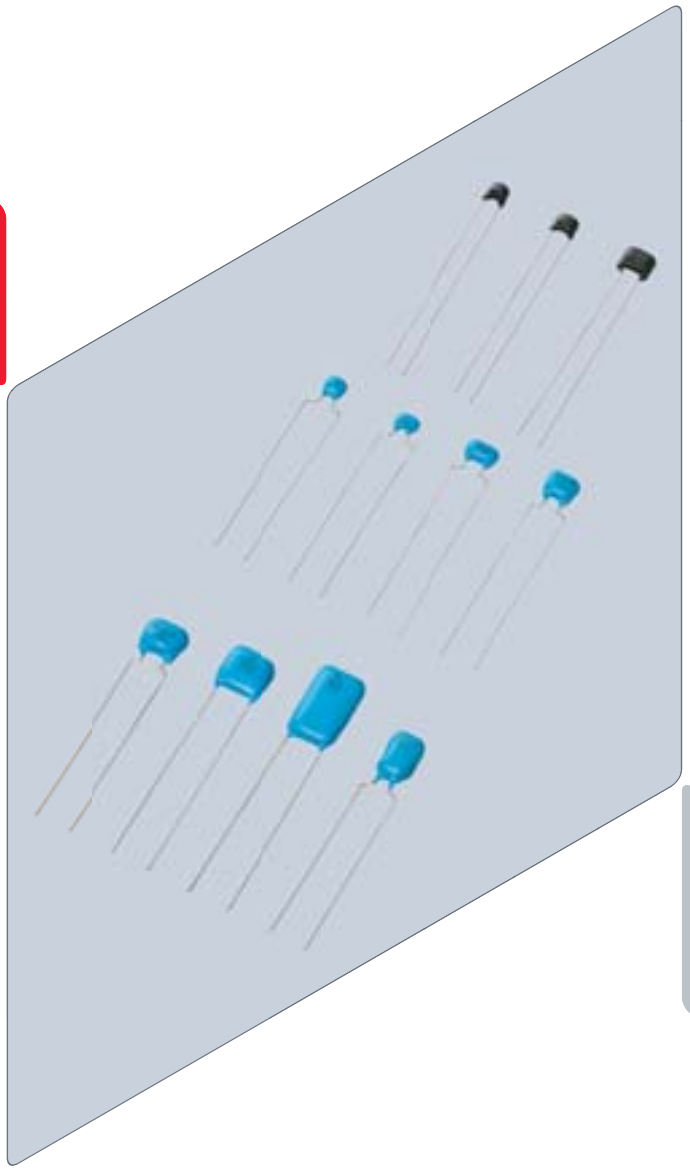
C49E.pdf
May 10,2018

muRata
INNOVATOR IN ELECTRONICS

Leaded MLCC



EU RoHS Compliant

- All the products in this catalog comply with EU RoHS.
- EU RoHS is "the European Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment."
- For more details, please refer to our web page, "Murata's Approach for EU RoHS" (https://www.murata.com/en-eu/support/compliance/rohs).

Contents

Product specifications are as of February 2018.

Please check the MURATA website (**https://www.murata.com/**)
if you cannot find a part number in this catalog.

● Part Numbering

Leaded MLCC

(Part Number)

RC	E	R7	1H	104	K	0	M1	H03	A
❶	❷	❸	❹	❺	❻	❼	❽	❾	❿

❶Product ID

❷Series

Product ID	Series Code	
RC	**E**	Leaded MLCC for Automotive
RH	**E**	150°C Operation Leaded MLCC for Automotive
RH	**S**	175°C/200°C Operation Leaded MLCC for Automotive
RD	**E**	Leaded MLCC for General Purpose

❸Temperature Characteristics

Temperature Characteristic			Temperature Characteristics			Operating Temperature Range
Code	Public STD Code		Reference Temperature	Temperature Range	Capacitance Change or Temperature Coefficient	
5C	C0G	EIA	25°C	25 to 125°C	0±30ppm/°C	-55 to 125°C
				-55 to 25°C	0+30/-72ppm/°C	
5G	X8G	*1	25°C	25 to 150°C	0±30ppm/°C	-55 to 150°C
				-55 to 25°C	0+30/-72ppm/°C	
7G	CCG	*1	25°C	-55 to 25°C	0+30/-72ppm/°C	-55 to 200°C
				25 to 125°C	0±30ppm/°C	
				125 to 200°C	0+72/-30ppm/°C	
7J	UNJ	*1	25°C	-55 to 25°C	-750+120/-347ppm/°C	-55 to 200°C
				25 to 125°C	-750±120ppm/°C	
				125 to 200°C	-750+347/-120ppm/°C	
7U	U2J	EIA	25°C	25 to 125°C*2	-750±120ppm/°C	-55 to 125°C
				-55 to 25°C	-750+120/-347ppm/°C	
C7	X7S	EIA	25°C	-55 to 125°C	±22%	-55 to 125°C
D7	X7T	EIA	25°C	-55 to 125°C	+22%, -33%	-55 to 125°C
L1	XAL	*1	25°C	-55 to 175°C	+15%, -40%	-55 to 175°C
L8	X8L	*1	25°C	-55 to 150°C	+15%, -40%	-55 to 150°C
N1	XAN	*1	25°C	-55 to 175°C	+15%, -60%	-55 to 175°C
R7	X7R	EIA	25°C	-55 to 125°C	±15%	-55 to 125°C

*1 Murata Temperature Characteristic Code.
*2 Rated Voltage 100Vdc max: 25 to 85°C

❹Rated Voltage

Code	Rated Voltage
1E	DC25V
1H	DC50V
2A	DC100V
2D	DC200V
2E	DC250V
2W	DC450V
2H	DC500V
2J	DC630V
3A	DC1kV

❻Capacitance Tolerance

Code	Capacitance Tolerance
C	±0.25pF
D	±0.5pF
J	±5%
K	±10%
M	±20%

❺Capacitance

Expressed by three figures. The unit is pico-farad (pF). The first and second figures are significant digits, and the third figure expresses the number of zeros that follow the two numbers.
If there is a decimal point, it is expressed by the capital letter "**R**."
In this case, all figures are significant digits.

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❼Dimensions (LxW)

Code	Dimensions (LxW)	
0	RCE Series	3.6×3.5mm max.
	RHE Series	
	RHS Series	3.8×3.5mm max.
	RDE Series	4.0×3.5mm max. or 5.0×3.5mm max. (Depends on Part Number List)
1	RCE Series	4.0×3.5mm max.
	RHE Series	
	RHS Series	
	RDE Series	4.5×3.5mm max. or 5.0×3.5mm max. (Depends on Part Number List)
2	5.5×4.0mm max.	
3	5.5×5.0mm max.	
4	7.5×5.5mm max.	
5	7.5×7.5mm max. (DC630V, DC1kV : 7.5×8.0mm max.)	
U	7.5×12.5mm max. (DC630V, DC1kV : 7.5×13.0mm max.)	
W	5.5×7.5mm max.	

❽Lead Style

Code	Lead Style	Lead Spacing
A2	Straight Long	2.5mm
B1	Straight Long	5.0mm
DB/DG	Straight Taping	2.5mm
E1	Straight Taping	5.0mm
K1	Inside Crimp	5.0mm
M1/M2	Inside Crimp Taping	5.0mm
P1	Outside Crimp	2.5mm
S1	Outside Crimp Taping	2.5mm

❾Individual Specification Code

Expressed by three figures

❿Packaging

Code	Packaging
A	Ammo Pack
B	Bulk

1

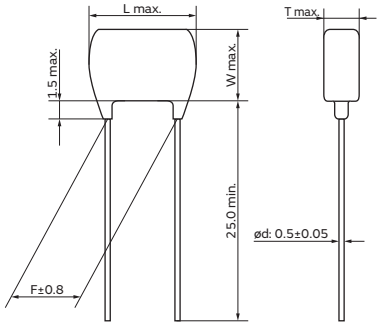
Leaded MLCC for Automotive

RCE Series (DC25V-DC1kV)

Features

1. Small size and large capacitance
2. Low ESR and ESL suitable for high frequency
3. Meet AEC-Q200, ISO7637-2 (surge test) requirement
4. Meet LF (Lead Free) and HF (Halogen Free)
5. Flow soldering and welding are available.
   (Re-flow soldering is not available.)
6. If copper wire is necessary at welding process,
   copper wire is available based on request.

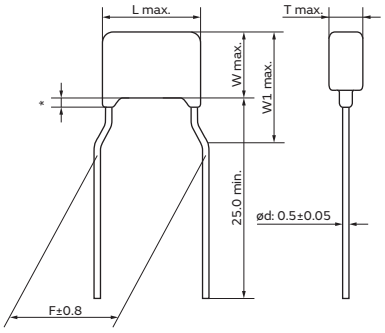
Dimensions code: 0
Lead style code: A2



· Lead Wire: Solder Coated CP Wire

(in mm)

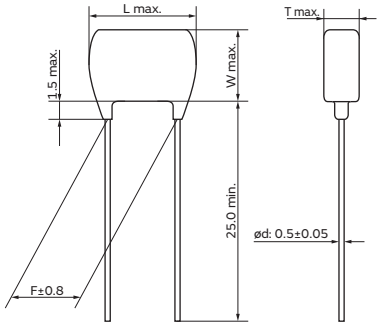
Dimensions code: 0
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

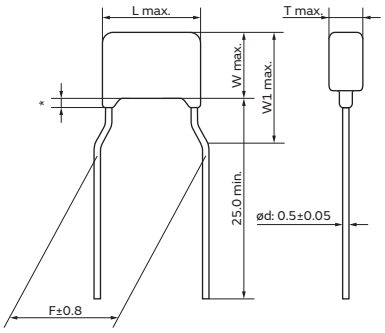
Dimensions code: 1
Lead style code: A2



· Lead Wire: Solder Coated CP Wire

(in mm)

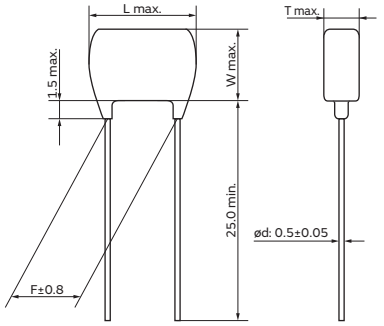
Dimensions code: 1
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

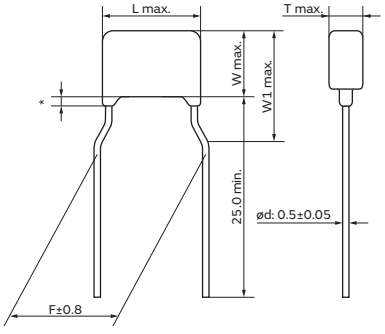
Dimensions code: 2
Lead style code: A2



· Lead Wire: Solder Coated CP Wire

(in mm)

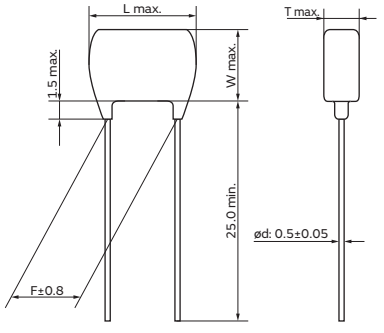
Dimensions code: 2
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

Dimensions code: 3
Lead style code: A2



· Lead Wire: Solder Coated CP Wire

(in mm)

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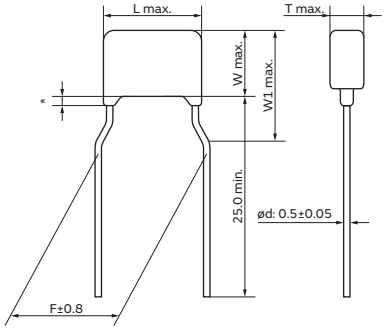
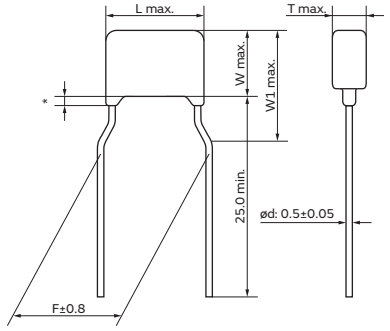
Dimensions code: 3
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

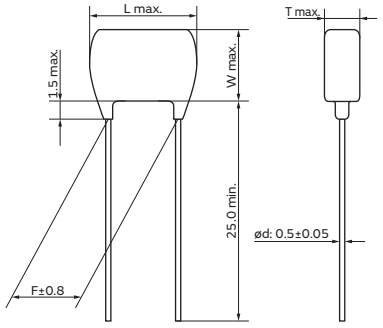
Dimensions code: 4
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

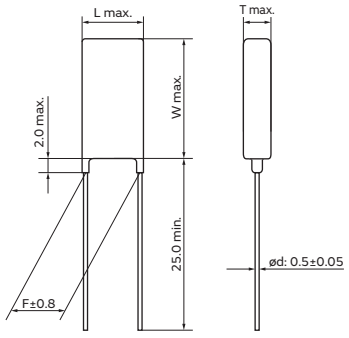
Dimensions code: 5
Lead style code: B1



· Lead Wire: Solder Coated CP Wire

(in mm)

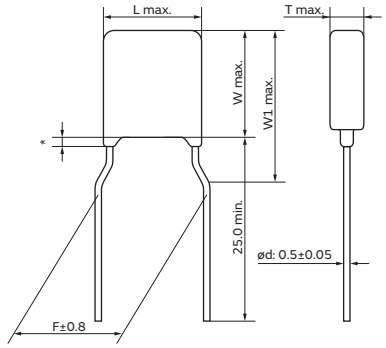
Dimensions code: U
Lead style code: B1



· Lead Wire: Solder Coated CP Wire

(in mm)

Dimensions code: W
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

Dimensions

Dimensions and Lead Style Code	Dimensions (mm)					
	L	W	W1	T	F	d
0A2/0DB	3.6	3.5	-	See the individual product specification	2.5	0.5
0K1/0M1	3.6	3.5	6.0		5.0	0.5
1A2/1DB	4.0	3.5	-		2.5	0.5
1K1/1M1	4.0	3.5	5.0		5.0	0.5
2A2/2DB	5.5	4.0	-		2.5	0.5
2K1/2M1	5.5	4.0	6.0		5.0	0.5
3A2/3DB	5.5	5.0	-		2.5	0.5
3K1/3M1	5.5	5.0	7.5		5.0	0.5
4K1/4M1	7.5	5.5	8.0		5.0	0.5
5B1/5E1	7.5	7.5*	-		5.0	0.5
UB1/UE1	7.7	12.5*	-		5.0	0.5
WK1/WM1	5.5	7.5	10.0		5.0	0.5

*DC630V, DC1kV: W+0.5mm

Marking

Dimensions Code \ Rated Voltage	DC25V	DC50V			DC100V			DC250V	DC630V	DC1kV
Temp. Char.	X7R	C0G	X7S	X7R	C0G	X7S	X7R	X7R, U2J, C0G		
0			–			–		–	–	–
1	224K	A 102J	105K	224K	A 102J	–	224K	U 102J (U2J) 102K (X7R)	–	–
2	Ⓜ 475 K2C	Ⓜ 563 J5A	Ⓜ 475 K5C	Ⓜ 105 K5C	Ⓜ 103 J1A	–	Ⓜ 105 K1C	Ⓜ 103 J4U (U2J) Ⓜ 473 K4C (X7R) Ⓜ 153 J4A (C0G)	Ⓜ 472 J7U (U2J) Ⓜ 153 K7C (X7R) Ⓜ 332 J7A (C0G)	Ⓜ 102 JAU (U2J) Ⓜ 102 KAC (X7R) Ⓜ 102 JAA (C0G)
3, 4, W	Ⓜ 226 K2C	–	Ⓜ 106 K5C	Ⓜ 335 K5C	–	Ⓜ 225 K1C	–	Ⓜ 473 J4U (U2J) Ⓜ 224 K4C (X7R)	Ⓜ 103 J7U (U2J) Ⓜ 104 K7C (X7R)	Ⓜ 472 JAU (U2J) Ⓜ 333 KAC (X7R)
5, U	–	–	–	–	–	–	–	–	Ⓜ 333 J7U (U2J) Ⓜ 474 K4C (X7R)	Ⓜ 103 JAU (U2J) Ⓜ 104 KAC (X7R)

Temperature Characteristics	Marked with code (C0G char.: A, X7S/X7R char.: C, U2J char.: U) A part is omitted (Please refer to the marking example.)
Nominal Capacitance	Under 100pF: Actual value 100pF and over: Marked with 3 figures
Capacitance Tolerance	Marked with code A part is omitted (Please refer to the marking example.)
Rated Voltage	Marked with code (DC25V: 2, DC50V: 5, DC100V: 1, DC250V: 4, DC630V: 7, DC1kV: A) A part is omitted (Please refer to the marking example.)
Manufacturer's Identification	Marked with Ⓜ A part is omitted (Please refer to the marking example.)

Temperature Compensating Type, C0G/U2J Characteristics

Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RCE5C1H1R0C0□□H03□	C0G (EIA)	50Vdc	1.0pF±0.25pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H1R0C0□□H03□	C0G (EIA)	50Vdc	1.0pF±0.25pF	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H2R0C0□□H03□	C0G (EIA)	50Vdc	2.0pF±0.25pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H2R0C0□□H03□	C0G (EIA)	50Vdc	2.0pF±0.25pF	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H3R0C0□□H03□	C0G (EIA)	50Vdc	3.0pF±0.25pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H3R0C0□□H03□	C0G (EIA)	50Vdc	3.0pF±0.25pF	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H4R0C0□□H03□	C0G (EIA)	50Vdc	4.0pF±0.25pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H4R0C0□□H03□	C0G (EIA)	50Vdc	4.0pF±0.25pF	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H5R0C0□□H03□	C0G (EIA)	50Vdc	5.0pF±0.25pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H5R0C0□□H03□	C0G (EIA)	50Vdc	5.0pF±0.25pF	3.6×3.5	2.5	5.0	K1	M1

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RCE5C1H6R0D0□□H03□	C0G (EIA)	50Vdc	6.0pF±0.5pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H6R0D0□□H03□	C0G (EIA)	50Vdc	6.0pF±0.5pF	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H7R0D0□□H03□	C0G (EIA)	50Vdc	7.0pF±0.5pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H7R0D0□□H03□	C0G (EIA)	50Vdc	7.0pF±0.5pF	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H8R0D0□□H03□	C0G (EIA)	50Vdc	8.0pF±0.5pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H8R0D0□□H03□	C0G (EIA)	50Vdc	8.0pF±0.5pF	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H9R0D0□□H03□	C0G (EIA)	50Vdc	9.0pF±0.5pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H9R0D0□□H03□	C0G (EIA)	50Vdc	9.0pF±0.5pF	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H100J0□□H03□	C0G (EIA)	50Vdc	10pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H100J0□□H03□	C0G (EIA)	50Vdc	10pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H120J0□□H03□	C0G (EIA)	50Vdc	12pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H120J0□□H03□	C0G (EIA)	50Vdc	12pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H150J0□□H03□	C0G (EIA)	50Vdc	15pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H150J0□□H03□	C0G (EIA)	50Vdc	15pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H180J0□□H03□	C0G (EIA)	50Vdc	18pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H180J0□□H03□	C0G (EIA)	50Vdc	18pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H220J0□□H03□	C0G (EIA)	50Vdc	22pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H220J0□□H03□	C0G (EIA)	50Vdc	22pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H270J0□□H03□	C0G (EIA)	50Vdc	27pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H270J0□□H03□	C0G (EIA)	50Vdc	27pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H330J0□□H03□	C0G (EIA)	50Vdc	33pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H330J0□□H03□	C0G (EIA)	50Vdc	33pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H390J0□□H03□	C0G (EIA)	50Vdc	39pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H390J0□□H03□	C0G (EIA)	50Vdc	39pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H470J0□□H03□	C0G (EIA)	50Vdc	47pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H470J0□□H03□	C0G (EIA)	50Vdc	47pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H560J0□□H03□	C0G (EIA)	50Vdc	56pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H560J0□□H03□	C0G (EIA)	50Vdc	56pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H680J0□□H03□	C0G (EIA)	50Vdc	68pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H680J0□□H03□	C0G (EIA)	50Vdc	68pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H820J0□□H03□	C0G (EIA)	50Vdc	82pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H820J0□□H03□	C0G (EIA)	50Vdc	82pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H101J0□□H03□	C0G (EIA)	50Vdc	100pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H101J0□□H03□	C0G (EIA)	50Vdc	100pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H121J0□□H03□	C0G (EIA)	50Vdc	120pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H121J0□□H03□	C0G (EIA)	50Vdc	120pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H151J0□□H03□	C0G (EIA)	50Vdc	150pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H151J0□□H03□	C0G (EIA)	50Vdc	150pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H181J0□□H03□	C0G (EIA)	50Vdc	180pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H181J0□□H03□	C0G (EIA)	50Vdc	180pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H221J0□□H03□	C0G (EIA)	50Vdc	220pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H221J0□□H03□	C0G (EIA)	50Vdc	220pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H271J0□□H03□	C0G (EIA)	50Vdc	270pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H271J0□□H03□	C0G (EIA)	50Vdc	270pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H331J0□□H03□	C0G (EIA)	50Vdc	330pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H331J0□□H03□	C0G (EIA)	50Vdc	330pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H391J0□□H03□	C0G (EIA)	50Vdc	390pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H391J0□□H03□	C0G (EIA)	50Vdc	390pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H471J0□□H03□	C0G (EIA)	50Vdc	470pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H471J0□□H03□	C0G (EIA)	50Vdc	470pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H561J0□□H03□	C0G (EIA)	50Vdc	560pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H561J0□□H03□	C0G (EIA)	50Vdc	560pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H681J0□□H03□	C0G (EIA)	50Vdc	680pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H681J0□□H03□	C0G (EIA)	50Vdc	680pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H821J0□□H03□	C0G (EIA)	50Vdc	820pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H821J0□□H03□	C0G (EIA)	50Vdc	820pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H102J0□□H03□	C0G (EIA)	50Vdc	1000pF±5%	3.6×3.5	2.5	2.5	A2	DB

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RCE5C1H102J0□□H03□	C0G (EIA)	50Vdc	1000pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H122J0□□H03□	C0G (EIA)	50Vdc	1200pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H122J0□□H03□	C0G (EIA)	50Vdc	1200pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H152J0□□H03□	C0G (EIA)	50Vdc	1500pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H152J0□□H03□	C0G (EIA)	50Vdc	1500pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H182J0□□H03□	C0G (EIA)	50Vdc	1800pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H182J0□□H03□	C0G (EIA)	50Vdc	1800pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H222J0□□H03□	C0G (EIA)	50Vdc	2200pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H222J0□□H03□	C0G (EIA)	50Vdc	2200pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H272J0□□H03□	C0G (EIA)	50Vdc	2700pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H272J0□□H03□	C0G (EIA)	50Vdc	2700pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H332J0□□H03□	C0G (EIA)	50Vdc	3300pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H332J0□□H03□	C0G (EIA)	50Vdc	3300pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H392J0□□H03□	C0G (EIA)	50Vdc	3900pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C1H392J0□□H03□	C0G (EIA)	50Vdc	3900pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C1H472J1□□H03□	C0G (EIA)	50Vdc	4700pF±5%	4.0×3.5	2.5	2.5	A2	DB
RCE5C1H472J1□□H03□	C0G (EIA)	50Vdc	4700pF±5%	4.0×3.5	2.5	5.0	K1	M1
RCE5C1H562J1□□H03□	C0G (EIA)	50Vdc	5600pF±5%	4.0×3.5	2.5	2.5	A2	DB
RCE5C1H562J1□□H03□	C0G (EIA)	50Vdc	5600pF±5%	4.0×3.5	2.5	5.0	K1	M1
RCE5C1H682J1□□H03□	C0G (EIA)	50Vdc	6800pF±5%	4.0×3.5	2.5	2.5	A2	DB
RCE5C1H682J1□□H03□	C0G (EIA)	50Vdc	6800pF±5%	4.0×3.5	2.5	5.0	K1	M1
RCE5C1H822J1□□H03□	C0G (EIA)	50Vdc	8200pF±5%	4.0×3.5	2.5	2.5	A2	DB
RCE5C1H822J1□□H03□	C0G (EIA)	50Vdc	8200pF±5%	4.0×3.5	2.5	5.0	K1	M1
RCE5C1H103J1□□H03□	C0G (EIA)	50Vdc	10000pF±5%	4.0×3.5	2.5	2.5	A2	DB
RCE5C1H103J1□□H03□	C0G (EIA)	50Vdc	10000pF±5%	4.0×3.5	2.5	5.0	K1	M1
RCE5C1H123J1□□H03□	C0G (EIA)	50Vdc	12000pF±5%	4.0×3.5	2.5	2.5	A2	DB
RCE5C1H123J1□□H03□	C0G (EIA)	50Vdc	12000pF±5%	4.0×3.5	2.5	5.0	K1	M1
RCE5C1H153J1□□H03□	C0G (EIA)	50Vdc	15000pF±5%	4.0×3.5	2.5	2.5	A2	DB
RCE5C1H153J1□□H03□	C0G (EIA)	50Vdc	15000pF±5%	4.0×3.5	2.5	5.0	K1	M1
RCE5C1H183J1□□H03□	C0G (EIA)	50Vdc	18000pF±5%	4.0×3.5	2.5	2.5	A2	DB
RCE5C1H183J1□□H03□	C0G (EIA)	50Vdc	18000pF±5%	4.0×3.5	2.5	5.0	K1	M1
RCE5C1H223J1□□H03□	C0G (EIA)	50Vdc	22000pF±5%	4.0×3.5	2.5	2.5	A2	DB
RCE5C1H223J1□□H03□	C0G (EIA)	50Vdc	22000pF±5%	4.0×3.5	2.5	5.0	K1	M1
RCE5C1H273J2□□H03□	C0G (EIA)	50Vdc	27000pF±5%	5.5×4.0	3.15	2.5	A2	DB
RCE5C1H273J2□□H03□	C0G (EIA)	50Vdc	27000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C1H333J2□□H03□	C0G (EIA)	50Vdc	33000pF±5%	5.5×4.0	3.15	2.5	A2	DB
RCE5C1H333J2□□H03□	C0G (EIA)	50Vdc	33000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C1H393J2□□H03□	C0G (EIA)	50Vdc	39000pF±5%	5.5×4.0	3.15	2.5	A2	DB
RCE5C1H393J2□□H03□	C0G (EIA)	50Vdc	39000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C1H473J2□□H03□	C0G (EIA)	50Vdc	47000pF±5%	5.5×4.0	3.15	2.5	A2	DB
RCE5C1H473J2□□H03□	C0G (EIA)	50Vdc	47000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C1H563J2□□H03□	C0G (EIA)	50Vdc	56000pF±5%	5.5×4.0	3.15	2.5	A2	DB
RCE5C1H563J2□□H03□	C0G (EIA)	50Vdc	56000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C1H683J2□□H03□	C0G (EIA)	50Vdc	68000pF±5%	5.5×4.0	3.15	2.5	A2	DB
RCE5C1H683J2□□H03□	C0G (EIA)	50Vdc	68000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C1H823J2□□H03□	C0G (EIA)	50Vdc	82000pF±5%	5.5×4.0	3.15	2.5	A2	DB
RCE5C1H823J2□□H03□	C0G (EIA)	50Vdc	82000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C1H104J2□□H03□	C0G (EIA)	50Vdc	0.1μF±5%	5.5×4.0	3.15	2.5	A2	DB
RCE5C1H104J2□□H03□	C0G (EIA)	50Vdc	0.1μF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2A1R0C0□□H03□	C0G (EIA)	100Vdc	1.0pF±0.25pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A1R0C0□□H03□	C0G (EIA)	100Vdc	1.0pF±0.25pF	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A2R0C0□□H03□	C0G (EIA)	100Vdc	2.0pF±0.25pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A2R0C0□□H03□	C0G (EIA)	100Vdc	2.0pF±0.25pF	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A3R0C0□□H03□	C0G (EIA)	100Vdc	3.0pF±0.25pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A3R0C0□□H03□	C0G (EIA)	100Vdc	3.0pF±0.25pF	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A4R0C0□□H03□	C0G (EIA)	100Vdc	4.0pF±0.25pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A4R0C0□□H03□	C0G (EIA)	100Vdc	4.0pF±0.25pF	3.6×3.5	2.5	5.0	K1	M1

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RCE5C2A5R0C0□□H03□	C0G (EIA)	100Vdc	5.0pF±0.25pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A5R0C0□□H03□	C0G (EIA)	100Vdc	5.0pF±0.25pF	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A6R0D0□□H03□	C0G (EIA)	100Vdc	6.0pF±0.5pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A6R0D0□□H03□	C0G (EIA)	100Vdc	6.0pF±0.5pF	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A7R0D0□□H03□	C0G (EIA)	100Vdc	7.0pF±0.5pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A7R0D0□□H03□	C0G (EIA)	100Vdc	7.0pF±0.5pF	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A8R0D0□□H03□	C0G (EIA)	100Vdc	8.0pF±0.5pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A8R0D0□□H03□	C0G (EIA)	100Vdc	8.0pF±0.5pF	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A9R0D0□□H03□	C0G (EIA)	100Vdc	9.0pF±0.5pF	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A9R0D0□□H03□	C0G (EIA)	100Vdc	9.0pF±0.5pF	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A100J0□□H03□	C0G (EIA)	100Vdc	10pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A100J0□□H03□	C0G (EIA)	100Vdc	10pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A120J0□□H03□	C0G (EIA)	100Vdc	12pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A120J0□□H03□	C0G (EIA)	100Vdc	12pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A150J0□□H03□	C0G (EIA)	100Vdc	15pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A150J0□□H03□	C0G (EIA)	100Vdc	15pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A180J0□□H03□	C0G (EIA)	100Vdc	18pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A180J0□□H03□	C0G (EIA)	100Vdc	18pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A220J0□□H03□	C0G (EIA)	100Vdc	22pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A220J0□□H03□	C0G (EIA)	100Vdc	22pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A270J0□□H03□	C0G (EIA)	100Vdc	27pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A270J0□□H03□	C0G (EIA)	100Vdc	27pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A330J0□□H03□	C0G (EIA)	100Vdc	33pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A330J0□□H03□	C0G (EIA)	100Vdc	33pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A390J0□□H03□	C0G (EIA)	100Vdc	39pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A390J0□□H03□	C0G (EIA)	100Vdc	39pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A470J0□□H03□	C0G (EIA)	100Vdc	47pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A470J0□□H03□	C0G (EIA)	100Vdc	47pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A560J0□□H03□	C0G (EIA)	100Vdc	56pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A560J0□□H03□	C0G (EIA)	100Vdc	56pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A680J0□□H03□	C0G (EIA)	100Vdc	68pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A680J0□□H03□	C0G (EIA)	100Vdc	68pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A820J0□□H03□	C0G (EIA)	100Vdc	82pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A820J0□□H03□	C0G (EIA)	100Vdc	82pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A101J0□□H03□	C0G (EIA)	100Vdc	100pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A101J0□□H03□	C0G (EIA)	100Vdc	100pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A121J0□□H03□	C0G (EIA)	100Vdc	120pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A121J0□□H03□	C0G (EIA)	100Vdc	120pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A151J0□□H03□	C0G (EIA)	100Vdc	150pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A151J0□□H03□	C0G (EIA)	100Vdc	150pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A181J0□□H03□	C0G (EIA)	100Vdc	180pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A181J0□□H03□	C0G (EIA)	100Vdc	180pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A221J0□□H03□	C0G (EIA)	100Vdc	220pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A221J0□□H03□	C0G (EIA)	100Vdc	220pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A271J0□□H03□	C0G (EIA)	100Vdc	270pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A271J0□□H03□	C0G (EIA)	100Vdc	270pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A331J0□□H03□	C0G (EIA)	100Vdc	330pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A331J0□□H03□	C0G (EIA)	100Vdc	330pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A391J0□□H03□	C0G (EIA)	100Vdc	390pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A391J0□□H03□	C0G (EIA)	100Vdc	390pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A471J0□□H03□	C0G (EIA)	100Vdc	470pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A471J0□□H03□	C0G (EIA)	100Vdc	470pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A561J0□□H03□	C0G (EIA)	100Vdc	560pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A561J0□□H03□	C0G (EIA)	100Vdc	560pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A681J0□□H03□	C0G (EIA)	100Vdc	680pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A681J0□□H03□	C0G (EIA)	100Vdc	680pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A821J0□□H03□	C0G (EIA)	100Vdc	820pF±5%	3.6×3.5	2.5	2.5	A2	DB

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RCE5C2A821J0□□H03□	C0G (EIA)	100Vdc	820pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A102J0□□H03□	C0G (EIA)	100Vdc	1000pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A102J0□□H03□	C0G (EIA)	100Vdc	1000pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A122J0□□H03□	C0G (EIA)	100Vdc	1200pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A122J0□□H03□	C0G (EIA)	100Vdc	1200pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A152J0□□H03□	C0G (EIA)	100Vdc	1500pF±5%	3.6×3.5	2.5	2.5	A2	DB
RCE5C2A152J0□□H03□	C0G (EIA)	100Vdc	1500pF±5%	3.6×3.5	2.5	5.0	K1	M1
RCE5C2A182J1□□H03□	C0G (EIA)	100Vdc	1800pF±5%	4.0×3.5	2.5	2.5	A2	DB
RCE5C2A182J1□□H03□	C0G (EIA)	100Vdc	1800pF±5%	4.0×3.5	2.5	5.0	K1	M1
RCE5C2A222J1□□H03□	C0G (EIA)	100Vdc	2200pF±5%	4.0×3.5	2.5	2.5	A2	DB
RCE5C2A222J1□□H03□	C0G (EIA)	100Vdc	2200pF±5%	4.0×3.5	2.5	5.0	K1	M1
RCE5C2A272J1□□H03□	C0G (EIA)	100Vdc	2700pF±5%	4.0×3.5	2.5	2.5	A2	DB
RCE5C2A272J1□□H03□	C0G (EIA)	100Vdc	2700pF±5%	4.0×3.5	2.5	5.0	K1	M1
RCE5C2A332J1□□H03□	C0G (EIA)	100Vdc	3300pF±5%	4.0×3.5	2.5	2.5	A2	DB
RCE5C2A332J1□□H03□	C0G (EIA)	100Vdc	3300pF±5%	4.0×3.5	2.5	5.0	K1	M1
RCE5C2A392J2□□H03□	C0G (EIA)	100Vdc	3900pF±5%	5.5×4.0	3.15	2.5	A2	DB
RCE5C2A392J2□□H03□	C0G (EIA)	100Vdc	3900pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2A472J2□□H03□	C0G (EIA)	100Vdc	4700pF±5%	5.5×4.0	3.15	2.5	A2	DB
RCE5C2A472J2□□H03□	C0G (EIA)	100Vdc	4700pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2A562J2□□H03□	C0G (EIA)	100Vdc	5600pF±5%	5.5×4.0	3.15	2.5	A2	DB
RCE5C2A562J2□□H03□	C0G (EIA)	100Vdc	5600pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2A682J2□□H03□	C0G (EIA)	100Vdc	6800pF±5%	5.5×4.0	3.15	2.5	A2	DB
RCE5C2A682J2□□H03□	C0G (EIA)	100Vdc	6800pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2A822J2□□H03□	C0G (EIA)	100Vdc	8200pF±5%	5.5×4.0	3.15	2.5	A2	DB
RCE5C2A822J2□□H03□	C0G (EIA)	100Vdc	8200pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2A103J2□□H03□	C0G (EIA)	100Vdc	10000pF±5%	5.5×4.0	3.15	2.5	A2	DB
RCE5C2A103J2□□H03□	C0G (EIA)	100Vdc	10000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E100J2□□H03□	C0G (EIA)	250Vdc	10pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E120J2□□H03□	C0G (EIA)	250Vdc	12pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E150J2□□H03□	C0G (EIA)	250Vdc	15pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E180J2□□H03□	C0G (EIA)	250Vdc	18pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E220J2□□H03□	C0G (EIA)	250Vdc	22pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E270J2□□H03□	C0G (EIA)	250Vdc	27pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E330J2□□H03□	C0G (EIA)	250Vdc	33pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E390J2□□H03□	C0G (EIA)	250Vdc	39pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E470J2□□H03□	C0G (EIA)	250Vdc	47pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E560J2□□H03□	C0G (EIA)	250Vdc	56pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E680J2□□H03□	C0G (EIA)	250Vdc	68pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E820J2□□H03□	C0G (EIA)	250Vdc	82pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E101J2□□H03□	C0G (EIA)	250Vdc	100pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E121J2□□H03□	C0G (EIA)	250Vdc	120pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E151J2□□H03□	C0G (EIA)	250Vdc	150pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E181J2□□H03□	C0G (EIA)	250Vdc	180pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E221J2□□H03□	C0G (EIA)	250Vdc	220pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E271J2□□H03□	C0G (EIA)	250Vdc	270pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E331J2□□H03□	C0G (EIA)	250Vdc	330pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E391J2□□H03□	C0G (EIA)	250Vdc	390pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E471J2□□H03□	C0G (EIA)	250Vdc	470pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E561J2□□H03□	C0G (EIA)	250Vdc	560pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E681J2□□H03□	C0G (EIA)	250Vdc	680pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E821J2□□H03□	C0G (EIA)	250Vdc	820pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E102J2□□H03□	C0G (EIA)	250Vdc	1000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E122J2□□H03□	C0G (EIA)	250Vdc	1200pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E152J2□□H03□	C0G (EIA)	250Vdc	1500pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E182J2□□H03□	C0G (EIA)	250Vdc	1800pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E222J2□□H03□	C0G (EIA)	250Vdc	2200pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E272J2□□H03□	C0G (EIA)	250Vdc	2700pF±5%	5.5×4.0	3.15	5.0	K1	M1

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RCE5C2E332J2□□H03□	C0G (EIA)	250Vdc	3300pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E392J2□□H03□	C0G (EIA)	250Vdc	3900pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E472J2□□H03□	C0G (EIA)	250Vdc	4700pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E562J2□□H03□	C0G (EIA)	250Vdc	5600pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E682J2□□H03□	C0G (EIA)	250Vdc	6800pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E822J2□□H03□	C0G (EIA)	250Vdc	8200pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E103J2□□H03□	C0G (EIA)	250Vdc	10000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E123J2□□H03□	C0G (EIA)	250Vdc	12000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2E153J2□□H03□	C0G (EIA)	250Vdc	15000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J100J2□□H03□	C0G (EIA)	630Vdc	10pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J120J2□□H03□	C0G (EIA)	630Vdc	12pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J150J2□□H03□	C0G (EIA)	630Vdc	15pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J180J2□□H03□	C0G (EIA)	630Vdc	18pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J220J2□□H03□	C0G (EIA)	630Vdc	22pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J270J2□□H03□	C0G (EIA)	630Vdc	27pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J330J2□□H03□	C0G (EIA)	630Vdc	33pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J390J2□□H03□	C0G (EIA)	630Vdc	39pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J470J2□□H03□	C0G (EIA)	630Vdc	47pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J560J2□□H03□	C0G (EIA)	630Vdc	56pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J680J2□□H03□	C0G (EIA)	630Vdc	68pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J820J2□□H03□	C0G (EIA)	630Vdc	82pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J101J2□□H03□	C0G (EIA)	630Vdc	100pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J121J2□□H03□	C0G (EIA)	630Vdc	120pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J151J2□□H03□	C0G (EIA)	630Vdc	150pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J181J2□□H03□	C0G (EIA)	630Vdc	180pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J221J2□□H03□	C0G (EIA)	630Vdc	220pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J271J2□□H03□	C0G (EIA)	630Vdc	270pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J331J2□□H03□	C0G (EIA)	630Vdc	330pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J391J2□□H03□	C0G (EIA)	630Vdc	390pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J471J2□□H03□	C0G (EIA)	630Vdc	470pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J561J2□□H03□	C0G (EIA)	630Vdc	560pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J681J2□□H03□	C0G (EIA)	630Vdc	680pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J821J2□□H03□	C0G (EIA)	630Vdc	820pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J102J2□□H03□	C0G (EIA)	630Vdc	1000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J122J2□□H03□	C0G (EIA)	630Vdc	1200pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J152J2□□H03□	C0G (EIA)	630Vdc	1500pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J182J2□□H03□	C0G (EIA)	630Vdc	1800pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J222J2□□H03□	C0G (EIA)	630Vdc	2200pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J272J2□□H03□	C0G (EIA)	630Vdc	2700pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C2J332J2□□H03□	C0G (EIA)	630Vdc	3300pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A100J2□□H03□	C0G (EIA)	1000Vdc	10pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A120J2□□H03□	C0G (EIA)	1000Vdc	12pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A150J2□□H03□	C0G (EIA)	1000Vdc	15pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A180J2□□H03□	C0G (EIA)	1000Vdc	18pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A220J2□□H03□	C0G (EIA)	1000Vdc	22pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A270J2□□H03□	C0G (EIA)	1000Vdc	27pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A330J2□□H03□	C0G (EIA)	1000Vdc	33pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A390J2□□H03□	C0G (EIA)	1000Vdc	39pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A470J2□□H03□	C0G (EIA)	1000Vdc	47pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A560J2□□H03□	C0G (EIA)	1000Vdc	56pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A680J2□□H03□	C0G (EIA)	1000Vdc	68pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A820J2□□H03□	C0G (EIA)	1000Vdc	82pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A101J2□□H03□	C0G (EIA)	1000Vdc	100pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A121J2□□H03□	C0G (EIA)	1000Vdc	120pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A151J2□□H03□	C0G (EIA)	1000Vdc	150pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A181J2□□H03□	C0G (EIA)	1000Vdc	180pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A221J2□□H03□	C0G (EIA)	1000Vdc	220pF±5%	5.5×4.0	3.15	5.0	K1	M1

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RCE5C3A271J2□□H03□	C0G (EIA)	1000Vdc	270pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A331J2□□H03□	C0G (EIA)	1000Vdc	330pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A391J2□□H03□	C0G (EIA)	1000Vdc	390pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A471J2□□H03□	C0G (EIA)	1000Vdc	470pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A561J2□□H03□	C0G (EIA)	1000Vdc	560pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A681J2□□H03□	C0G (EIA)	1000Vdc	680pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A821J2□□H03□	C0G (EIA)	1000Vdc	820pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE5C3A102J2□□H03□	C0G (EIA)	1000Vdc	1000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2E101J1□□H03□	U2J (EIA)	250Vdc	100pF±5%	4.0×3.5	3.15	5.0	K1	M1
RCE7U2E151J1□□H03□	U2J (EIA)	250Vdc	150pF±5%	4.0×3.5	3.15	5.0	K1	M1
RCE7U2E221J1□□H03□	U2J (EIA)	250Vdc	220pF±5%	4.0×3.5	3.15	5.0	K1	M1
RCE7U2E331J1□□H03□	U2J (EIA)	250Vdc	330pF±5%	4.0×3.5	3.15	5.0	K1	M1
RCE7U2E471J1□□H03□	U2J (EIA)	250Vdc	470pF±5%	4.0×3.5	3.15	5.0	K1	M1
RCE7U2E681J1□□H03□	U2J (EIA)	250Vdc	680pF±5%	4.0×3.5	3.15	5.0	K1	M1
RCE7U2E102J1□□H03□	U2J (EIA)	250Vdc	1000pF±5%	4.0×3.5	3.15	5.0	K1	M1
RCE7U2E152J1□□H03□	U2J (EIA)	250Vdc	1500pF±5%	4.0×3.5	3.15	5.0	K1	M1
RCE7U2E222J1□□H03□	U2J (EIA)	250Vdc	2200pF±5%	4.0×3.5	3.15	5.0	K1	M1
RCE7U2E332J1□□H03□	U2J (EIA)	250Vdc	3300pF±5%	4.0×3.5	3.15	5.0	K1	M1
RCE7U2E472J1□□H03□	U2J (EIA)	250Vdc	4700pF±5%	4.0×3.5	3.15	5.0	K1	M1
RCE7U2E682J2□□H03□	U2J (EIA)	250Vdc	6800pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2E103J2□□H03□	U2J (EIA)	250Vdc	10000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J100J2□□H03□	U2J (EIA)	630Vdc	10pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J150J2□□H03□	U2J (EIA)	630Vdc	15pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J220J2□□H03□	U2J (EIA)	630Vdc	22pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J330J2□□H03□	U2J (EIA)	630Vdc	33pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J470J2□□H03□	U2J (EIA)	630Vdc	47pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J680J2□□H03□	U2J (EIA)	630Vdc	68pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J101J2□□H03□	U2J (EIA)	630Vdc	100pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J151J2□□H03□	U2J (EIA)	630Vdc	150pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J221J2□□H03□	U2J (EIA)	630Vdc	220pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J331J2□□H03□	U2J (EIA)	630Vdc	330pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J471J2□□H03□	U2J (EIA)	630Vdc	470pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J681J2□□H03□	U2J (EIA)	630Vdc	680pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J102J2□□H03□	U2J (EIA)	630Vdc	1000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J152J2□□H03□	U2J (EIA)	630Vdc	1500pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J222J2□□H03□	U2J (EIA)	630Vdc	2200pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J332J2□□H03□	U2J (EIA)	630Vdc	3300pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J472J2□□H03□	U2J (EIA)	630Vdc	4700pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U2J682J3□□H03□	U2J (EIA)	630Vdc	6800pF±5%	5.5×5.0	4.0	5.0	K1	M1
RCE7U2J103J3□□H03□	U2J (EIA)	630Vdc	10000pF±5%	5.5×5.0	4.0	5.0	K1	M1
RCE7U2J153J4□□H03□	U2J (EIA)	630Vdc	15000pF±5%	7.5×5.5	4.0	5.0	K1	M1
RCE7U2J223J4□□H03□	U2J (EIA)	630Vdc	22000pF±5%	7.5×5.5	4.0	5.0	K1	M1
RCE7U2J333J5□□H03□	U2J (EIA)	630Vdc	33000pF±5%	7.5×8.0	4.0	5.0	B1	E1
RCE7U2J473J5□□H03□	U2J (EIA)	630Vdc	47000pF±5%	7.5×8.0	4.0	5.0	B1	E1
RCE7U2J943JU□□H03□	U2J (EIA)	630Vdc	94000pF±5%	7.7×13.0	4.0	5.0	B1	E1
RCE7U3A100J2□□H03□	U2J (EIA)	1000Vdc	10pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U3A150J2□□H03□	U2J (EIA)	1000Vdc	15pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U3A220J2□□H03□	U2J (EIA)	1000Vdc	22pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U3A330J2□□H03□	U2J (EIA)	1000Vdc	33pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U3A470J2□□H03□	U2J (EIA)	1000Vdc	47pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U3A680J2□□H03□	U2J (EIA)	1000Vdc	68pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U3A101J2□□H03□	U2J (EIA)	1000Vdc	100pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U3A151J2□□H03□	U2J (EIA)	1000Vdc	150pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U3A221J2□□H03□	U2J (EIA)	1000Vdc	220pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U3A331J2□□H03□	U2J (EIA)	1000Vdc	330pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U3A471J2□□H03□	U2J (EIA)	1000Vdc	470pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U3A681J2□□H03□	U2J (EIA)	1000Vdc	680pF±5%	5.5×4.0	3.15	5.0	K1	M1

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RCE7U3A102J2□□H03□	U2J (EIA)	1000Vdc	1000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RCE7U3A152J3□□H03□	U2J (EIA)	1000Vdc	1500pF±5%	5.5×5.0	4.0	5.0	K1	M1
RCE7U3A222J3□□H03□	U2J (EIA)	1000Vdc	2200pF±5%	5.5×5.0	4.0	5.0	K1	M1
RCE7U3A332J4□□H03□	U2J (EIA)	1000Vdc	3300pF±5%	7.5×5.5	4.0	5.0	K1	M1
RCE7U3A472J4□□H03□	U2J (EIA)	1000Vdc	4700pF±5%	7.5×5.5	4.0	5.0	K1	M1
RCE7U3A682J5□□H03□	U2J (EIA)	1000Vdc	6800pF±5%	7.5×8.0	4.0	5.0	B1	E1
RCE7U3A103J5□□H03□	U2J (EIA)	1000Vdc	10000pF±5%	7.5×8.0	4.0	5.0	B1	E1
RCE7U3A203JU□□H03□	U2J (EIA)	1000Vdc	20000pF±5%	7.7×13.0	4.0	5.0	B1	E1

Two blank columns are filled with the lead style code. Please refer to the 3 columns on the right for the appropriate code.
The last blank column is filled with the packaging code. (B: bulk, A: ammo pack)

High Dielectric Constant Type, X7R/X7S Characteristics

Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RCER71E104K0□□H03□	X7R (EIA)	25Vdc	0.1μF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71E104K0□□H03□	X7R (EIA)	25Vdc	0.1μF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71E154K0□□H03□	X7R (EIA)	25Vdc	0.15μF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71E154K0□□H03□	X7R (EIA)	25Vdc	0.15μF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71E224K0□□H03□	X7R (EIA)	25Vdc	0.22μF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71E224K0□□H03□	X7R (EIA)	25Vdc	0.22μF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71E334K1□□H03□	X7R (EIA)	25Vdc	0.33μF±10%	4.0×3.5	2.5	2.5	A2	DB
RCER71E334K1□□H03□	X7R (EIA)	25Vdc	0.33μF±10%	4.0×3.5	2.5	5.0	K1	M1
RCER71E474K1□□H03□	X7R (EIA)	25Vdc	0.47μF±10%	4.0×3.5	2.5	2.5	A2	DB
RCER71E474K1□□H03□	X7R (EIA)	25Vdc	0.47μF±10%	4.0×3.5	2.5	5.0	K1	M1
RCER71E684K1□□H03□	X7R (EIA)	25Vdc	0.68μF±10%	4.0×3.5	2.5	2.5	A2	DB
RCER71E684K1□□H03□	X7R (EIA)	25Vdc	0.68μF±10%	4.0×3.5	2.5	5.0	K1	M1
RCER71E105K1□□H03□	X7R (EIA)	25Vdc	1.0μF±10%	4.0×3.5	2.5	2.5	A2	DB
RCER71E105K1□□H03□	X7R (EIA)	25Vdc	1.0μF±10%	4.0×3.5	2.5	5.0	K1	M1
RCER71E155K2□□H03□	X7R (EIA)	25Vdc	1.5μF±10%	5.5×4.0	3.15	2.5	A2	DB
RCER71E155K2□□H03□	X7R (EIA)	25Vdc	1.5μF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER71E225K2□□H03□	X7R (EIA)	25Vdc	2.2μF±10%	5.5×4.0	3.15	2.5	A2	DB
RCER71E225K2□□H03□	X7R (EIA)	25Vdc	2.2μF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER71E335K2□□H03□	X7R (EIA)	25Vdc	3.3μF±10%	5.5×4.0	3.15	2.5	A2	DB
RCER71E335K2□□H03□	X7R (EIA)	25Vdc	3.3μF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER71E475K2□□H03□	X7R (EIA)	25Vdc	4.7μF±10%	5.5×4.0	3.15	2.5	A2	DB
RCER71E475K2□□H03□	X7R (EIA)	25Vdc	4.7μF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER71E106K3□□H03□	X7R (EIA)	25Vdc	10μF±10%	5.5×5.0	4.0	2.5	A2	DB
RCER71E106K3□□H03□	X7R (EIA)	25Vdc	10μF±10%	5.5×5.0	4.0	5.0	K1	M1
RCER71E226MW□□H03□	X7R (EIA)	25Vdc	22μF±20%	5.5×7.5	4.0	5.0	K1	M1
RCER71H221K0□□H03□	X7R (EIA)	50Vdc	220pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71H221K0□□H03□	X7R (EIA)	50Vdc	220pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H331K0□□H03□	X7R (EIA)	50Vdc	330pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71H331K0□□H03□	X7R (EIA)	50Vdc	330pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H471K0□□H03□	X7R (EIA)	50Vdc	470pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71H471K0□□H03□	X7R (EIA)	50Vdc	470pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H681K0□□H03□	X7R (EIA)	50Vdc	680pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71H681K0□□H03□	X7R (EIA)	50Vdc	680pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H102K0□□H03□	X7R (EIA)	50Vdc	1000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71H102K0□□H03□	X7R (EIA)	50Vdc	1000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H152K0□□H03□	X7R (EIA)	50Vdc	1500pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71H152K0□□H03□	X7R (EIA)	50Vdc	1500pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H222K0□□H03□	X7R (EIA)	50Vdc	2200pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71H222K0□□H03□	X7R (EIA)	50Vdc	2200pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H332K0□□H03□	X7R (EIA)	50Vdc	3300pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71H332K0□□H03□	X7R (EIA)	50Vdc	3300pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H472K0□□H03□	X7R (EIA)	50Vdc	4700pF±10%	3.6×3.5	2.5	2.5	A2	DB

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RCER71H472K0□□H03□	X7R (EIA)	50Vdc	4700pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H682K0□□H03□	X7R (EIA)	50Vdc	6800pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71H682K0□□H03□	X7R (EIA)	50Vdc	6800pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H103K0□□H03□	X7R (EIA)	50Vdc	10000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71H103K0□□H03□	X7R (EIA)	50Vdc	10000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H153K0□□H03□	X7R (EIA)	50Vdc	15000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71H153K0□□H03□	X7R (EIA)	50Vdc	15000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H223K0□□H03□	X7R (EIA)	50Vdc	22000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71H223K0□□H03□	X7R (EIA)	50Vdc	22000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H333K0□□H03□	X7R (EIA)	50Vdc	33000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71H333K0□□H03□	X7R (EIA)	50Vdc	33000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H473K0□□H03□	X7R (EIA)	50Vdc	47000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71H473K0□□H03□	X7R (EIA)	50Vdc	47000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H683K0□□H03□	X7R (EIA)	50Vdc	68000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71H683K0□□H03□	X7R (EIA)	50Vdc	68000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H104K0□□H03□	X7R (EIA)	50Vdc	0.10μF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER71H104K0□□H03□	X7R (EIA)	50Vdc	0.10μF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER71H154K1□□H03□	X7R (EIA)	50Vdc	0.15μF±10%	4.0×3.5	2.5	2.5	A2	DB
RCER71H154K1□□H03□	X7R (EIA)	50Vdc	0.15μF±10%	4.0×3.5	2.5	5.0	K1	M1
RCER71H224K1□□H03□	X7R (EIA)	50Vdc	0.22μF±10%	4.0×3.5	2.5	2.5	A2	DB
RCER71H224K1□□H03□	X7R (EIA)	50Vdc	0.22μF±10%	4.0×3.5	2.5	5.0	K1	M1
RCER71H334K1□□H03□	X7R (EIA)	50Vdc	0.33μF±10%	4.0×3.5	2.5	2.5	A2	DB
RCER71H334K1□□H03□	X7R (EIA)	50Vdc	0.33μF±10%	4.0×3.5	2.5	5.0	K1	M1
RCER71H474K1□□H03□	X7R (EIA)	50Vdc	0.47μF±10%	4.0×3.5	2.5	2.5	A2	DB
RCER71H474K1□□H03□	X7R (EIA)	50Vdc	0.47μF±10%	4.0×3.5	2.5	5.0	K1	M1
RCER71H684K2□□H03□	X7R (EIA)	50Vdc	0.68μF±10%	5.5×4.0	3.15	2.5	A2	DB
RCER71H684K2□□H03□	X7R (EIA)	50Vdc	0.68μF±10%	5.5×4.0	3.15	5.0	K1	M1
RCEC71H105K1□□H03□	X7S (EIA)	50Vdc	1.0μF±10%	4.0×3.5	2.5	2.5	A2	DB
RCEC71H105K1□□H03□	X7S (EIA)	50Vdc	1.0μF±10%	4.0×3.5	2.5	5.0	K1	M1
RCER71H105K2□□H03□	X7R (EIA)	50Vdc	1.0μF±10%	5.5×4.0	3.15	2.5	A2	DB
RCER71H105K2□□H03□	X7R (EIA)	50Vdc	1.0μF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER71H155K2□□H03□	X7R (EIA)	50Vdc	1.5μF±10%	5.5×4.0	3.15	2.5	A2	DB
RCER71H155K2□□H03□	X7R (EIA)	50Vdc	1.5μF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER71H225K2□□H03□	X7R (EIA)	50Vdc	2.2μF±10%	5.5×4.0	3.15	2.5	A2	DB
RCER71H225K2□□H03□	X7R (EIA)	50Vdc	2.2μF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER71H335K3□□H03□	X7R (EIA)	50Vdc	3.3μF±10%	5.5×5.0	4.0	2.5	A2	DB
RCER71H335K3□□H03□	X7R (EIA)	50Vdc	3.3μF±10%	5.5×5.0	4.0	5.0	K1	M1
RCEC71H475K2□□H03□	X7S (EIA)	50Vdc	4.7μF±10%	5.5×4.0	3.15	2.5	A2	DB
RCEC71H475K2□□H03□	X7S (EIA)	50Vdc	4.7μF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER71H475K3□□H03□	X7R (EIA)	50Vdc	4.7μF±10%	5.5×5.0	4.0	2.5	A2	DB
RCER71H475K3□□H03□	X7R (EIA)	50Vdc	4.7μF±10%	5.5×5.0	4.0	5.0	K1	M1
RCEC71H106K3□□H03□	X7S (EIA)	50Vdc	10μF±10%	5.5×5.0	4.0	2.5	A2	DB
RCEC71H106K3□□H03□	X7S (EIA)	50Vdc	10μF±10%	5.5×5.0	4.0	5.0	K1	M1
RCER71H106MW□□H03□	X7R (EIA)	50Vdc	10μF±20%	5.5×7.5	4.0	5.0	K1	M1
RCEC71H226MW□□H03□	X7S (EIA)	50Vdc	22μF±20%	5.5×7.5	4.0	5.0	K1	M1
RCER72A221K0□□H03□	X7R (EIA)	100Vdc	220pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER72A221K0□□H03□	X7R (EIA)	100Vdc	220pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER72A331K0□□H03□	X7R (EIA)	100Vdc	330pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER72A331K0□□H03□	X7R (EIA)	100Vdc	330pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER72A471K0□□H03□	X7R (EIA)	100Vdc	470pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER72A471K0□□H03□	X7R (EIA)	100Vdc	470pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER72A681K0□□H03□	X7R (EIA)	100Vdc	680pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER72A681K0□□H03□	X7R (EIA)	100Vdc	680pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER72A102K0□□H03□	X7R (EIA)	100Vdc	1000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER72A102K0□□H03□	X7R (EIA)	100Vdc	1000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER72A152K0□□H03□	X7R (EIA)	100Vdc	1500pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER72A152K0□□H03□	X7R (EIA)	100Vdc	1500pF±10%	3.6×3.5	2.5	5.0	K1	M1

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RCER72A222K0□□H03□	X7R (EIA)	100Vdc	2200pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER72A222K0□□H03□	X7R (EIA)	100Vdc	2200pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER72A332K0□□H03□	X7R (EIA)	100Vdc	3300pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER72A332K0□□H03□	X7R (EIA)	100Vdc	3300pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER72A472K0□□H03□	X7R (EIA)	100Vdc	4700pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER72A472K0□□H03□	X7R (EIA)	100Vdc	4700pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER72A682K0□□H03□	X7R (EIA)	100Vdc	6800pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER72A682K0□□H03□	X7R (EIA)	100Vdc	6800pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER72A103K0□□H03□	X7R (EIA)	100Vdc	10000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER72A103K0□□H03□	X7R (EIA)	100Vdc	10000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER72A153K0□□H03□	X7R (EIA)	100Vdc	15000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER72A153K0□□H03□	X7R (EIA)	100Vdc	15000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER72A223K0□□H03□	X7R (EIA)	100Vdc	22000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RCER72A223K0□□H03□	X7R (EIA)	100Vdc	22000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RCER72A333K1□□H03□	X7R (EIA)	100Vdc	33000pF±10%	4.0×3.5	2.5	2.5	A2	DB
RCER72A333K1□□H03□	X7R (EIA)	100Vdc	33000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RCER72A473K1□□H03□	X7R (EIA)	100Vdc	47000pF±10%	4.0×3.5	2.5	2.5	A2	DB
RCER72A473K1□□H03□	X7R (EIA)	100Vdc	47000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RCER72A683K1□□H03□	X7R (EIA)	100Vdc	68000pF±10%	4.0×3.5	2.5	2.5	A2	DB
RCER72A683K1□□H03□	X7R (EIA)	100Vdc	68000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RCER72A104K1□□H03□	X7R (EIA)	100Vdc	0.10μF±10%	4.0×3.5	2.5	2.5	A2	DB
RCER72A104K1□□H03□	X7R (EIA)	100Vdc	0.10μF±10%	4.0×3.5	2.5	5.0	K1	M1
RCER72A154K2□□H03□	X7R (EIA)	100Vdc	0.15μF±10%	5.5×4.0	3.15	2.5	A2	DB
RCER72A154K2□□H03□	X7R (EIA)	100Vdc	0.15μF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72A224K2□□H03□	X7R (EIA)	100Vdc	0.22μF±10%	5.5×4.0	3.15	2.5	A2	DB
RCER72A224K2□□H03□	X7R (EIA)	100Vdc	0.22μF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72A334K1□□H03□	X7R (EIA)	100Vdc	0.33μF±10%	4.0×3.5	2.5	2.5	A2	DB
RCER72A334K1□□H03□	X7R (EIA)	100Vdc	0.33μF±10%	4.0×3.5	2.5	5.0	K1	M1
RCER72A474K2□□H03□	X7R (EIA)	100Vdc	0.47μF±10%	5.5×4.0	3.15	2.5	A2	DB
RCER72A474K2□□H03□	X7R (EIA)	100Vdc	0.47μF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72A684K2□□H03□	X7R (EIA)	100Vdc	0.68μF±10%	5.5×4.0	3.15	2.5	A2	DB
RCER72A684K2□□H03□	X7R (EIA)	100Vdc	0.68μF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72A105K2□□H03□	X7R (EIA)	100Vdc	1.0μF±10%	5.5×4.0	3.15	2.5	A2	DB
RCER72A105K2□□H03□	X7R (EIA)	100Vdc	1.0μF±10%	5.5×4.0	3.15	5.0	K1	M1
RCEC72A155K3□□H03□	X7S (EIA)	100Vdc	1.5μF±10%	5.5×5.0	4.0	2.5	A2	DB
RCEC72A155K3□□H03□	X7S (EIA)	100Vdc	1.5μF±10%	5.5×5.0	4.0	5.0	K1	M1
RCEC72A225K3□□H03□	X7S (EIA)	100Vdc	2.2μF±10%	5.5×5.0	4.0	2.5	A2	DB
RCEC72A225K3□□H03□	X7S (EIA)	100Vdc	2.2μF±10%	5.5×5.0	4.0	5.0	K1	M1
RCEC72A475MW□□H03□	X7S (EIA)	100Vdc	4.7μF±20%	5.5×7.5	4.0	5.0	K1	M1
RCER72E102K1□□H03□	X7R (EIA)	250Vdc	1000pF±10%	4.0×3.5	3.15	5.0	K1	M1
RCER72E152K1□□H03□	X7R (EIA)	250Vdc	1500pF±10%	4.0×3.5	3.15	5.0	K1	M1
RCER72E222K1□□H03□	X7R (EIA)	250Vdc	2200pF±10%	4.0×3.5	3.15	5.0	K1	M1
RCER72E332K1□□H03□	X7R (EIA)	250Vdc	3300pF±10%	4.0×3.5	3.15	5.0	K1	M1
RCER72E472K1□□H03□	X7R (EIA)	250Vdc	4700pF±10%	4.0×3.5	3.15	5.0	K1	M1
RCER72E682K1□□H03□	X7R (EIA)	250Vdc	6800pF±10%	4.0×3.5	3.15	5.0	K1	M1
RCER72E103K1□□H03□	X7R (EIA)	250Vdc	10000pF±10%	4.0×3.5	3.15	5.0	K1	M1
RCER72E153K1□□H03□	X7R (EIA)	250Vdc	15000pF±10%	4.0×3.5	3.15	5.0	K1	M1
RCER72E223K1□□H03□	X7R (EIA)	250Vdc	22000pF±10%	4.0×3.5	3.15	5.0	K1	M1
RCER72E333K2□□H03□	X7R (EIA)	250Vdc	33000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72E473K2□□H03□	X7R (EIA)	250Vdc	47000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72E683K2□□H03□	X7R (EIA)	250Vdc	68000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72E104K2□□H03□	X7R (EIA)	250Vdc	0.10μF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72E154K3□□H03□	X7R (EIA)	250Vdc	0.15μF±10%	5.5×5.0	4.0	5.0	K1	M1
RCER72E224K3□□H03□	X7R (EIA)	250Vdc	0.22μF±10%	5.5×5.0	4.0	5.0	K1	M1
RCER72E334K4□□H03□	X7R (EIA)	250Vdc	0.33μF±10%	7.5×5.5	4.0	5.0	K1	M1
RCER72E474K4□□H03□	X7R (EIA)	250Vdc	0.47μF±10%	7.5×5.5	4.0	5.0	K1	M1
RCER72E684K5□□H03□	X7R (EIA)	250Vdc	0.68μF±10%	7.5×7.5	4.0	5.0	B1	E1

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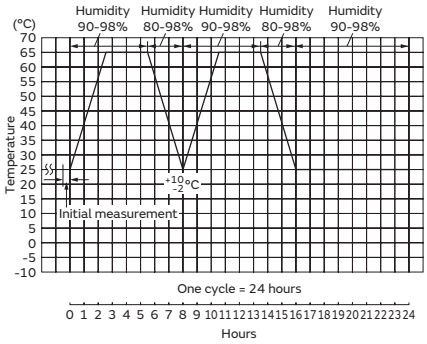
Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RCER72E105K5□□H03□	X7R (EIA)	250Vdc	1.0μF±10%	7.5×7.5	4.0	5.0	B1	E1
RCER72E225MU□□H03□	X7R (EIA)	250Vdc	2.2μF±20%	7.5×12.5	4.0	5.0	B1	E1
RCER72J102K2□□H03□	X7R (EIA)	630Vdc	1000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72J152K2□□H03□	X7R (EIA)	630Vdc	1500pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72J222K2□□H03□	X7R (EIA)	630Vdc	2200pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72J332K2□□H03□	X7R (EIA)	630Vdc	3300pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72J472K2□□H03□	X7R (EIA)	630Vdc	4700pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72J682K2□□H03□	X7R (EIA)	630Vdc	6800pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72J103K2□□H03□	X7R (EIA)	630Vdc	10000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72J153K2□□H03□	X7R (EIA)	630Vdc	15000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72J223K2□□H03□	X7R (EIA)	630Vdc	22000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER72J333K3□□H03□	X7R (EIA)	630Vdc	33000pF±10%	5.5×5.0	4.0	5.0	K1	M1
RCER72J473K3□□H03□	X7R (EIA)	630Vdc	47000pF±10%	5.5×5.0	4.0	5.0	K1	M1
RCER72J683K4□□H03□	X7R (EIA)	630Vdc	68000pF±10%	7.5×5.5	4.0	5.0	K1	M1
RCER72J104K4□□H03□	X7R (EIA)	630Vdc	0.10μF±10%	7.5×5.5	4.0	5.0	K1	M1
RCER72J154K5□□H03□	X7R (EIA)	630Vdc	0.15μF±10%	7.5×8.0	4.0	5.0	B1	E1
RCER72J224K5□□H03□	X7R (EIA)	630Vdc	0.22μF±10%	7.5×8.0	4.0	5.0	B1	E1
RCER72J474MU□□H03□	X7R (EIA)	630Vdc	0.47μF±20%	7.7×13.0	4.0	5.0	B1	E1
RCER73A102K2□□H03□	X7R (EIA)	1000Vdc	1000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER73A152K2□□H03□	X7R (EIA)	1000Vdc	1500pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER73A222K2□□H03□	X7R (EIA)	1000Vdc	2200pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER73A332K2□□H03□	X7R (EIA)	1000Vdc	3300pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER73A472K2□□H03□	X7R (EIA)	1000Vdc	4700pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER73A682K2□□H03□	X7R (EIA)	1000Vdc	6800pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER73A103K2□□H03□	X7R (EIA)	1000Vdc	10000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RCER73A153K3□□H03□	X7R (EIA)	1000Vdc	15000pF±10%	5.5×5.0	4.0	5.0	K1	M1
RCER73A223K3□□H03□	X7R (EIA)	1000Vdc	22000pF±10%	5.5×5.0	4.0	5.0	K1	M1
RCER73A333K4□□H03□	X7R (EIA)	1000Vdc	33000pF±10%	7.5×5.5	4.0	5.0	K1	M1
RCER73A473K4□□H03□	X7R (EIA)	1000Vdc	47000pF±10%	7.5×5.5	4.0	5.0	K1	M1
RCER73A683K5□□H03□	X7R (EIA)	1000Vdc	68000pF±10%	7.5×8.0	4.0	5.0	B1	E1
RCER73A104K5□□H03□	X7R (EIA)	1000Vdc	0.10μF±10%	7.5×8.0	4.0	5.0	B1	E1
RCER73A224MU□□H03□	X7R (EIA)	1000Vdc	0.22μF±20%	7.7×13.0	4.0	5.0	B1	E1

Two blank columns are filled with the lead style code. Please refer to the 3 columns on the right for the appropriate code.
The last blank column is filled with the packaging code. (B: bulk, A: ammo pack)

Temperature Compensating Type Specifications and Test Methods

No.	AEC-Q200 Test Item		Specifications	AEC-Q200 Test Method
1	Pre-and Post-Stress Electrical Test		–	
2	High Temperature Exposure (Storage)		The measured and observed characteristics should satisfy the specifications in the following table.	Sit the capacitor for 1000±12h at 150±3°C. Let sit for 24±2h at room condition*, then measure.
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±3% or ±0.3pF (Whichever is larger)	
		Q	30pF ≦ C: Q ≧ 350 10pF ≦ C < 30pF: Q ≧ 275+5C/2 10pF > C: Q ≧ 200+10C C: Nominal Capacitance (pF)	
		I.R.	More than 1000MΩ or 50MΩ • μF (Whichever is smaller)	
3	Temperature Cycling		The measured and observed characteristics should satisfy the specifications in the following table.	Perform the 1000 cycles according to the four heat treatments listed in the following table. Let sit for 24±2h at room condition*, then measure. Step / 1 / 2 / 3 / 4 Temp. (°C) / -55+0/-3 / Room Temp. / 125+3/-0 / Room Temp. Time (min) / 15±3 / 1 / 15±3 / 1
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±5% or ±0.5pF (Whichever is larger)	
		Q	30pF ≦ C: Q ≧ 350 10pF ≦ C < 30pF: Q ≧ 275+5C/2 10pF > C: Q ≧ 200+10C C: Nominal Capacitance (pF)	
		I.R.	1000MΩ or 50MΩ • μF min. (Whichever is smaller)	
4	Moisture Resistance		The measured and observed characteristics should satisfy the specifications in the following table.	Apply the 24h heat (25 to 65°C) and humidity (80 to 98%) treatment shown below, 10 consecutive times. Let sit for 24±2h at room condition*, then measure. 
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±5% or ±0.5pF (Whichever is larger)	
		Q	30pF ≦ C: Q ≧ 200 30pF > C: Q ≧ 100+10C/3 C: Nominal Capacitance (pF)	
		I.R.	500MΩ or 25MΩ • μF min. (Whichever is smaller)	
5	Biased Humidity		The measured and observed characteristics should satisfy the specifications in the following table.	Apply the rated voltage and DC1.3+0.2/-0V (add 100kΩ resistor) at 85±3°C and 80 to 85% humidity for 1000±12h. Remove and let sit for 24±2h at room condition*, then measure. The charge/discharge current is less than 50mA.
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±5% or ±0.5pF (Whichever is larger)	
		Q	30pF ≦ C: Q ≧ 200 30pF > C: Q ≧ 100+10C/3 C: Nominal Capacitance (pF)	
		I.R.	500MΩ or 25MΩ • μF min. (Whichever is smaller)	
6	Operational Life		The measured and observed characteristics should satisfy the specifications in the following table.	Apply the voltage shown in the table for 1000±12h at 125±3°C. Let sit for 24±2h at room condition*, then measure. The charge/discharge current is less than 50mA. Rated Voltage / Test Voltage DC50V, DC100V / 200% of the rated voltage DC250V / 150% of the rated voltage DC630V, DC1kV / 120% of the rated voltage
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±3% or ±0.3pF (Whichever is larger)	
		Q	30pF ≦ C: Q ≧ 350 10pF ≦ C < 30pF: Q ≧ 275+5C/2 10pF > C: Q ≧ 200+10C C: Nominal Capacitance (pF)	
		I.R.	1000MΩ or 50MΩ • μF min. (Whichever is smaller)	

* "room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

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Temperature Compensating Type Specifications and Test Methods

Continued from the preceding page.↘

No.	AEC-Q200 Test Item		Specifications	AEC-Q200 Test Method
7	External Visual		No defects or abnormalities	Visual inspection
8	Physical Dimension		Within the specified dimensions	Using calipers and micrometers
9	Marking		To be easily legible	Visual inspection
10	Resistance to Solvents	Appearance	No defects or abnormalities	Per MIL-STD-202 Method 215 Solvent 1: 1 part (by volume) of isopropyl alcohol 3 parts (by volume) of mineral spirits Solvent 2: Terpene defluxer Solvent 3: 42 parts (by volume) of water 1 part (by volume) of propylene glycol monomethyl ether 1 part (by volume) of monoethanolamine
		Capacitance	Within the specified tolerance	
		Q	30pF ≦ C: Q ≧ 1000 30pF > C: Q ≧ 400+20C C: Nominal Capacitance (pF)	
		I.R.	More than 10000MΩ or 500MΩ • μF (Whichever is smaller)	
11	Mechanical Shock	Appearance	No defects or abnormalities	Three shocks in each direction should be applied along 3 mutually perpendicular axes of the test specimen (18 shocks). The specified test pulse should be Half-sine and should have a duration: 0.5ms, peak value: 1500G and velocity change: 4.7m/s.
		Capacitance	Within the specified tolerance	
		Q	30pF ≦ C : Q ≧ 1000 30pF > C : Q ≧ 400+20C C : Nominal Capacitance (pF)	
12	Vibration	Appearance	No defects or abnormalities	The capacitor should be subjected to a simple harmonic motion having a total amplitude of 1.5mm, the frequency being varied uniformly between the approximate limits of 10 and 2000Hz. The frequency range, from 10 to 2000Hz and return to 10Hz, should be traversed in approximately 20min. This motion should be applied for 12 items in each 3 mutually perpendicular directions (total of 36 times).
		Capacitance	Within the specified tolerance	
		Q	30pF ≦ C: Q ≧ 1000 30pF > C: Q ≧ 400+20C C: Nominal Capacitance (pF)	
13-1	Resistance to Soldering Heat (Non-Preheat)		The measured and observed characteristics should satisfy the specifications in the following table.	The lead wires should be immersed in the melted solder 1.5 to 2.0mm from the root of terminal at 260±5°C for 10±1s. Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±2.5% or ±0.25pF (Whichever is larger)	
		Dielectric Strength (Between Terminals)	No defects	
13-2	Resistance to Soldering Heat (On-Preheat)		The measured and observed characteristics should satisfy the specifications in the following table.	First the capacitor should be stored at 120+0/-5°C for 60+0/-5s. Then, the lead wires should be immersed in the melted solder 1.5 to 2.0mm from the root of terminal at 260±5°C for 7.5+0/-1s. Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±2.5% or ±0.25pF (Whichever is larger)	
		Dielectric Strength (Between Terminals)	No defects	
13-3	Resistance to Soldering Heat (soldering iron method)		The measured and observed characteristics should satisfy the specifications in the following table.	Test condition Temperature of iron-tip: 350±10°C Soldering time: 3.5±0.5s Soldering position Straight Lead: 1.5 to 2.0mm from the root of terminal. Crimp Lead: 1.5 to 2.0mm from the end of lead bend. Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±2.5% or ±0.25pF (Whichever is larger)	
		Dielectric Strength (Between Terminals)	No defects	
14	Thermal Shock		The measured and observed characteristics should satisfy the specifications in the following table.	Perform the 300 cycles according to the two heat treatments listed in the following table (Maximum transfer time is 20s). Let sit for 24±2h at room condition*, then measure.
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±5% or ±0.5pF (Whichever is larger)	
		Q	30pF ≦ C: Q ≧ 350 10pF ≦ C < 30p: Q ≧ 275+5C/2 10pF > C: Q ≧ 200+10C C: Nominal Capacitance (pF)	
		I.R.	1000MΩ or 50MΩ • μF min. (Whichever is smaller)	

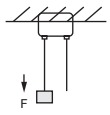
Step	1	2
Temp. (°C)	-55+0/-3	125+3/-0
Time (min)	15±3	15±3

* "room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

Continued on the following page.↗

Temperature Compensating Type Specifications and Test Methods

Continued from the preceding page.↘

No.	AEC-Q200 Test Item		Specifications		AEC-Q200 Test Method
15	ESD	Appearance	No defects or abnormalities		Per AEC-Q200-002
		Capacitance	Within the specified tolerance		
		Q	30pF ≦ C: Q ≧ 1000 30pF > C: Q ≧ 400+20C C: Nominal Capacitance (pF)		
		I.R.	More than 10000MΩ or 500MΩ • μF (Whichever is smaller)		
16	Solderability		Lead wire should be soldered with uniform coating on the axial direction over 95% of the circumferential direction.		Should be placed into steam aging for 8h±15min. The terminal of capacitor is dipped into a solution of ethanol (JIS K 8101) and rosin (JIS K 5902) (25% rosin in weight propotion). Immerse in solder solution for 2±0.5s. In both cases the depth of dipping is up to about 1.5 to 2mm from the terminal body.
17	Electrical Charac-terization	Appearance	No defects or abnormalities		Visual inspection
		Capacitance	Within the specified tolerance		The capacitance, Q should be measured at 25°C at the frequency and voltage shown in the table. Nominal Cap. / Frequency / Voltage C ≦ 1000pF / 1±0.1MHz / AC0.5 to 5V (r.m.s.) C > 1000pF / 1±0.1kHz / AC1±0.2V (r.m.s.)
		Q	30pF ≦ C: Q ≧ 1000 30pF > C: Q ≧ 400+20C C: Nominal Capacitance (pF)		
		I.R.	Between Terminals	10000MΩ or 500MΩ • μF min. (Whichever is smaller)	The insulation resistance should be measured with a DC voltage shown in the table at 25°C within 2min of charging. Rated Voltage / Measuring Voltage DC25V, DC50V, DC100V, DC250V / Rated Voltage DC630V, DC1kV / DC500V
		Dielectric Strength	Between Terminals	No defects or abnormalities	The capacitor should not be damaged when DC voltage shown in the table is applied between the terminations for 1 to 5s. (Charge/Discharge current ≦ 50mA.) Rated Voltage / Test Voltage DC50V, DC100V / 300% of the rated voltage DC250V / 200% of the rated voltage DC630V / 150% of the rated voltage DC1kV / 130% of the rated voltage
			Body Insulation	No defects or abnormalities	The capacitor is placed in a container with metal balls of 1mm diameter so that each terminal, short-circuit is kept approximately 2mm from the balls, and DC voltage shown in the table is impressed for 1 to 5s between capacitor terminals and metal balls. (Charge/Discharge current ≦ 50mA.) Rated Voltage / Test Voltage DC25V, DC50V, DC100V / 250% of the rated voltage DC250V / 200% of the rated voltage DC630V, DC1kV / DC1300V
18	Terminal Strength	Tensile Strength	Termination not to be broken or loosened		As in the figure, fix the capacitor body, apply the force gradually to each lead in the radial direction of the capacitor until reaching 10N and then keep the force applied for 10±1s. 
		Bending Strength	Termination not to be broken or loosened		Each lead wire should be subjected to a force of 2.5N and then be bent 90° at the point of egress in one direction. Each wire is then returned to the original position and bent 90° in the opposite direction at the rate of one bend per 2 to 3s.

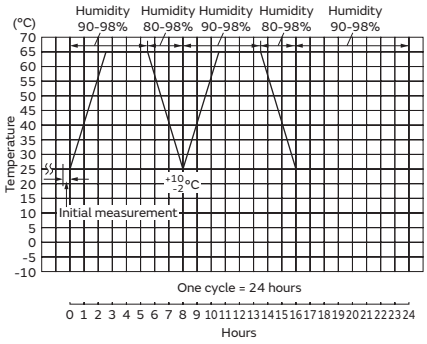
Continued on the following page.↗

Temperature Compensating Type Specifications and Test Methods

Continued from the preceding page.↘

<table>
<tr><th>No.</th><th>AEC-Q200 Test Item</th><th>Specifications</th><th>AEC-Q200 Test Method</th></tr>
<tr><td>19</td><td>Capacitance Temperature Characteristics</td><td>
<table>
<tr><th>Char.</th><th>Temperature Coefficient</th></tr>
<tr><td>C0G</td><td>25 to 125°C: 0±30ppm/°C
–55 to 25°C: 0+30/–72ppm/°C</td></tr>
<tr><td>U2J</td><td>25 to 125°C: –750±120ppm/°C
–55 to 25°C: –750+120/–347ppm/°C</td></tr>
</table>
</td><td>The capacitance change should be measured after 5min at each specified temperature step.
<table>
<tr><th>Step</th><th>Temperature (°C)</th></tr>
<tr><td>1</td><td>25±2</td></tr>
<tr><td>2</td><td>-55±3</td></tr>
<tr><td>3</td><td>25±2</td></tr>
<tr><td>4</td><td>125±3</td></tr>
<tr><td>5</td><td>25±2</td></tr>
</table>
The temperature coefficient is determind using the capacitance measured in step 3 as a reference. When cycling the temperature sequentially from step 1 through 5 (-55 to +125°C) the capacitance should be within the specified tolerance for the temperature coefficient.
The capacitance drift is caluculated by dividing the differences betweeen the maximum and minimum measured values in the step 1, 3 and 5 by the capacitance value in step 3.</td></tr>
</table>

High Dielectric Constant Type Specifications and Test Methods

No.	AEC-Q200 Test Item		Specifications	AEC-Q200 Test Method
1	Pre-and Post-Stress Electrical Test		–	
2	High Temperature Exposure (Storage)		The measured and observed characteristics should satisfy the specifications in the following table.	Sit the capacitor for 1000±12h at 150±3°C. Let sit for 24±2h at room condition*, then measure. •Pretreatment Perform the heat treatment at 150+0/-10°C for 60±5min and then let sit for 24±2h at room condition*.
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±12.5%	
		D.F.	0.04 max.	
		I.R.	More than 1000MΩ or 50MΩ • μF (Whichever is smaller)	
3	Temperature Cycling		The measured and observed characteristics should satisfy the specifications in the following table.	Perform the 1000 cycles according to the four heat treatments listed in the following table. Let sit for 24±2h at room condition*, then measure. Step 1: -55+0/-3, 15±3 min; Step 2: Room Temp., 1 min; Step 3: 125+3/-0, 15±3 min; Step 4: Room Temp., 1 min •Pretreatment Perform the heat treatment at 150+0/-10°C for 60±5min and then let sit for 24±2h at room condition*.
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±12.5%	
		D.F.	0.05 max.	
		I.R.	1000MΩ or 50MΩ • μF min. (Whichever is smaller)	
4	Moisture Resistance		The measured and observed characteristics should satisfy the specifications in the following table.	Apply the 24h heat (25 to 65°C) and humidity (80 to 98%) treatment shown below, 10 consecutive times. Let sit for 24±2h at room condition*, then measure. •Pretreatment Perform the heat treatment at 150+0/-10°C for 60±5min and then let sit for 24±2h at room condition*. 
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±12.5%	
		D.F.	0.05 max.	
		I.R.	500MΩ or 25MΩ • μF min. (Whichever is smaller)	
5	Biased Humidity		The measured and observed characteristics should satisfy the specifications in the following table.	Apply the rated voltage and DC1.3+0.2/-0V (add 100kΩ resistor) at 85±3°C and 80 to 85% humidity for 1000±12h. Remove and let sit for 24±2h at room condition*, then measure. The charge/discharge current is less than 50mA. •Pretreatment Perform the heat treatment at 150+0/-10°C for 60±5min and then let sit for 24±2h at room condition*.
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±12.5%	
		D.F.	0.05 max.	
		I.R.	500MΩ or 25MΩ • μF min. (Whichever is smaller)	

* "room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

Continued on the following page.↗

High Dielectric Constant Type Specifications and Test Methods

Continued from the preceding page.↘

No.	AEC-Q200 Test Item		Specifications	AEC-Q200 Test Method
6	Operational Life		The measured and observed characteristics should satisfy the specifications in the following table.	Apply the voltage shown in the table for 1000±12h at 125±3°C. Let sit for 24±2h at room condition*, then measure. The charge/discharge current is less than 50mA. •Pretreatment Apply test voltage for 60±5min at test temperature. Remove and let sit for 24±2h at room condition*.
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±12.5%	
		D.F.	0.04 max.	
		I.R.	1000MΩ or 50MΩ • μF min. (Whichever is smaller)	
7	External Visual		No defects or abnormalities	Visual inspection
8	Physical Dimension		Within the specified dimensions	Using calipers and micrometers
9	Marking		To be easily legible	Visual inspection
10	Resistance to Solvents	Appearance	No defects or abnormalities	Per MIL-STD-202 Method 215 Solvent 1: 1 part (by volume) of isopropyl alcohol 3 parts (by volume) of mineral spirits Solvent 2: Terpene defluxer Solvent 3: 42 parts (by volume) of water 1 part (by volume) of propylene glycol monomethyl ether 1 part (by volume) of monoethanolamine
		Capacitance	Within the specified tolerance	
		D.F.	0.025 max.	
		I.R.	Rated Voltage: DC25V, DC50V, DC100V More than 10000MΩ or 500MΩ • μF (Whichever is smaller) Rated Voltage: DC250V, DC500V, DC630V, DC1kV More than 10000MΩ or 100MΩ • μF (Whichever is smaller)	
11	Mechanical Shock	Appearance	No defects or abnormalities	Three shocks in each direction should be applied along 3 mutually perpendicular axes of the test specimen (18 shocks). The specified test pulse should be Half-sine and should have a duration: 0.5ms, peak value: 1500G and velocity change: 4.7m/s.
		Capacitance	Within the specified tolerance	
		D.F.	0.025 max.	
12	Vibration	Appearance	No defects or abnormalities	The capacitor should be subjected to a simple harmonic motion having a total amplitude of 1.5mm, the frequency being varied uniformly between the approximate limits of 10 and 2000Hz. The frequency range, from 10 to 2000Hz and return to 10Hz, should be traversed in approximately 20min. This motion should be applied for 12 items in each 3 mutually perpendicular directions (total of 36 times).
		Capacitance	Within the specified tolerance	
		D.F.	0.025 max.	
13-1	Resistance to Soldering Heat (Non-Preheat)		The measured and observed characteristics should satisfy the specifications in the following table.	The lead wires should be immersed in the melted solder 1.5 to 2.0mm from the root of terminal at 260±5°C for 10±1s. Pre-treatment Capacitor should be stored at 150+0/-10°C for 1h, then place at room temperature for 24±2h before initial measurement. Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±7.5%	
		Dielectric Strength (Between Terminals)	No defects	
13-2	Resistance to Soldering Heat (On-Preheat)		The measured and observed characteristics should satisfy the specifications in the following table.	First the capacitor should be stored at 120+0/-5°C for 60+0/-5s. Then, the lead wires should be immersed in the melted solder 1.5 to 2.0mm from the root of terminal at 260±5°C for 7.5+0/-1s. Pre-treatment Capacitor should be stored at 150+0/-10°C for 1h, then place at room temperature for 24±2h before initial measurement. Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±7.5%	
		Dielectric Strength (Between Terminals)	No defects	

Rated Voltage	Test Voltage
DC25V, DC50V, DC100V	200% of the rated voltage *1
DC250V	150% of the rated voltage
DC630V	120% of the rated voltage
DC1kV	110% of the rated voltage

* "room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

*1: below parts are applicable in rated voltage×150%.

Char.	Rated Voltage	Capacitance	Dimensions
C7	1H	105	1
C7	1H	475	2
C7	1H	106	3
C7	1H	226	W
R7	2A	334	1
R7	2A	474-105	2
C7	2A	155-225	3
C7	2A	475	W

Continued on the following page.↗

High Dielectric Constant Type Specifications and Test Methods

Continued from the preceding page.↘

No.	AEC-Q200 Test Item		Specifications		AEC-Q200 Test Method
13 - 3	Resistance to Soldering Heat (Soldering Iron Method)		The measured and observed characteristics should satisfy the specifications in the following table.		Test condition Temperature of iron-tip: 350±10°C Soldering time: 3.5±0.5s. Soldering position Straight Lead: 1.5 to 2.0mm from the root of terminal. Crimp Lead: 1.5 to 2.0mm from the end of lead bend. Pre-treatment Capacitor should be stored at 150+0/-10°C for 1h, then place at room temperature for 24±2h before initial measurement. Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Appearance	No defects or abnormalities		
		Capacitance Change	Within ±7.5%		
		Dielectric Strength (Between Terminals)	No defects		
14	Thermal Shock		The measured and observed characteristics should satisfy the specifications in the following table.		Perform the 300 cycles according to the two heat treatments listed in the following table (Maximum transfer time is 20s). Let sit for 24±2h at room condition*, then measure. Step / 1 / 2 Temp. (°C) / -55+0/-3 / 125+3/-0 Time (min) / 15±3 / 15±3 •Pretreatment Perform the heat treatment at 150+0/-10°C for 60±5min and then let sit for 24±2h at room condition*.
		Appearance	No defects or abnormalities		
		Capacitance Change	Within ±12.5%		
		D.F.	0.05 max.		
		I.R.	1000MΩ or 50MΩ • μF min. (Whichever is smaller)		
15	ESD	Appearance	No defects or abnormalities		Per AEC-Q200-002
		Capacitance	Within the specified tolerance		
		D.F.	0.025 max.		
		I.R.	Rated Voltage: DC25V, DC50V, DC100V More than 10000MΩ or 500MΩ • μF (Whichever is smaller) Rated Voltage: DC250V, DC500V, DC630V, DC1kV More than 10000MΩ or 100MΩ • μF (Whichever is smaller)		
16	Solderability		Lead wire should be soldered with uniform coating on the axial direction over 95% of the circumferential direction.		Should be placed into steam aging for 8h±15min. The terminal of capacitor is dipped into a solution of ethanol (JIS K 8101) and rosin (JIS K 5902) (25% rosin in weight propotion). Immerse in solder solution for 2±0.5s. In both cases the depth of dipping is up to about 1.5 to 2mm from the terminal body.
17	Electrical Charac-terization	Appearance	No defects or abnormalities		Visual inspection
		Capacitance	Within the specified tolerance		The capacitance/D.F. should be measured at 25°C at the frequency and voltage shown in the table. Nominal Cap. / Frequency / Voltage C ≦ 10μF / 1±0.1kHz / AC1.0±0.2V (r.m.s.) C > 10μF / 120±24kHz / AC0.5±0.1V (r.m.s.)
		D.F.	0.025 max.		
		I.R.	Between Terminals	Rated Voltage: DC25V, DC50V, DC100V More than 10000MΩ or 500MΩ • μF (Whichever is smaller) Rated Voltage: DC250V, DC500V, DC630V, DC1kV More than 10000MΩ or 100MΩ • μF (Whichever is smaller)	The insulation resistance should be measured with a DC voltage shown in the table at 25°C within 2min of charging. Rated Voltage / Measuring Voltage DC25V, DC50V, DC100V, DC250V / Rated Voltage DC630V, DC1kV / DC500V
		Dielectric Strength	Between Terminals	No defects or abnormalities	The capacitor should not be damaged when DC voltage shown in the table is applied between the terminations for 1 to 5s. (Charge/Discharge current ≦ 50mA.) Rated Voltage / Test Voltage DC25V, DC50V, DC100V / 250% of the rated voltage DC250V / 200% of the rated voltage DC630V / 150% of the rated voltage DC1kV / 120% of the rated voltage
			Body Insulation	No defects or abnormalities	The capacitor is placed in a container with metal balls of 1mm diameter so that each terminal, short-circuit is kept approximately 2mm from the balls, and 250% of the rated DC voltage shown in the table is impressed for 1 to 5s between capacitor terminals and metal balls. (Charge/Discharge current ≦ 50mA.) Rated Voltage / Test Voltage DC25V, DC50V, DC100V / 250% of the rated voltage DC250V / 200% of the rated voltage DC630V, DC1kV / DC1300V

* "room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

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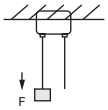
High Dielectric Constant Type Specifications and Test Methods

Continued from the preceding page.↘

No.	AEC-Q200 Test Item		Specifications	AEC-Q200 Test Method
18	Terminal Strength	Tensile Strength	Termination not to be broken or loosened	As in the figure, fix the capacitor body, apply the force gradually to each lead in the radial direction of the capacitor until reaching 10N and then keep the force applied for 10±1s. 
		Bending Strength	Termination not to be broken or loosened	Each lead wire should be subjected to a force of 2.5N and then be bent 90° at the point of egress in one direction. Each wire is then returned to the original position and bent 90° in the opposite direction at the rate of one bend per 2 to 3s.
19	Capacitance Temperature Characteristics		Char. X7R: Within ±15% Char. X7S: Within ±22%	The capacitance change should be measured after 5min at each specified temperature step. Step / Temperature (°C): 1 / 25±2; 2 / -55±3; 3 / 25±2; 4 / 125±3; 5 / 25±2 The ranges of capacitance change compared with the above 25°C value over the temperature ranges shown in the table should be within the specified ranges. •Pretreatment Perform the heat treatment at 150+0/-10°C for 60±5min and then let sit for 24±2h at room condition*. Perform the initial measurement.

* “room condition” Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

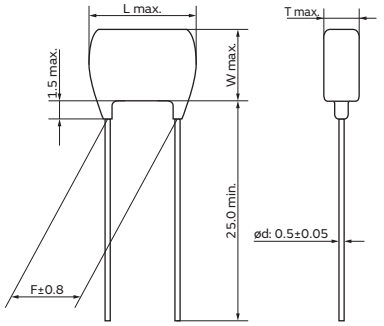
150°C Operation Leaded MLCC for Automotive

RHE Series (DC25V-DC100V)

Features

1. Small size and large capacitance
2. Low ESR and ESL suitable for high frequency
3. Applied maximum temperature up to 150°C
   Note: Maximum accumulative time to 150°C
   is within 2000 hours.
4. Meet AEC-Q200, ISO7637-2 (surge test) requirement
5. Meet LF (Lead Free) and HF (Halogen Free)
6. Flow soldering and welding are available.
   (Re-flow soldering is not available.)
7. If copper wire is necessary at welding process,
   copper wire is available based on request.

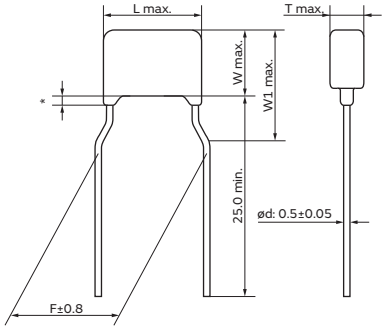
Dimensions code: 0
Lead style code: A2



· Lead Wire: Solder Coated CP Wire

(in mm)

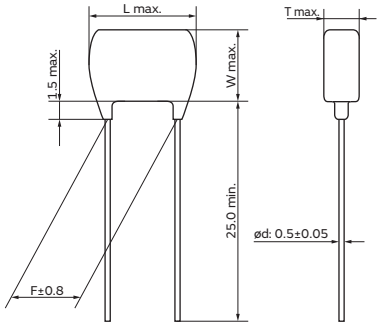
Dimensions code: 0
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

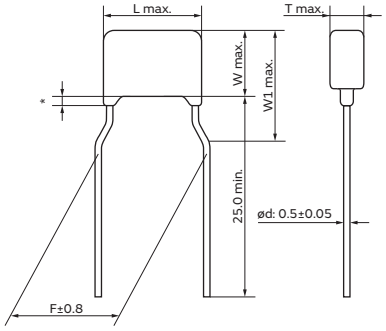
Dimensions code: 1
Lead style code: A2



· Lead Wire: Solder Coated CP Wire

(in mm)

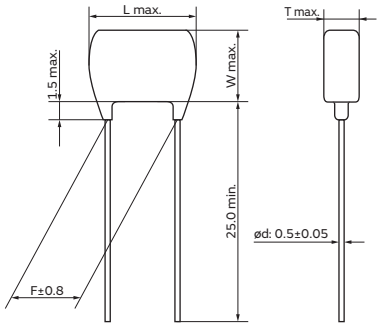
Dimensions code: 1
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

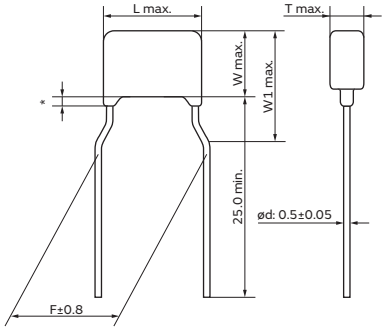
Dimensions code: 2
Lead style code: A2



· Lead Wire: Solder Coated CP Wire

(in mm)

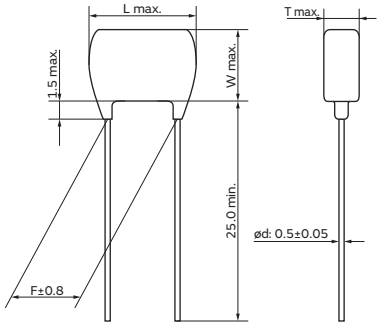
Dimensions code: 2
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

Dimensions code: 3
Lead style code: A2



· Lead Wire: Solder Coated CP Wire

(in mm)

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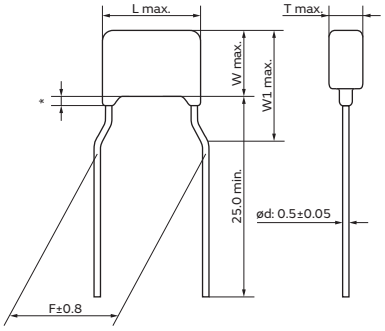
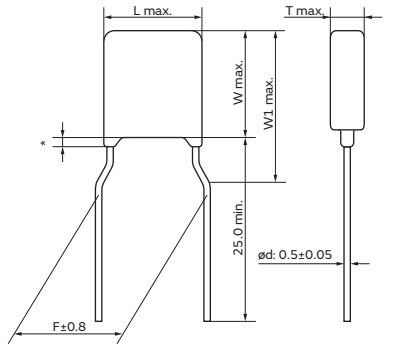
Dimensions code: 3
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

Dimensions code: W
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

Dimensions

Dimensions and Lead Style Code	Dimensions (mm)					
	L	W	W1	T	F	d
0A2/0DB	3.6	3.5	-	See the individual product specification	2.5	0.5
0K1/0M1	3.6	3.5	6.0		5.0	0.5
1A2/1DB	4.0	3.5	-		2.5	0.5
1K1/1M1	4.0	3.5	5.0		5.0	0.5
2A2/2DB	5.5	4.0	-		2.5	0.5
2K1/2M1	5.5	4.0	6.0		5.0	0.5
3A2/3DB	5.5	5.0	-		2.5	0.5
3K1/3M1	5.5	5.0	7.5		5.0	0.5
WK1/WM1	5.5	7.5	10.0		5.0	0.5

Marking

Dimensions Code \ Type	Temperature Compensating Type	High Dielectric Constant Type	
Rated Voltage	DC50V, DC100V	DC25V, DC50V	DC100V
Temp. Char.	X8G	X8L	
0	8 102J	8 104K	8 103K
1			
2	—	Ⓜ 105 K58	Ⓜ 224 K18
3, W	—	Ⓜ 335 K58	—
Temperature Characteristics	Marked with code (X8G, X8L char.: 8)		
Nominal Capacitance	Marked with 3 figures		
Capacitance Tolerance	Marked with code		
Rated Voltage	Marked with code (DC25V: 2, DC50V: 5, DC100V: 1) A part is omitted (Please refer to the marking example.)		
Manufacturer's Identification	Marked with Ⓜ A part is omitted (Please refer to the marking example.)		

Temperature Compensating Type, X8G Characteristics

Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RHE5G1H101J0□□H03□	X8G (Murata)	50Vdc	100pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H101J0□□H03□	X8G (Murata)	50Vdc	100pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H121J0□□H03□	X8G (Murata)	50Vdc	120pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H121J0□□H03□	X8G (Murata)	50Vdc	120pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H151J0□□H03□	X8G (Murata)	50Vdc	150pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H151J0□□H03□	X8G (Murata)	50Vdc	150pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H181J0□□H03□	X8G (Murata)	50Vdc	180pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H181J0□□H03□	X8G (Murata)	50Vdc	180pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H221J0□□H03□	X8G (Murata)	50Vdc	220pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H221J0□□H03□	X8G (Murata)	50Vdc	220pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H271J0□□H03□	X8G (Murata)	50Vdc	270pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H271J0□□H03□	X8G (Murata)	50Vdc	270pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H331J0□□H03□	X8G (Murata)	50Vdc	330pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H331J0□□H03□	X8G (Murata)	50Vdc	330pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H391J0□□H03□	X8G (Murata)	50Vdc	390pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H391J0□□H03□	X8G (Murata)	50Vdc	390pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H471J0□□H03□	X8G (Murata)	50Vdc	470pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H471J0□□H03□	X8G (Murata)	50Vdc	470pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H561J0□□H03□	X8G (Murata)	50Vdc	560pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H561J0□□H03□	X8G (Murata)	50Vdc	560pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H681J0□□H03□	X8G (Murata)	50Vdc	680pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H681J0□□H03□	X8G (Murata)	50Vdc	680pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H821J0□□H03□	X8G (Murata)	50Vdc	820pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H821J0□□H03□	X8G (Murata)	50Vdc	820pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H102J0□□H03□	X8G (Murata)	50Vdc	1000pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H102J0□□H03□	X8G (Murata)	50Vdc	1000pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H122J0□□H03□	X8G (Murata)	50Vdc	1200pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H122J0□□H03□	X8G (Murata)	50Vdc	1200pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H152J0□□H03□	X8G (Murata)	50Vdc	1500pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H152J0□□H03□	X8G (Murata)	50Vdc	1500pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H182J0□□H03□	X8G (Murata)	50Vdc	1800pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H182J0□□H03□	X8G (Murata)	50Vdc	1800pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H222J0□□H03□	X8G (Murata)	50Vdc	2200pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H222J0□□H03□	X8G (Murata)	50Vdc	2200pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H272J0□□H03□	X8G (Murata)	50Vdc	2700pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H272J0□□H03□	X8G (Murata)	50Vdc	2700pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H332J0□□H03□	X8G (Murata)	50Vdc	3300pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H332J0□□H03□	X8G (Murata)	50Vdc	3300pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H392J0□□H03□	X8G (Murata)	50Vdc	3900pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G1H392J0□□H03□	X8G (Murata)	50Vdc	3900pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G1H472J1□□H03□	X8G (Murata)	50Vdc	4700pF±5%	4.0×3.5	2.5	2.5	A2	DB
RHE5G1H472J1□□H03□	X8G (Murata)	50Vdc	4700pF±5%	4.0×3.5	2.5	5.0	K1	M1
RHE5G1H562J1□□H03□	X8G (Murata)	50Vdc	5600pF±5%	4.0×3.5	2.5	2.5	A2	DB
RHE5G1H562J1□□H03□	X8G (Murata)	50Vdc	5600pF±5%	4.0×3.5	2.5	5.0	K1	M1
RHE5G1H682J1□□H03□	X8G (Murata)	50Vdc	6800pF±5%	4.0×3.5	2.5	2.5	A2	DB
RHE5G1H682J1□□H03□	X8G (Murata)	50Vdc	6800pF±5%	4.0×3.5	2.5	5.0	K1	M1
RHE5G1H822J1□□H03□	X8G (Murata)	50Vdc	8200pF±5%	4.0×3.5	2.5	2.5	A2	DB
RHE5G1H822J1□□H03□	X8G (Murata)	50Vdc	8200pF±5%	4.0×3.5	2.5	5.0	K1	M1
RHE5G1H103J1□□H03□	X8G (Murata)	50Vdc	10000pF±5%	4.0×3.5	2.5	2.5	A2	DB
RHE5G1H103J1□□H03□	X8G (Murata)	50Vdc	10000pF±5%	4.0×3.5	2.5	5.0	K1	M1
RHE5G2A101J0□□H03□	X8G (Murata)	100Vdc	100pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G2A101J0□□H03□	X8G (Murata)	100Vdc	100pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G2A121J0□□H03□	X8G (Murata)	100Vdc	120pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G2A121J0□□H03□	X8G (Murata)	100Vdc	120pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G2A151J0□□H03□	X8G (Murata)	100Vdc	150pF±5%	3.6×3.5	2.5	2.5	A2	DB

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RHE5G2A151J0□□H03□	X8G (Murata)	100Vdc	150pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G2A181J0□□H03□	X8G (Murata)	100Vdc	180pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G2A181J0□□H03□	X8G (Murata)	100Vdc	180pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G2A221J0□□H03□	X8G (Murata)	100Vdc	220pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G2A221J0□□H03□	X8G (Murata)	100Vdc	220pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G2A271J0□□H03□	X8G (Murata)	100Vdc	270pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G2A271J0□□H03□	X8G (Murata)	100Vdc	270pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G2A331J0□□H03□	X8G (Murata)	100Vdc	330pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G2A331J0□□H03□	X8G (Murata)	100Vdc	330pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G2A391J0□□H03□	X8G (Murata)	100Vdc	390pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G2A391J0□□H03□	X8G (Murata)	100Vdc	390pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G2A471J0□□H03□	X8G (Murata)	100Vdc	470pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G2A471J0□□H03□	X8G (Murata)	100Vdc	470pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G2A561J0□□H03□	X8G (Murata)	100Vdc	560pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G2A561J0□□H03□	X8G (Murata)	100Vdc	560pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G2A681J0□□H03□	X8G (Murata)	100Vdc	680pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G2A681J0□□H03□	X8G (Murata)	100Vdc	680pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G2A821J0□□H03□	X8G (Murata)	100Vdc	820pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G2A821J0□□H03□	X8G (Murata)	100Vdc	820pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G2A102J0□□H03□	X8G (Murata)	100Vdc	1000pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G2A102J0□□H03□	X8G (Murata)	100Vdc	1000pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G2A122J0□□H03□	X8G (Murata)	100Vdc	1200pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G2A122J0□□H03□	X8G (Murata)	100Vdc	1200pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G2A152J0□□H03□	X8G (Murata)	100Vdc	1500pF±5%	3.6×3.5	2.5	2.5	A2	DB
RHE5G2A152J0□□H03□	X8G (Murata)	100Vdc	1500pF±5%	3.6×3.5	2.5	5.0	K1	M1
RHE5G2A182J1□□H03□	X8G (Murata)	100Vdc	1800pF±5%	4.0×3.5	2.5	2.5	A2	DB
RHE5G2A182J1□□H03□	X8G (Murata)	100Vdc	1800pF±5%	4.0×3.5	2.5	5.0	K1	M1
RHE5G2A222J1□□H03□	X8G (Murata)	100Vdc	2200pF±5%	4.0×3.5	2.5	2.5	A2	DB
RHE5G2A222J1□□H03□	X8G (Murata)	100Vdc	2200pF±5%	4.0×3.5	2.5	5.0	K1	M1
RHE5G2A272J1□□H03□	X8G (Murata)	100Vdc	2700pF±5%	4.0×3.5	2.5	2.5	A2	DB
RHE5G2A272J1□□H03□	X8G (Murata)	100Vdc	2700pF±5%	4.0×3.5	2.5	5.0	K1	M1
RHE5G2A332J1□□H03□	X8G (Murata)	100Vdc	3300pF±5%	4.0×3.5	2.5	2.5	A2	DB
RHE5G2A332J1□□H03□	X8G (Murata)	100Vdc	3300pF±5%	4.0×3.5	2.5	5.0	K1	M1

Two blank columns are filled with the lead style code. Please refer to the 3 columns on the right for the appropriate code.
The last blank column is filled with the packaging code. (B: bulk, A: ammo pack)

High Dielectric Constant Type, X8L Characteristics

Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RHEL81E104K0□□H03□	X8L (Murata)	25Vdc	0.1μF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81E104K0□□H03□	X8L (Murata)	25Vdc	0.1μF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81E154K0□□H03□	X8L (Murata)	25Vdc	0.15μF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81E154K0□□H03□	X8L (Murata)	25Vdc	0.15μF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81E224K0□□H03□	X8L (Murata)	25Vdc	0.22μF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81E224K0□□H03□	X8L (Murata)	25Vdc	0.22μF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81E334K1□□H03□	X8L (Murata)	25Vdc	0.33μF±10%	4.0×3.5	2.5	2.5	A2	DB
RHEL81E334K1□□H03□	X8L (Murata)	25Vdc	0.33μF±10%	4.0×3.5	2.5	5.0	K1	M1
RHEL81E474K1□□H03□	X8L (Murata)	25Vdc	0.47μF±10%	4.0×3.5	2.5	2.5	A2	DB
RHEL81E474K1□□H03□	X8L (Murata)	25Vdc	0.47μF±10%	4.0×3.5	2.5	5.0	K1	M1
RHEL81E684K1□□H03□	X8L (Murata)	25Vdc	0.68μF±10%	4.0×3.5	2.5	2.5	A2	DB
RHEL81E684K1□□H03□	X8L (Murata)	25Vdc	0.68μF±10%	4.0×3.5	2.5	5.0	K1	M1
RHEL81E105K1□□H03□	X8L (Murata)	25Vdc	1.0μF±10%	4.0×3.5	2.5	2.5	A2	DB
RHEL81E105K1□□H03□	X8L (Murata)	25Vdc	1.0μF±10%	4.0×3.5	2.5	5.0	K1	M1
RHEL81E155K2□□H03□	X8L (Murata)	25Vdc	1.5μF±10%	5.5×4.0	3.15	2.5	A2	DB
RHEL81E155K2□□H03□	X8L (Murata)	25Vdc	1.5μF±10%	5.5×4.0	3.15	5.0	K1	M1
RHEL81E225K2□□H03□	X8L (Murata)	25Vdc	2.2μF±10%	5.5×4.0	3.15	2.5	A2	DB

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RHEL81E225K2□□H03□	X8L (Murata)	25Vdc	2.2μF±10%	5.5×4.0	3.15	5.0	K1	M1
RHEL81E335K2□□H03□	X8L (Murata)	25Vdc	3.3μF±10%	5.5×4.0	3.15	2.5	A2	DB
RHEL81E335K2□□H03□	X8L (Murata)	25Vdc	3.3μF±10%	5.5×4.0	3.15	5.0	K1	M1
RHEL81E475K2□□H03□	X8L (Murata)	25Vdc	4.7μF±10%	5.5×4.0	3.15	2.5	A2	DB
RHEL81E475K2□□H03□	X8L (Murata)	25Vdc	4.7μF±10%	5.5×4.0	3.15	5.0	K1	M1
RHEL81E106K3□□H03□	X8L (Murata)	25Vdc	10μF±10%	5.5×5.0	4.0	2.5	A2	DB
RHEL81E106K3□□H03□	X8L (Murata)	25Vdc	10μF±10%	5.5×5.0	4.0	5.0	K1	M1
RHEL81E226MW□□H03□	X8L (Murata)	25Vdc	22μF±20%	5.5×7.5	4.0	5.0	K1	M1
RHEL81H221K0□□H03□	X8L (Murata)	50Vdc	220pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H221K0□□H03□	X8L (Murata)	50Vdc	220pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H331K0□□H03□	X8L (Murata)	50Vdc	330pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H331K0□□H03□	X8L (Murata)	50Vdc	330pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H471K0□□H03□	X8L (Murata)	50Vdc	470pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H471K0□□H03□	X8L (Murata)	50Vdc	470pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H681K0□□H03□	X8L (Murata)	50Vdc	680pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H681K0□□H03□	X8L (Murata)	50Vdc	680pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H102K0□□H03□	X8L (Murata)	50Vdc	1000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H102K0□□H03□	X8L (Murata)	50Vdc	1000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H152K0□□H03□	X8L (Murata)	50Vdc	1500pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H152K0□□H03□	X8L (Murata)	50Vdc	1500pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H222K0□□H03□	X8L (Murata)	50Vdc	2200pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H222K0□□H03□	X8L (Murata)	50Vdc	2200pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H332K0□□H03□	X8L (Murata)	50Vdc	3300pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H332K0□□H03□	X8L (Murata)	50Vdc	3300pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H472K0□□H03□	X8L (Murata)	50Vdc	4700pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H472K0□□H03□	X8L (Murata)	50Vdc	4700pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H682K0□□H03□	X8L (Murata)	50Vdc	6800pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H682K0□□H03□	X8L (Murata)	50Vdc	6800pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H103K0□□H03□	X8L (Murata)	50Vdc	10000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H103K0□□H03□	X8L (Murata)	50Vdc	10000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H153K0□□H03□	X8L (Murata)	50Vdc	15000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H153K0□□H03□	X8L (Murata)	50Vdc	15000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H223K0□□H03□	X8L (Murata)	50Vdc	22000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H223K0□□H03□	X8L (Murata)	50Vdc	22000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H333K0□□H03□	X8L (Murata)	50Vdc	33000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H333K0□□H03□	X8L (Murata)	50Vdc	33000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H473K0□□H03□	X8L (Murata)	50Vdc	47000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H473K0□□H03□	X8L (Murata)	50Vdc	47000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H683K0□□H03□	X8L (Murata)	50Vdc	68000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H683K0□□H03□	X8L (Murata)	50Vdc	68000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H104K0□□H03□	X8L (Murata)	50Vdc	0.10μF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL81H104K0□□H03□	X8L (Murata)	50Vdc	0.10μF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL81H154K1□□H03□	X8L (Murata)	50Vdc	0.15μF±10%	4.0×3.5	2.5	2.5	A2	DB
RHEL81H154K1□□H03□	X8L (Murata)	50Vdc	0.15μF±10%	4.0×3.5	2.5	5.0	K1	M1
RHEL81H224K1□□H03□	X8L (Murata)	50Vdc	0.22μF±10%	4.0×3.5	2.5	2.5	A2	DB
RHEL81H224K1□□H03□	X8L (Murata)	50Vdc	0.22μF±10%	4.0×3.5	2.5	5.0	K1	M1
RHEL81H334K1□□H03□	X8L (Murata)	50Vdc	0.33μF±10%	4.0×3.5	2.5	2.5	A2	DB
RHEL81H334K1□□H03□	X8L (Murata)	50Vdc	0.33μF±10%	4.0×3.5	2.5	5.0	K1	M1
RHEL81H474K2□□H03□	X8L (Murata)	50Vdc	0.47μF±10%	5.5×4.0	3.15	2.5	A2	DB
RHEL81H474K2□□H03□	X8L (Murata)	50Vdc	0.47μF±10%	5.5×4.0	3.15	5.0	K1	M1
RHEL81H684K2□□H03□	X8L (Murata)	50Vdc	0.68μF±10%	5.5×4.0	3.15	2.5	A2	DB
RHEL81H684K2□□H03□	X8L (Murata)	50Vdc	0.68μF±10%	5.5×4.0	3.15	5.0	K1	M1
RHEL81H105K2□□H03□	X8L (Murata)	50Vdc	1.0μF±10%	5.5×4.0	3.15	2.5	A2	DB
RHEL81H105K2□□H03□	X8L (Murata)	50Vdc	1.0μF±10%	5.5×4.0	3.15	5.0	K1	M1
RHEL81H155K2□□H03□	X8L (Murata)	50Vdc	1.5μF±10%	5.5×4.0	3.15	2.5	A2	DB
RHEL81H155K2□□H03□	X8L (Murata)	50Vdc	1.5μF±10%	5.5×4.0	3.15	5.0	K1	M1
RHEL81H225K2□□H03□	X8L (Murata)	50Vdc	2.2μF±10%	5.5×4.0	3.15	2.5	A2	DB

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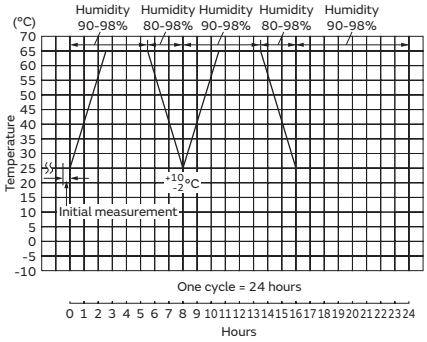
Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RHEL81H225K2□□H03□	X8L (Murata)	50Vdc	2.2μF±10%	5.5×4.0	3.15	5.0	K1	M1
RHEL81H335K3□□H03□	X8L (Murata)	50Vdc	3.3μF±10%	5.5×5.0	4.0	2.5	A2	DB
RHEL81H335K3□□H03□	X8L (Murata)	50Vdc	3.3μF±10%	5.5×5.0	4.0	5.0	K1	M1
RHEL81H475K3□□H03□	X8L (Murata)	50Vdc	4.7μF±10%	5.5×5.0	4.0	2.5	A2	DB
RHEL81H475K3□□H03□	X8L (Murata)	50Vdc	4.7μF±10%	5.5×5.0	4.0	5.0	K1	M1
RHEL81H106MW□□H03□	X8L (Murata)	50Vdc	10μF±20%	5.5×7.5	4.0	5.0	K1	M1
RHEL82A221K0□□H03□	X8L (Murata)	100Vdc	220pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL82A221K0□□H03□	X8L (Murata)	100Vdc	220pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL82A331K0□□H03□	X8L (Murata)	100Vdc	330pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL82A331K0□□H03□	X8L (Murata)	100Vdc	330pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL82A471K0□□H03□	X8L (Murata)	100Vdc	470pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL82A471K0□□H03□	X8L (Murata)	100Vdc	470pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL82A681K0□□H03□	X8L (Murata)	100Vdc	680pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL82A681K0□□H03□	X8L (Murata)	100Vdc	680pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL82A102K0□□H03□	X8L (Murata)	100Vdc	1000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL82A102K0□□H03□	X8L (Murata)	100Vdc	1000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL82A152K0□□H03□	X8L (Murata)	100Vdc	1500pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL82A152K0□□H03□	X8L (Murata)	100Vdc	1500pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL82A222K0□□H03□	X8L (Murata)	100Vdc	2200pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL82A222K0□□H03□	X8L (Murata)	100Vdc	2200pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL82A332K0□□H03□	X8L (Murata)	100Vdc	3300pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL82A332K0□□H03□	X8L (Murata)	100Vdc	3300pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL82A472K0□□H03□	X8L (Murata)	100Vdc	4700pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL82A472K0□□H03□	X8L (Murata)	100Vdc	4700pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL82A682K0□□H03□	X8L (Murata)	100Vdc	6800pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL82A682K0□□H03□	X8L (Murata)	100Vdc	6800pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL82A103K0□□H03□	X8L (Murata)	100Vdc	10000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL82A103K0□□H03□	X8L (Murata)	100Vdc	10000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL82A153K0□□H03□	X8L (Murata)	100Vdc	15000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL82A153K0□□H03□	X8L (Murata)	100Vdc	15000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL82A223K0□□H03□	X8L (Murata)	100Vdc	22000pF±10%	3.6×3.5	2.5	2.5	A2	DB
RHEL82A223K0□□H03□	X8L (Murata)	100Vdc	22000pF±10%	3.6×3.5	2.5	5.0	K1	M1
RHEL82A333K1□□H03□	X8L (Murata)	100Vdc	33000pF±10%	4.0×3.5	2.5	2.5	A2	DB
RHEL82A333K1□□H03□	X8L (Murata)	100Vdc	33000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RHEL82A473K1□□H03□	X8L (Murata)	100Vdc	47000pF±10%	4.0×3.5	2.5	2.5	A2	DB
RHEL82A473K1□□H03□	X8L (Murata)	100Vdc	47000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RHEL82A683K1□□H03□	X8L (Murata)	100Vdc	68000pF±10%	4.0×3.5	2.5	2.5	A2	DB
RHEL82A683K1□□H03□	X8L (Murata)	100Vdc	68000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RHEL82A104K1□□H03□	X8L (Murata)	100Vdc	0.10μF±10%	4.0×3.5	2.5	2.5	A2	DB
RHEL82A104K1□□H03□	X8L (Murata)	100Vdc	0.10μF±10%	4.0×3.5	2.5	5.0	K1	M1
RHEL82A154K2□□H03□	X8L (Murata)	100Vdc	0.15μF±10%	5.5×4.0	3.15	2.5	A2	DB
RHEL82A154K2□□H03□	X8L (Murata)	100Vdc	0.15μF±10%	5.5×4.0	3.15	5.0	K1	M1
RHEL82A224K2□□H03□	X8L (Murata)	100Vdc	0.22μF±10%	5.5×4.0	3.15	2.5	A2	DB
RHEL82A224K2□□H03□	X8L (Murata)	100Vdc	0.22μF±10%	5.5×4.0	3.15	5.0	K1	M1

Two blank columns are filled with the lead style code. Please refer to the 3 columns on the right for the appropriate code.
The last blank column is filled with the packaging code. (B: bulk, A: ammo pack)

Specifications and Test Methods

No.	AEC-Q200 Test Item		Specification: Temperature Compensating Type (Char. X8G)	Specification: High Dielectric Constant Type (Char. X8L)	AEC-Q200 Test Method
1	Pre-and Post-Stress Electrical Test		–		
2	High Temperature Exposure (Storage)		The measured and observed characteristics should satisfy the specifications in the following table.		Sit the capacitor for 1000±12h at 150±3°C. Let sit for 24±2h at room condition*, then measure. •Pretreatment Perform the heat treatment at 150+0/-10°C for 60±5min and then let sit for 24±2h at room condition*. (for Char. X8L)
		Appearance	No defects or abnormalities		
		Capacitance Change	Within ±3% or ±0.3pF (Whichever is larger)	Within ±12.5%	
		Q/D.F.	Q ≧ 350	0.04 max.	
		I.R.	More than 1000MΩ or 50MΩ • μF (Whichever is smaller)		
3	Temperature Cycling		The measured and observed characteristics should satisfy the specifications in the following table.		Perform the 1000 cycles according to the four heat treatments listed in the following table. Let sit for 24±2h at room condition*, then measure. Step / 1 / 2 / 3 / 4 Temp. (°C) / -55+0/-3 / Room Temp. / 150+3/-0 / Room Temp. Time (min) / 15±3 / 1 / 15±3 / 1 •Pretreatment Perform the heat treatment at 150+0/-10°C for 60±5min and then let sit for 24±2h at room condition*. (for Char. X8L)
		Appearance	No defects or abnormalities except color change of outer coating		
		Capacitance Change	Within ±5% or ±0.5pF (Whichever is larger)	Within ±12.5%	
		Q/D.F.	Q ≧ 350	0.05 max.	
		I.R.	1000MΩ or 50MΩ • μF min. (Whichever is smaller)		
4	Moisture Resistance		The measured and observed characteristics should satisfy the specifications in the following table.		Apply the 24h heat (25 to 65°C) and humidity (80 to 98%) treatment shown below, 10 consecutive times. Let sit for 24±2h at room condition*, then measure. •Pretreatment Perform the heat treatment at 150+0/-10°C for 60±5min and then let sit for 24±2h at room condition*. (for Char. X8L) 
		Appearance	No defects or abnormalities		
		Capacitance Change	Within ±5% or ±0.5pF (Whichever is larger)	Within ±12.5%	
		Q/D.F.	Q ≧ 200	0.05 max.	
		I.R.	500MΩ or 25MΩ • μF min. (Whichever is smaller)		
5	Biased Humidity		The measured and observed characteristics should satisfy the specifications in the following table.		Apply the rated voltage and DC1.3+0.2/-0V (add 100kΩ resistor) at 85±3°C and 80 to 85% humidity for 1000±12h. Remove and let sit for 24±2h at room condition*, then measure. The charge/discharge current is less than 50mA. •Pretreatment Perform the heat treatment at 150+0/-10°C for 60±5min and then let sit for 24±2h at room condition*. (for Char. X8L)
		Appearance	No defects or abnormalities		
		Capacitance Change	Within ±5% or ±0.5pF (Whichever is larger)	Within ±12.5%	
		Q/D.F.	Q ≧ 200	0.05 max.	
		I.R.	500MΩ or 25MΩ • μF min. (Whichever is smaller)		
6	Operational Life		The measured and observed characteristics should satisfy the specifications in the following table.		Apply 150% of the rated voltage for 1000±12h at 150±3°C. Let sit for 24±2h at room condition*, then measure. The charge/discharge current is less than 50mA. •Pretreatment Apply test voltage for 60±5 min at test temperature. Remove and let sit for 24±2h at room condition*. (for Char. X8L)
		Appearance	No defects or abnormalities except color change of outer coating		
		Capacitance Change	Within ±3% or ±0.3pF (Whichever is larger)	Within ±12.5%	
		Q/D.F.	Q ≧ 350	0.04 max.	
		I.R.	1000MΩ or 50MΩ • μF min. (Whichever is smaller)		
7	External Visual		No defects or abnormalities		Visual inspection
8	Physical Dimension		Within the specified dimensions		Using calipers and micrometers
9	Marking		To be easily legible		Visual inspection

* "room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

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Specifications and Test Methods

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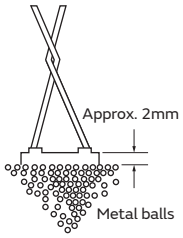
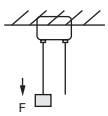
No.	AEC-Q200 Test Item		Specification: Temperature Compensating Type (Char. X8G)	Specification: High Dielectric Constant Type (Char. X8L)	AEC-Q200 Test Method
10	Resistance to Solvents	Appearance	No defects or abnormalities		Per MIL-STD-202 Method 215 Solvent 1: 1 part (by volume) of isopropyl alcohol 3 parts (by volume) of mineral spirits Solvent 2: Terpene defluxer Solvent 3: 42 parts (by volume) of water 1 part (by volume) of propylene glycol monomethyl ether 1 part (by volume) of monoethanolamine
		Capacitance	Within the specified tolerance		
		Q/D.F.	Q ≧ 1000	0.025 max.	
		I.R.	More than 10000MΩ or 500MΩ • μF (Whichever is smaller)		
11	Mechanical Shock	Appearance	No defects or abnormalities		Three shocks in each direction should be applied along 3 mutually perpendicular axes of the test specimen (18 shocks). The specified test pulse should be Half-sine and should have a duration: 0.5ms, peak value: 1500G and velocity change: 4.7m/s.
		Capacitance	Within the specified tolerance		
		Q/D.F.	Q ≧ 1000	0.025 max.	
12	Vibration	Appearance	No defects or abnormalities		The capacitor should be subjected to a simple harmonic motion having a total amplitude of 1.5mm, the frequency being varied uniformly between the approximate limits of 10 and 2000Hz. The frequency range, from 10 to 2000Hz and return to 10Hz, should be traversed in approximately 20min. This motion should be applied for 12 items in each 3 mutually perpendicular directions (total of 36 times).
		Capacitance	Within the specified tolerance		
		Q/D.F.	Q ≧ 1000	0.025 max.	
13-1	Resistance to Soldering Heat (Non-Preheat)		The measured and observed characteristics should satisfy the specifications in the following table.		The lead wires should be immersed in the melted solder 1.5 to 2.0mm from the root of terminal at 260±5°C for 10±1s. Pre-treatment Capacitor should be stored at 150+0/-10°C for 1h, then place at room temperature for 24±2h before initial measurement. (For Char. X8L) Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Appearance	No defects or abnormalities		
		Capacitance Change	Within ±2.5% or ±0.25pF (Whichever is larger)	Within ±7.5%	
		Dielectric Strength (Between Terminals)	No defects		
13-2	Resistance to Soldering Heat (On-Preheat)		The measured and observed characteristics should satisfy the specifications in the following table.		First the capacitor should be stored at 120+0/-5°C for 60+0/-5s. Then, the lead wires should be immersed in the melted solder 1.5 to 2.0mm from the root of terminal at 260±5°C for 7.5+0/-1s. Pre-treatment Capacitor should be stored at 150+0/-10°C for 1h, then place at room temperature for 24±2h before initial measurement. (For Char. X8L) Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Appearance	No defects or abnormalities		
		Capacitance Change	Within ±2.5% or ±0.25pF (Whichever is larger)	Within ±7.5%	
		Dielectric Strength (Between Terminals)	No defects		
13-3	Resistance to Soldering Heat (Soldering Iron Method)		The measured and observed characteristics should satisfy the specifications in the following table.		Test condition Temperature of iron-tip: 350±10°C Soldering time: 3.5±0.5s. Soldering position Straight Lead: 1.5 to 2.0mm from the root of terminal. Crimp Lead: 1.5 to 2.0mm from the end of lead bend. Pre-treatment Capacitor should be stored at 150+0/-10°C for 1h, then place at room temperature for 24±2h before initial measurement. (For Char. X8L) Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Appearance	No defects or abnormalities		
		Capacitance Change	Within ±2.5% or ±0.25pF (Whichever is larger)	Within ±7.5%	
		Dielectric Strength (Between Terminals)	No defects		
14	Thermal Shock		The measured and observed characteristics should satisfy the specifications in the following table.		Perform the 300 cycles according to the two heat treatments listed in the following table (Maximum transfer time is 20s). Let sit for 24±2h at room condition*, then measure. Step 1: Temp. (°C) -55+0/-3, Time (min) 15±3 Step 2: Temp. (°C) 150+3/-0, Time (min) 15±3 •Pretreatment Perform the heat treatment at 150+0/-10°C for 60±5min and then let sit for 24±2h at room condition*. (for Char. X8L)
		Appearance	No defects or abnormalities		
		Capacitance Change	Within ±5% or ±0.5pF (Whichever is larger)	Within ±12.5%	
		Q/D.F.	Q ≧ 350	0.05 max.	
		I.R.	1000MΩ or 50MΩ • μF min. (Whichever is smaller)		
15	ESD	Appearance	No defects or abnormalities		Per AEC-Q200-002
		Capacitance	Within the specified tolerance		
		Q/D.F.	Q ≧ 1000	0.025 max.	
		I.R.	More than 10000MΩ or 500MΩ • μF (Whichever is smaller)		

* "room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

Continued on the following page.↗

Specifications and Test Methods

Continued from the preceding page.↘

No.	AEC-Q200 Test Item		Specification: Temperature Compensating Type (Char. X8G)	Specification: High Dielectric Constant Type (Char. X8L)	AEC-Q200 Test Method
16	Solderability		Lead wire should be soldered with uniform coating on the axial direction over 95% of the circumferential direction.		The terminal of a capacitor is dipped into a solution of ethanol (JIS-K-8101) and rosin (JIS-K-5902) (25%rosin in weight propotion) and then into molten solder (JIS-Z-3282) for 2±0.5s. In both cases the depth of dipping is up to about 1.5 to 2mm from the terminal body. Temp. of solder: 245±5°C Lead Free Solder (Sn-3.0Ag-0.5Cu) 235±5°C H60A or H63A Eutectic Solder
17	Electrical Characterization	Appearance	No defects or abnormalities		Visual inspection
		Capacitance	Within the specified tolerance		The capacitance, Q/D.F. should be measured at 25°C at the frequency and voltage shown in the table.
		Q/D.F.	Q ≧ 1000	0.025 max.	
		Insulation Resistance (I.R.)	Room Temperature: 10000MΩ or 500MΩ • μF min. (Whichever is smaller)		The insulation resistance should be measured at 25±3°C with a DC voltage not exceeding the rated voltage at normal temperature and humidity and within 2min of charging. (Charge/Discharge current ≦ 50mA.)
			High Temperature: 100MΩ or 5MΩ • μF min. (Whichever is smaller)		The insulation resistance should be measured at 150±3°C with a DC voltage not exceeding the rated voltage at normal temperature and humidity and within 2min of charging. (Charge/Discharge current ≦ 50mA.)
		Dielectric Strength	Between Terminals: No defects or abnormalities		The capacitor should not be damaged when DC voltage of 300% of the rated voltage (for Char. X8G) or DC voltage of 250% of the rated voltage (for Char. X8L) is applied between the terminations for 1 to 5s. (Charge/Discharge current ≦ 50mA.)
			Body Insulation: No defects or abnormalities		The capacitor is placed in a container with metal balls of 1mm diameter so that each terminal, short-circuit is kept approximately 2mm from the balls, and 250% of the rated DC voltage is impressed for 1 to 5s between capacitor terminals and metal balls. (Charge/Discharge current ≦ 50mA.) 
18	Terminal Strength	Tensile Strength	Termination not to be broken or loosened		As in the figure, fix the capacitor body, apply the force gradually to each lead in the radial direction of the capacitor until reaching 10N and then keep the force applied for 10±1s. 
		Bending Strength	Termination not to be broken or loosened		Each lead wire should be subjected to a force of 2.5N and then be bent 90° at the point of egress in one direction. Each wire is then returned to the original position and bent 90° in the opposite direction at the rate of one bend per 2 to 3s.
19	Capacitance Temperature Characteristics		Char. X8G: Temperature Coefficient: 25 to 150°C: 0±30ppm/°C; -55 to 25°C: 0+30/-72ppm/°C	Within ±15% (Temp. Range: -55 to +125°C) Within +15/-40% (Temp. Range: +125 to +150°C)	The capacitance change should be measured after 5min at each specified temperature step.

Char. X8G / X8L — Nominal Cap. / Frequency / Voltage

Char.	Nominal Cap.	Frequency	Voltage
X8G	C < 1000pF	1±0.1MHz	AC0.5 to 5V (r.m.s.)
	C ≧ 1000pF	1±0.1kHz	AC1±0.2V (r.m.s.)
X8L	C ≦ 10μF	1±0.1kHz	AC1.0±0.2V (r.m.s.)
	C > 10μF	120±24Hz	AC0.5±0.1V (r.m.s.)

Step	Temperature (°C)
1	25±2
2	-55±3
3	25±2
4	150±3
5	25±2

The temperature coefficient or the ranges of capacitance change is determined using the capacitance measured in step 3 as a reference.
•Pretreatment
Perform the heat treatment at 150+0/-10°C for 60±5 min and then let sit for 24±2h at room condition*.
Perform the initial measurement. (for Char. X8L)

* "room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

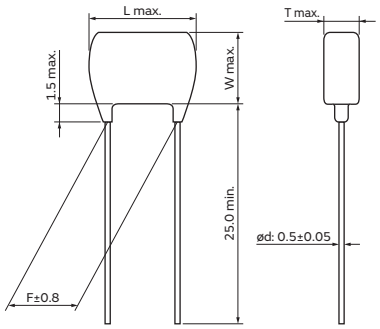
175°C/200°C Operation Leaded MLCC for Automotive

RHS Series (DC100V-DC500V)

Features

1. Small size and large capacitance
2. Low ESR and ESL suitable for high frequency
3. Applied maximum temperature up to 175°C or 200°C
   Note: Maximum accumulative time is within 2000 hours.
4. Meet AEC-Q200, ISO7637-2 (surge test) requirement
5. Meet LF (Lead Free) and HF (Halogen Free)
6. Flow soldering and welding are available.
   (Re-flow soldering is not available.)
7. If copper wire is necessary at welding process, copper wire is available based on request.

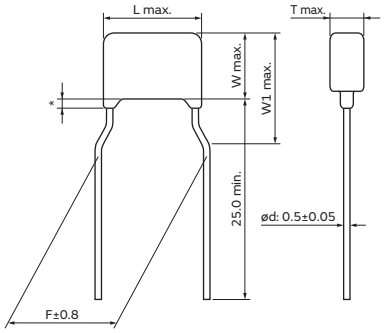
Dimension code: 0
Lead style code: A2



· Lead Wire: Solder Coated CP Wire

(in mm)

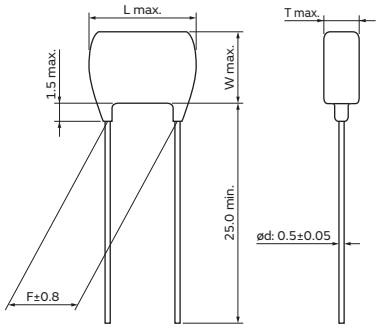
Dimension code: 0
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

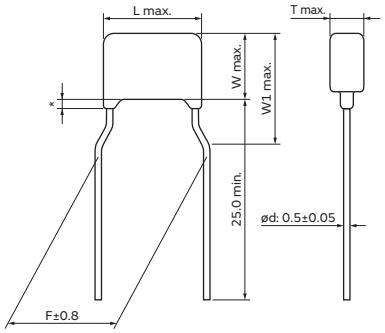
Dimension code: 1
Lead style code: A2



· Lead Wire: Solder Coated CP Wire

(in mm)

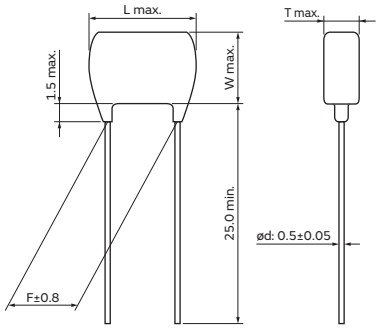
Dimension code: 1
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

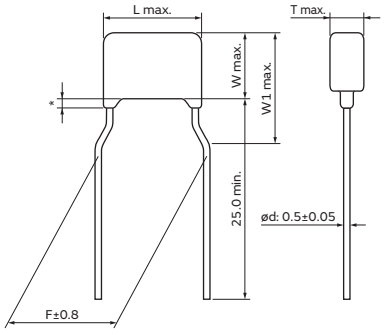
Dimension code: 2
Lead style code: A2



· Lead Wire: Solder Coated CP Wire

(in mm)

Dimension code: 2
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

Dimensions

Dimensions and Lead Style Code	Dimensions (mm)					
	L	W	W1	T	F	d
0A2/0DG	3.8	3.5	-	See the individual product specification	2.5	0.5
0K1/0M2	3.8	3.5	6.0		5.0	0.5
1A2/1DG	4.0	3.5	-		2.5	0.5
1K1/1M2	4.0	3.5	5.0		5.0	0.5
2A2/2DG	5.5	4.0	-		2.5	0.5
2K1/2M1	5.5	4.0	6.0		5.0	0.5

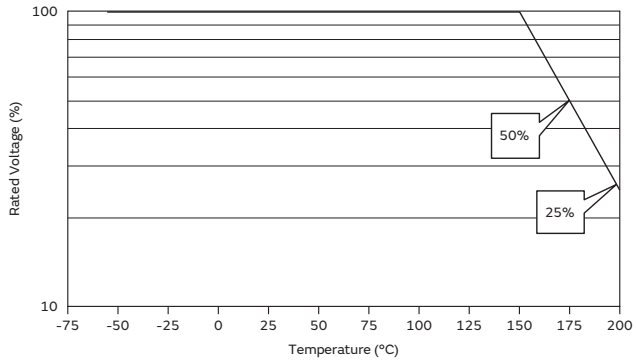
Rated Voltage

When the product temperature exceeds 150°C, please use this product within the voltage and temperature derated conditions in the figure below.

Maximum operating temperature

200°C: Temp. Char. CCG and UNJ

175°C: Temp. Char. XAL and XAN



Marking

Rated Voltage / Dimension Code / Temp. Char.	DC100V			DC200V	DC500V
	CCG	XAL	XAN	UNJ	
0	4 101J	6 103K	9 103K	—	—
1		—		2 101J	—
2	—	—	Ⓜ 224 K19	Ⓜ 103 J62	Ⓜ 101 J92
Temperature Characteristics	Marked with code (CCG Char.: 4, UNJ Char.: 2, XAL Char.: 6, XAN Char.: 9)				
Nominal Capacitance	Marked with 3 figures				
Capacitance Tolerance	Marked with code				
Rated Voltage	Marked with code (DC100V: 1, DC200V: 6, DC500V: 9) Apart is omitted (Please refer to the marking example.)				
Manufacturer's Identification	Marked with Ⓜ A part is omitted (Please refer to the marking example.)				

Temperature Compensating Type, CCG/UNJ Characteristics

Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RHS7G2A101J0□□H01□	CCG (Murata)	100Vdc	100pF±5%	3.8×3.5	2.5	2.5	A2	DG
RHS7G2A101J0□□H01□	CCG (Murata)	100Vdc	100pF±5%	3.8×3.5	2.5	5.0	K1	M2
RHS7G2A121J0□□H01□	CCG (Murata)	100Vdc	120pF±5%	3.8×3.5	2.5	2.5	A2	DG
RHS7G2A121J0□□H01□	CCG (Murata)	100Vdc	120pF±5%	3.8×3.5	2.5	5.0	K1	M2
RHS7G2A151J0□□H01□	CCG (Murata)	100Vdc	150pF±5%	3.8×3.5	2.5	2.5	A2	DG
RHS7G2A151J0□□H01□	CCG (Murata)	100Vdc	150pF±5%	3.8×3.5	2.5	5.0	K1	M2
RHS7G2A181J0□□H01□	CCG (Murata)	100Vdc	180pF±5%	3.8×3.5	2.5	2.5	A2	DG
RHS7G2A181J0□□H01□	CCG (Murata)	100Vdc	180pF±5%	3.8×3.5	2.5	5.0	K1	M2
RHS7G2A221J0□□H01□	CCG (Murata)	100Vdc	220pF±5%	3.8×3.5	2.5	2.5	A2	DG
RHS7G2A221J0□□H01□	CCG (Murata)	100Vdc	220pF±5%	3.8×3.5	2.5	5.0	K1	M2
RHS7G2A271J0□□H01□	CCG (Murata)	100Vdc	270pF±5%	3.8×3.5	2.5	2.5	A2	DG
RHS7G2A271J0□□H01□	CCG (Murata)	100Vdc	270pF±5%	3.8×3.5	2.5	5.0	K1	M2

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RHS7G2A331J0□□H01□	CCG (Murata)	100Vdc	330pF±5%	3.8×3.5	2.5	2.5	A2	DG
RHS7G2A331J0□□H01□	CCG (Murata)	100Vdc	330pF±5%	3.8×3.5	2.5	5.0	K1	M2
RHS7G2A391J0□□H01□	CCG (Murata)	100Vdc	390pF±5%	3.8×3.5	2.5	2.5	A2	DG
RHS7G2A391J0□□H01□	CCG (Murata)	100Vdc	390pF±5%	3.8×3.5	2.5	5.0	K1	M2
RHS7G2A471J0□□H01□	CCG (Murata)	100Vdc	470pF±5%	3.8×3.5	2.5	2.5	A2	DG
RHS7G2A471J0□□H01□	CCG (Murata)	100Vdc	470pF±5%	3.8×3.5	2.5	5.0	K1	M2
RHS7G2A561J0□□H01□	CCG (Murata)	100Vdc	560pF±5%	3.8×3.5	2.5	2.5	A2	DG
RHS7G2A561J0□□H01□	CCG (Murata)	100Vdc	560pF±5%	3.8×3.5	2.5	5.0	K1	M2
RHS7G2A681J0□□H01□	CCG (Murata)	100Vdc	680pF±5%	3.8×3.5	2.5	2.5	A2	DG
RHS7G2A681J0□□H01□	CCG (Murata)	100Vdc	680pF±5%	3.8×3.5	2.5	5.0	K1	M2
RHS7G2A821J0□□H01□	CCG (Murata)	100Vdc	820pF±5%	3.8×3.5	2.5	2.5	A2	DG
RHS7G2A821J0□□H01□	CCG (Murata)	100Vdc	820pF±5%	3.8×3.5	2.5	5.0	K1	M2
RHS7G2A102J0□□H01□	CCG (Murata)	100Vdc	1000pF±5%	3.8×3.5	2.5	2.5	A2	DG
RHS7G2A102J0□□H01□	CCG (Murata)	100Vdc	1000pF±5%	3.8×3.5	2.5	5.0	K1	M2
RHS7G2A152J0□□H01□	CCG (Murata)	100Vdc	1500pF±5%	3.8×3.5	2.5	2.5	A2	DG
RHS7G2A152J0□□H01□	CCG (Murata)	100Vdc	1500pF±5%	3.8×3.5	2.5	5.0	K1	M2
RHS7G2A222J1□□H01□	CCG (Murata)	100Vdc	2200pF±5%	4.0×3.5	2.5	2.5	A2	DG
RHS7G2A222J1□□H01□	CCG (Murata)	100Vdc	2200pF±5%	4.0×3.5	2.5	5.0	K1	M2
RHS7G2A272J1□□H01□	CCG (Murata)	100Vdc	2700pF±5%	4.0×3.5	2.5	2.5	A2	DG
RHS7G2A272J1□□H01□	CCG (Murata)	100Vdc	2700pF±5%	4.0×3.5	2.5	5.0	K1	M2
RHS7G2A332J1□□H01□	CCG (Murata)	100Vdc	3300pF±5%	4.0×3.5	2.5	2.5	A2	DG
RHS7G2A332J1□□H01□	CCG (Murata)	100Vdc	3300pF±5%	4.0×3.5	2.5	5.0	K1	M2
RHS7J2D101J1□□H01□	UNJ (Murata)	200Vdc	100pF±5%	4.0×3.5	2.5	2.5	A2	DG
RHS7J2D101J1□□H01□	UNJ (Murata)	200Vdc	100pF±5%	4.0×3.5	2.5	5.0	K1	M2
RHS7J2D151J1□□H01□	UNJ (Murata)	200Vdc	150pF±5%	4.0×3.5	2.5	2.5	A2	DG
RHS7J2D151J1□□H01□	UNJ (Murata)	200Vdc	150pF±5%	4.0×3.5	2.5	5.0	K1	M2
RHS7J2D221J1□□H01□	UNJ (Murata)	200Vdc	220pF±5%	4.0×3.5	2.5	2.5	A2	DG
RHS7J2D221J1□□H01□	UNJ (Murata)	200Vdc	220pF±5%	4.0×3.5	2.5	5.0	K1	M2
RHS7J2D331J1□□H01□	UNJ (Murata)	200Vdc	330pF±5%	4.0×3.5	2.5	2.5	A2	DG
RHS7J2D331J1□□H01□	UNJ (Murata)	200Vdc	330pF±5%	4.0×3.5	2.5	5.0	K1	M2
RHS7J2D471J1□□H01□	UNJ (Murata)	200Vdc	470pF±5%	4.0×3.5	2.5	2.5	A2	DG
RHS7J2D471J1□□H01□	UNJ (Murata)	200Vdc	470pF±5%	4.0×3.5	2.5	5.0	K1	M2
RHS7J2D681J1□□H01□	UNJ (Murata)	200Vdc	680pF±5%	4.0×3.5	2.5	2.5	A2	DG
RHS7J2D681J1□□H01□	UNJ (Murata)	200Vdc	680pF±5%	4.0×3.5	2.5	5.0	K1	M2
RHS7J2D102J1□□H01□	UNJ (Murata)	200Vdc	1000pF±5%	4.0×3.5	2.5	2.5	A2	DG
RHS7J2D102J1□□H01□	UNJ (Murata)	200Vdc	1000pF±5%	4.0×3.5	2.5	5.0	K1	M2
RHS7J2D152J1□□H01□	UNJ (Murata)	200Vdc	1500pF±5%	4.0×3.5	2.5	2.5	A2	DG
RHS7J2D152J1□□H01□	UNJ (Murata)	200Vdc	1500pF±5%	4.0×3.5	2.5	5.0	K1	M2
RHS7J2D222J1□□H01□	UNJ (Murata)	200Vdc	2200pF±5%	4.0×3.5	2.5	2.5	A2	DG
RHS7J2D222J1□□H01□	UNJ (Murata)	200Vdc	2200pF±5%	4.0×3.5	2.5	5.0	K1	M2
RHS7J2D332J1□□H01□	UNJ (Murata)	200Vdc	3300pF±5%	4.0×3.5	2.5	2.5	A2	DG
RHS7J2D332J1□□H01□	UNJ (Murata)	200Vdc	3300pF±5%	4.0×3.5	2.5	5.0	K1	M2
RHS7J2D472J1□□H01□	UNJ (Murata)	200Vdc	4700pF±5%	4.0×3.5	2.5	2.5	A2	DG
RHS7J2D472J1□□H01□	UNJ (Murata)	200Vdc	4700pF±5%	4.0×3.5	2.5	5.0	K1	M2
RHS7J2D682J2□□H01□	UNJ (Murata)	200Vdc	6800pF±5%	5.5×4.0	3.15	2.5	A2	DG
RHS7J2D682J2□□H01□	UNJ (Murata)	200Vdc	6800pF±5%	5.5×4.0	3.15	5.0	K1	M2
RHS7J2D103J2□□H01□	UNJ (Murata)	200Vdc	10000pF±5%	5.5×4.0	3.15	2.5	A2	DG
RHS7J2D103J2□□H01□	UNJ (Murata)	200Vdc	10000pF±5%	5.5×4.0	3.15	5.0	K1	M2
RHS7J2H101J2□□H01□	UNJ (Murata)	500Vdc	100pF±5%	5.5×4.0	3.15	5.0	K1	M2
RHS7J2H151J2□□H01□	UNJ (Murata)	500Vdc	150pF±5%	5.5×4.0	3.15	5.0	K1	M2
RHS7J2H221J2□□H01□	UNJ (Murata)	500Vdc	220pF±5%	5.5×4.0	3.15	5.0	K1	M2
RHS7J2H331J2□□H01□	UNJ (Murata)	500Vdc	330pF±5%	5.5×4.0	3.15	5.0	K1	M2
RHS7J2H471J2□□H01□	UNJ (Murata)	500Vdc	470pF±5%	5.5×4.0	3.15	5.0	K1	M2
RHS7J2H681J2□□H01□	UNJ (Murata)	500Vdc	680pF±5%	5.5×4.0	3.15	5.0	K1	M2
RHS7J2H102J2□□H01□	UNJ (Murata)	500Vdc	1000pF±5%	5.5×4.0	3.15	5.0	K1	M2
RHS7J2H152J2□□H01□	UNJ (Murata)	500Vdc	1500pF±5%	5.5×4.0	3.15	5.0	K1	M2
RHS7J2H222J2□□H01□	UNJ (Murata)	500Vdc	2200pF±5%	5.5×4.0	3.15	5.0	K1	M2

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RHS7J2H332J2□□H01□	UNJ (Murata)	500Vdc	3300pF±5%	5.5×4.0	3.15	5.0	K1	M2
RHS7J2H472J2□□H01□	UNJ (Murata)	500Vdc	4700pF±5%	5.5×4.0	3.15	5.0	K1	M2

Two blank columns are filled with the lead style code. Please refer to the 3 columns on the right for the appropriate code.
The last blank column is filled with the packaging code. (B: bulk, A: ammo pack)

High Dielectric Constant Type, XAL/XAN Characteristics

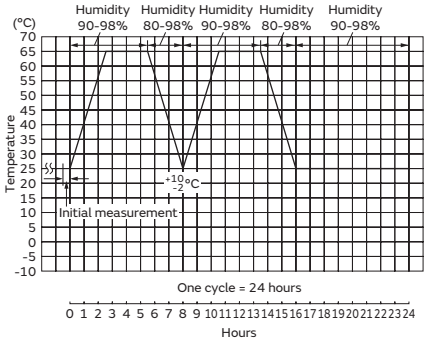
Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RHSL12A472K0□□H01□	XAL (Murata)	100Vdc	4700pF±10%	3.8×3.5	2.5	2.5	A2	DG
RHSL12A472K0□□H01□	XAL (Murata)	100Vdc	4700pF±10%	3.8×3.5	2.5	5.0	K1	M2
RHSL12A682K0□□H01□	XAL (Murata)	100Vdc	6800pF±10%	3.8×3.5	2.5	2.5	A2	DG
RHSL12A682K0□□H01□	XAL (Murata)	100Vdc	6800pF±10%	3.8×3.5	2.5	5.0	K1	M2
RHSL12A103K0□□H01□	XAL (Murata)	100Vdc	10000pF±10%	3.8×3.5	2.5	2.5	A2	DG
RHSL12A103K0□□H01□	XAL (Murata)	100Vdc	10000pF±10%	3.8×3.5	2.5	5.0	K1	M2
RHSL12A153K0□□H01□	XAL (Murata)	100Vdc	15000pF±10%	3.8×3.5	2.5	2.5	A2	DG
RHSL12A153K0□□H01□	XAL (Murata)	100Vdc	15000pF±10%	3.8×3.5	2.5	5.0	K1	M2
RHSL12A223K0□□H01□	XAL (Murata)	100Vdc	22000pF±10%	3.8×3.5	2.5	2.5	A2	DG
RHSL12A223K0□□H01□	XAL (Murata)	100Vdc	22000pF±10%	3.8×3.5	2.5	5.0	K1	M2
RHSL12A333K0□□H01□	XAL (Murata)	100Vdc	33000pF±10%	3.8×3.5	2.5	2.5	A2	DG
RHSL12A333K0□□H01□	XAL (Murata)	100Vdc	33000pF±10%	3.8×3.5	2.5	5.0	K1	M2
RHSL12A473K0□□H01□	XAL (Murata)	100Vdc	47000pF±10%	3.8×3.5	2.5	2.5	A2	DG
RHSL12A473K0□□H01□	XAL (Murata)	100Vdc	47000pF±10%	3.8×3.5	2.5	5.0	K1	M2
RHSL12A683K0□□H01□	XAL (Murata)	100Vdc	68000pF±10%	3.8×3.5	2.5	2.5	A2	DG
RHSL12A683K0□□H01□	XAL (Murata)	100Vdc	68000pF±10%	3.8×3.5	2.5	5.0	K1	M2
RHSL12A104K0□□H01□	XAL (Murata)	100Vdc	0.1μF±10%	3.8×3.5	2.5	2.5	A2	DG
RHSL12A104K0□□H01□	XAL (Murata)	100Vdc	0.1μF±10%	3.8×3.5	2.5	5.0	K1	M2
RHSN12A472K0□□H01□	XAN (Murata)	100Vdc	4700pF±10%	3.8×3.5	2.5	2.5	A2	DG
RHSN12A472K0□□H01□	XAN (Murata)	100Vdc	4700pF±10%	3.8×3.5	2.5	5.0	K1	M2
RHSN12A682K0□□H01□	XAN (Murata)	100Vdc	6800pF±10%	3.8×3.5	2.5	2.5	A2	DG
RHSN12A682K0□□H01□	XAN (Murata)	100Vdc	6800pF±10%	3.8×3.5	2.5	5.0	K1	M2
RHSN12A103K0□□H01□	XAN (Murata)	100Vdc	10000pF±10%	3.8×3.5	2.5	2.5	A2	DG
RHSN12A103K0□□H01□	XAN (Murata)	100Vdc	10000pF±10%	3.8×3.5	2.5	5.0	K1	M2
RHSN12A153K0□□H01□	XAN (Murata)	100Vdc	15000pF±10%	3.8×3.5	2.5	2.5	A2	DG
RHSN12A153K0□□H01□	XAN (Murata)	100Vdc	15000pF±10%	3.8×3.5	2.5	5.0	K1	M2
RHSN12A223K0□□H01□	XAN (Murata)	100Vdc	22000pF±10%	3.8×3.5	2.5	2.5	A2	DG
RHSN12A223K0□□H01□	XAN (Murata)	100Vdc	22000pF±10%	3.8×3.5	2.5	5.0	K1	M2
RHSN12A333K1□□H01□	XAN (Murata)	100Vdc	33000pF±10%	4.0×3.5	2.5	2.5	A2	DG
RHSN12A333K1□□H01□	XAN (Murata)	100Vdc	33000pF±10%	4.0×3.5	2.5	5.0	K1	M2
RHSN12A473K1□□H01□	XAN (Murata)	100Vdc	47000pF±10%	4.0×3.5	2.5	2.5	A2	DG
RHSN12A473K1□□H01□	XAN (Murata)	100Vdc	47000pF±10%	4.0×3.5	2.5	5.0	K1	M2
RHSN12A683K1□□H01□	XAN (Murata)	100Vdc	68000pF±10%	4.0×3.5	2.5	2.5	A2	DG
RHSN12A683K1□□H01□	XAN (Murata)	100Vdc	68000pF±10%	4.0×3.5	2.5	5.0	K1	M2
RHSN12A104K1□□H01□	XAN (Murata)	100Vdc	0.1μF±10%	4.0×3.5	2.5	2.5	A2	DG
RHSN12A104K1□□H01□	XAN (Murata)	100Vdc	0.1μF±10%	4.0×3.5	2.5	5.0	K1	M2
RHSN12A154K2□□H01□	XAN (Murata)	100Vdc	0.15μF±10%	5.5×4.0	3.15	2.5	A2	DG
RHSN12A154K2□□H01□	XAN (Murata)	100Vdc	0.15μF±10%	5.5×4.0	3.15	5.0	K1	M2
RHSN12A224K2□□H01□	XAN (Murata)	100Vdc	0.22μF±10%	5.5×4.0	3.15	2.5	A2	DG
RHSN12A224K2□□H01□	XAN (Murata)	100Vdc	0.22μF±10%	5.5×4.0	3.15	5.0	K1	M2

Two blank columns are filled with the lead style code. Please refer to the 3 columns on the right for the appropriate code.
The last blank column is filled with the packaging code. (B: bulk, A: ammo pack)

Temperature Compensating Type Specifications and Test Methods

No.	AEC-Q200 Test Item		Specifications	AEC-Q200 Test Method
1	**Pre-and Post-Stress Electrical Test**		–	
2	High Temperature Exposure (Storage)	Appearance	No defects or abnormalities except color change of outer coating	Sit the capacitor for 1000±12h at 200±5°C. Let sit for 24±2h at room condition*, then measure.
		Capacitance Change	Within ±3% or ±0.3pF (Whichever is larger)	
		Q	Q ≧ 350	
		I.R.	1000MΩ min.	
3	Temperature Cycling	Appearance	No defects or abnormalities except color change of outer coating	Perform the 1000 cycles according to the four heat treatments listed in the following table. Let sit for 24±2h at room condition*, then measure.
		Capacitance Change	Within ±5% or ±0.5pF (Whichever is larger)	
		Q	Q ≧ 350	
		I.R.	1000MΩ min.	
4	Moisture Resistance	Appearance	No defects or abnormalities	Apply the 24h heat (25 to 65°C) and humidity (80 to 98%) treatment shown below, 10 consecutive times. Let sit for 24±2h at room condition*, then measure.
		Capacitance Change	Within ±5% or ±0.5pF (Whichever is larger)	
		Q	Q ≧ 200	
		I.R.	500MΩ min.	
5	**Biased Humidity**	Appearance	No defects or abnormalities	Apply the rated voltage and DC1.3+0.2/-0 V (add 100kΩ resistor) at 85±3°C and 80 to 85% humidity for 1000±12h. Remove and let sit for 24±2h at room condition*, then measure. The charge/discharge current is less than 50mA.
		Capacitance Change	Within ±5% or ±0.5pF (Whichever is larger)	
		Q	Q ≧ 200	
		I.R.	500MΩ min.	
6	Operational Life	Appearance	No defects or abnormalities except color change of outer coating	Apply 25% of the rated voltage for 1000±12h at 200±5°C. Let sit for 24±2h at room condition*, then measure The charge/discharge current is less than 50mA.
		Capacitance Change	Within ±3% or ±0.3pF (Whichever is larger)	
		Q	Q ≧ 350	
		I.R.	1000MΩ min.	
7	**External Visual**		No defects or abnormalities	Visual inspection
8	**Physical Dimension**		Within the specified dimensions	Using calipers and micrometers
9	**Marking**		To be easily legible	Visual inspection
10	Resistance to Solvents	Appearance	No defects or abnormalities	Per MIL-STD-202 Method 215 Solvent 1: 1 part (by volume) of isopropyl alcohol 3 parts (by volume) of mineral spirits Solvent 2: Terpene defluxer Solvent 3: 42 parts (by volume) of water 1part (by volume) of propylene glycol monomethyl ether 1 part (by volume) of monoethanolamine
		Capacitance	Within the specified tolerance	
		Q	Q ≧ 1000	
		I.R.	10000MΩ min.	
11	Mechanical Shock	Appearance	No defects or abnormalities	Three shocks in each direction should be applied along 3 mutually perpendicular axes of the test specimen (18 shocks). The specified test pulse should be Half-sine and should have a duration: 0.5ms, peak value: 1500G and velocity change: 4.7m/s.
		Capacitance	Within the specified tolerance	
		Q	Q ≧ 1000	

Step	1	2	3	4
Temp. (°C)	-55+0/-3	Room Temp.	125+3/-0	Room Temp.
Time (min)	15±3	1	15±3	1



* "room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

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Temperature Compensating Type Specifications and Test Methods

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No.	AEC-Q200 Test Item		Specifications	AEC-Q200 Test Method
12	Vibration	Appearance	No defects or abnormalities	The capacitor should be subjected to a simple harmonic motion having a total amplitude of 1.5mm, the frequency being varied uniformly between the approximate limits of 10 and 2000Hz. The frequency range, from 10 to 2000Hz and return to 10Hz, should be traversed in approximately 20min. This motion should be applied for 12 items in each 3 mutually perpendicular directions (total of 36 times).
		Capacitance	Within the specified tolerance	
		Q	Q ≧ 1000	
13-1	Resistance to Soldering Heat (Non-Preheat)	Appearance	No defects or abnormalities	The lead wires should be immersed in the melted solder 1.5 to 2.0mm from the root of terminal at 260±5°C for 10±1s. Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Capacitance Change	Within ±2.5% or ±0.25pF (Whichever is larger)	
		Dielectric Strength (Between Terminals)	No defects	
13-2	Resistance to Soldering Heat (On-Preheat)	Appearance	No defects or abnormalities	First the capacitor should be stored at 120+0/-5°C for 60+0/-5s. Then, the lead wires should be immersed in the melted solder 1.5 to 2.0mm from the root of terminal at 260±5°C for 7.5+0/-1s. Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Capacitance Change	Within ±2.5% or ±0.25pF (Whichever is larger)	
		Dielectric Strength (Between Terminals)	No defects	
13-3	Resistance to Soldering Heat (soldering iron method)	Appearance	No defects or abnormalities	Test condition Termperature of iron-tip: 350±10°C Soldering time: 3.5±0.5s. Soldering position Straight Lead: 1.5 to 2.0mm from the root of terminal. Crimp Lead: 1.5 to 2.0mm from the end of lead bend. Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Capacitance Change	Within ±2.5% or ±0.25pF (Whichever is larger)	
		Dielectric Strength (Between Terminals)	No defects	
14	Thermal Shock	Appearance	No defects or abnormalities	Perform the 300 cycles according to the two heat treatments listed in the following table (Maximum transfer time is 20s). Let sit for 24±2h at room condition*, then measure. Step / 1 / 2 Temp. (°C) / -55+0/-3 / 200+5/-0 Time (min) / 15±3 / 15±3
		Capacitance Change	Within ±5% or ±0.5pF (Whichever is larger)	
		Q	Q ≧ 350	
		I.R.	1000MΩ min.	
15	ESD	Appearance	No defects or abnormalities	Per AEC-Q200-002
		Capacitance	Within the specified tolerance	
		Q	Q ≧ 1000	
		I.R.	10000MΩ min.	
16	Solderability		Lead wire should be soldered with uniform coating on the axial direction over 95% of the circumferential direction.	The terminal of a capacitor is dipped into a solution of ethanol (JIS-K-8101) and rosin (JIS-K-5902) (25% rosin in weight propotion) and then into molten solder (JIS-Z-3282) for 2±0.5s. In both cases the depth of dipping is up to about 1.5 to 2mm from the terminal body. Temp. of solder: 245±5°C Lead Free Solder (Sn-3.0Ag-0.5Cu)

* "room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

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Temperature Compensating Type Specifications and Test Methods

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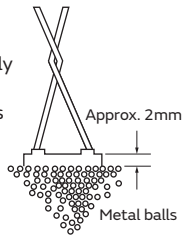
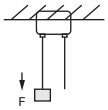
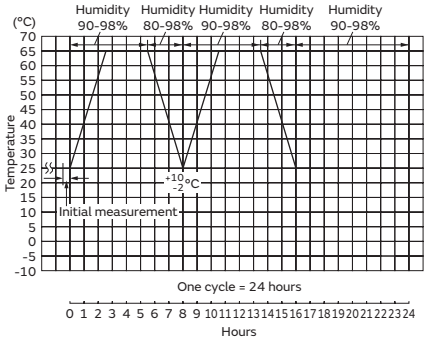
<table>
<tr><th colspan="3">No. AEC-Q200 Test Item</th><th colspan="2">Specifications</th><th>AEC-Q200 Test Method</th></tr>
<tr><td rowspan="6">17</td><td rowspan="6">Electrical Charac-terization</td><td>Appearance</td><td colspan="2">No defects or abnormalities</td><td>Visual inspection</td></tr>
<tr><td>Capacitance</td><td colspan="2">Within the specified tolerance</td><td rowspan="2">The capacitance, Q should be measured at 25°C at the frequency and voltage shown in the table.
<table><tr><th>Nominal Cap.</th><th>Frequency</th><th>Voltage</th></tr><tr><td>C < 1000pF</td><td>1±0.1MHz</td><td>AC0.5 to 5V (r.m.s.)</td></tr><tr><td>C ≧ 1000pF</td><td>1±0.1kHz</td><td>AC1±0.2V (r.m.s.)</td></tr></table></td></tr>
<tr><td>Q</td><td colspan="2">Q ≧ 1000</td></tr>
<tr><td rowspan="2">I.R.</td><td>Room Temperature</td><td>10000MΩ min.</td><td>The insulation resistance should be measured at 25±3°C with a DC voltage not exceeding the rated voltage at normal temperature and humidity and within 2min of charging.
(Charge/Discharge current ≦ 50mA)</td></tr>
<tr><td>High Temperature</td><td>20MΩ min.</td><td>The insulation resistance should be measured at 200±5°C with a DC voltage not exceeding 25% of the rated voltage at normal temperature and humidity and within 2min of charging.
(Charge/Discharge current ≦ 50mA)</td></tr>
<tr><td rowspan="2">Dielectric Strength</td><td>Between Terminals</td><td>No defects or abnormalities</td><td>The capacitor should not be damaged when voltage in table is applied between the terminations for 1 to 5s.
(Charge/Discharge current ≦ 50mA.)
<table><tr><th>Rated Voltage</th><th>Test Voltage</th></tr><tr><td>DC100V</td><td>300% of the rated voltage</td></tr><tr><td>DC200V</td><td>250% of the rated voltage</td></tr><tr><td>DC500V</td><td>150% of the rated voltage</td></tr></table></td></tr>
<tr><td>Body Insulation</td><td>No defects or abnormalities</td><td>The capacitor is placed in a container with metal balls of 1mm diameter so that each terminal, short-circuit, is kept approximately 2mm from the balls as shown in the figure, and voltage in table is impressed for 1 to 5s between capacitor terminals and metal balls.
(Charge/Discharge current ≦ 50mA.)
 

<table><tr><th>Rated Voltage</th><th>Test Voltage</th></tr><tr><td>DC100V, DC200V</td><td>250% of the rated voltage</td></tr><tr><td>DC500V</td><td>150% of the rated voltage</td></tr></table></td></tr>
<tr><td rowspan="2">18</td><td rowspan="2">Terminal Strength</td><td>Tensile Strength</td><td colspan="2" rowspan="2">Termination not to be broken or loosened</td><td>As in the figure, fix the capacitor body, apply the force gradually to each lead in the radial direction of the capacitor until reaching 10N and then keep the force applied for 10±1s.
 
</td></tr>
<tr><td>Bending Strength</td><td>Each lead wire should be subjected to a force of 2.5N and then be bent 90° at the point of egress in one direction. Each wire is then returned to the original position and bent 90° in the opposite direction at the rate of one bend per 2 to 3s.</td></tr>
<tr><td>19</td><td colspan="2">Capacitance Temperature Characteristics</td><td colspan="2">Within the specified Tolerance
<table><tr><th>Char.</th><th>Temperature Coefficient</th></tr><tr><td>CCG</td><td>-55 to 25°C: 0+30/-72ppm/°C
25 to 125°C: 0±30ppm/°C
125 to 200°C: 0+72/-30ppm/°C</td></tr><tr><td>UNJ</td><td>-55 to 25°C: -750+120/-347ppm/°C
25 to 125°C: -750±120ppm/°C
125 to 200°C: -750+347/-120ppm/°C</td></tr></table></td><td>The capacitance change should be measured after 5min at each specified temperature step.
<table><tr><th>Step</th><th>Temperature (°C)</th></tr><tr><td>1</td><td>25±2</td></tr><tr><td>2</td><td>-55±3</td></tr><tr><td>3</td><td>25±2</td></tr><tr><td>4</td><td>200±5</td></tr><tr><td>5</td><td>25±2</td></tr></table>The temperature coefficient is determind using the capacitance measured in step 3 as a reference. When cycling the temperature sequentially from step 1 through 5 (-55 to +200°C) the capacitance should be within the specified tolerance for the temperature coefficient.
The capacitance drift is caluculated by dividing the differences betweeen the maximum and minimum measured values in the step 1, 3 and 5 by the capacitance value in step 3.</td></tr>
</table>

High Dielectric Constant Type Specifications and Test Methods

No.	AEC-Q200 Test Item		Specifications	AEC-Q200 Test Method
1	Pre-and Post-Stress Electrical Test		–	
2	High Temperature Exposure (Storage)	Appearance	No defects or abnormalities except color change of outer coating	Sit the capacitor for 1000±12h at 175±5°C. Let sit for 24±2h at room condition*, then measure. •Pretreatment Perform the heat treatment at 150+0/-10°C for 1h and then let sit for 24±2h at room condition*.
		Capacitance Change	Within ±12.5%	
		D.F.	Char. XAL: 0.075 max. Char. XAN: 0.04 max.	
		I.R.	1000MΩ or 50MΩ • μF min. (Whichever is smaller)	
3	Temperature Cycling	Appearance	No defects or abnormalities except color change of outer coating	Perform the 1000 cycles according to the four heat treatments listed in the following table. Let sit for 24±2h at room condition*, then measure. Step 1: -55+0/-3, 15±3 min Step 2: Room Temp., 1 min Step 3: 175+5/-0, 15±3 min Step 4: Room Temp., 1 min •Pretreatment Perform the heat treatment at 150+0/-10°C for 1h and then let sit for 24±2h at room condition*.
		Capacitance Change	Within ±12.5%	
		D.F.	Char. XAL: 0.075 max. Char. XAN: 0.05 max.	
		I.R.	1000MΩ or 50MΩ • μF min. (Whichever is smaller)	
4	Moisture Resistance	Appearance	No defects or abnormalities	Apply the 24h heat (25 to 65°C) and humidity (80 to 98%) treatment shown below, 10 consecutive times. Let sit for 24±2h at room condition*, then measure.  •Pretreatment Perform the heat treatment at 150+0/-10°C for 1h and then let sit for 24±2h at room condition*.
		Capacitance Change	Within ±12.5%	
		D.F.	Char. XAL: 0.075 max. Char. XAN: 0.05 max.	
		I.R.	500MΩ or 25MΩ • μF min. (Whichever is smaller)	
5	Biased Humidity	Appearance	No defects or abnormalities	Apply the rated voltage and DC1.3+0.2/-0 V (add 100kΩ resistor) at 85±3°C and 80 to 85% humidity for 1000±12h. Remove and let sit for 24±2h at room condition*, then measure. The charge/discharge current is less than 50mA. •Pretreatment Perform the heat treatment at 150+0/-10°C for 1h and then let sit for 24±2h at room condition*.
		Capacitance Change	Within ±12.5%	
		D.F.	Char. XAL: 0.075 max. Char. XAN: 0.05 max.	
		I.R.	500MΩ or 25MΩ • μF min. (Whichever is smaller)	
6	Operational Life	Appearance	No defects or abnormalities except color change of outer coating	Apply 50% of the rated voltage for 1000±12h at 175±5°C. Let sit for 24±2h at room condition*, then measure. The charge/discharge current is less than 50mA. •Pretreatment Apply test voltage for 60±5min at test temperature. Remove and let sit for 24±2h at room condition*.
		Capacitance Change	Within ±15%	
		D.F.	Char. XAL: 0.075 max. Char. XAN: 0.04 max.	
		I.R.	100MΩ or 5MΩ • μF min. (Whichever is smaller)	
7	External Visual		No defects or abnormalities	Visual inspection
8	Physical Dimension		Within the specified dimensions	Using calipers and micrometers
9	Marking		To be easily legible	Visual inspection
10	Resistance to Solvents	Appearance	No defects or abnormalities	Per MIL-STD-202 Method 215 Solvent 1: 1 part (by volume) of isopropyl alcohol 3 parts (by volume) of mineral spirits Solvent 2: Terpene defluxer Solvent 3: 42 parts (by volume) of water 1part (by volume) of propylene glycol monomethyl ether 1 part (by volume) of monoethanolamine
		Capacitance	Within the specified tolerance	
		D.F.	Char. XAL: 0.075 max. Char. XAN: 0.025 max.	
		I.R.	10000MΩ or 500MΩ • μF min. (Whichever is smaller)	

* "room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

Continued on the following page.↗

High Dielectric Constant Type Specifications and Test Methods

Continued from the preceding page.↘

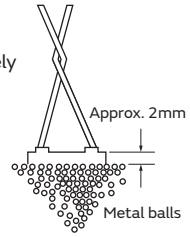
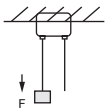
No.	AEC-Q200 Test Item		Specifications	AEC-Q200 Test Method
11	Mechanical Shock	Appearance	No defects or abnormalities	Three shocks in each direction should be applied along 3 mutually perpendicular axes of the test specimen (18 shocks). The specified test pulse should be Half-sine and should have a duration: 0.5ms, peak value: 1500G and velocity change: 4.7m/s.
		Capacitance	Within the specified tolerance	
		D.F.	Char. XAL: 0.075 max. Char. XAN: 0.025 max.	
12	Vibration	Appearance	No defects or abnormalities	The capacitor should be subjected to a simple harmonic motion having a total amplitude of 1.5mm, the frequency being varied uniformly between the approximate limits of 10 and 2000Hz. The frequency range, from 10 to 2000Hz and return to 10Hz, should be traversed in approximately 20min. This motion should be applied for 12 items in each 3 mutually perpendicular directions (total of 36 times).
		Capacitance	Within the specified tolerance	
		D.F.	Char. XAL: 0.075 max. Char. XAN: 0.025 max.	
13-1	Resistance to Soldering Heat (Non-Preheat)	Appearance	No defects or abnormalities	The lead wires should be immersed in the melted solder 1.5 to 2.0mm from the root of terminal at 260±5°C for 10±1s. •Pretreatment Perform the heat treatment at 150+0/-10°C for 1h and then let sit for 24±2h at room condition*. •Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Capacitance Change	Within ±7.5%	
		Dielectric Strength (Between Terminals)	No defects	
13-2	Resistance to Soldering Heat (On-Preheat)	Appearance	No defects or abnormalities	First the capacitor should be stored at 120+0/-5°C for 60+0/-5s. Then, the lead wires should be immersed in the melted solder 1.5 to 2.0mm from the root of terminal at 260±5°C for 7.5+0/-1s. •Pretreatment Perform the heat treatment at 150+0/-10°C for 1h and then let sit for 24±2h at room condition*. •Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Capacitance Change	Within ±7.5%	
		Dielectric Strength (Between Terminals)	No defects	
13-3	Resistance to Soldering Heat (Soldering Iron Method)	Appearance	No defects or abnormalities	Test condition Termperature of iron-tip: 350±10°C Soldering time: 3.5±0.5s Soldering position Straight Lead: 1.5 to 2.0mm from the root of terminal. Crimp Lead: 1.5 to 2.0mm from the end of lead bend. •Pretreatment Perform the heat treatment at 150+0/-10°C for 1h and then let sit for 24±2h at room condition*. •Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Capacitance Change	Within ±7.5%	
		Dielectric Strength (Between Terminals)	No defects	
14	Thermal Shock	Appearance	No defects or abnormalities	Perform the 300 cycles according to the two heat treatments listed in the following table (Maximum transfer time is 20s). Let sit for 24±2h at room condition*, then measure. Step 1: Temp. (°C) -55+0/-3, Time (min) 15±3 Step 2: Temp. (°C) 175+5/-0, Time (min) 15±3 •Pretreatment Perform the heat treatment at 150+0/-10°C for 1h and then let sit for 24±2h at room condition*.
		Capacitance Change	Within ±12.5%	
		D.F.	Char. XAL: 0.075 max. Char. XAN: 0.05 max.	
		I.R.	1000MΩ or 50MΩ • μF min. (Whichever is smaller)	
15	ESD	Appearance	No defects or abnormalities	Per AEC-Q200-002
		Capacitance	Within the specified tolerance	
		D.F.	Char. XAL: 0.075 max. Char. XAN: 0.025 max.	
		I.R.	10000MΩ or 500MΩ • μF min. (Whichever is smaller)	
16	Solderability		Lead wire should be soldered with uniform coating on the axial direction over 95% of the circumferential direction.	The terminal of a capacitor is dipped into a solution of ethanol (JIS-K-8101) and rosin (JIS-K-5902) (25% rosin in weight propotion) and then into molten solder (JIS-Z-3282) for 2±0.5s. In both cases the depth of dipping is up to about 1.5 to 2mm from the terminal body. Temp. of solder : 245±5°C Lead Free Solder (Sn-3.0Ag-0.5Cu)

* "room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

Continued on the following page.↗

High Dielectric Constant Type Specifications and Test Methods

Continued from the preceding page.↘

No.	AEC-Q200 Test Item		Specifications		AEC-Q200 Test Method
17	Electrical Characterization	Appearance	No defects or abnormalities		Visual inspection
		Capacitance	Within the specified tolerance		The capacitance, D.F. should be measured at 25°C at the frequency and voltage shown in the table. Frequency: 1±0.1kHz; Voltage: AC1±0.2V (r.m.s.)
		D.F.	Char. XAL: 0.075 max. Char. XAN: 0.025 max.		
		I.R.	Room Temperature	10000MΩ or 500MΩ • μF min. (Whichever is smaller)	The insulation resistance should be measured at 25±3°C with a DC voltage not exceeding the rated voltage at normal temperature and humidity and within 2min of charging. (Charge/Discharge current ≦ 50mA)
			High Temperature	10MΩ or 0.5MΩ • μF min. (Whichever is smaller)	The insulation resistance should be measured at 175±5°C with a DC voltage not exceeding 50% of the rated voltage at normal temperature and humidity and within 2min of charging. (Charge/Discharge current ≦ 50mA)
		Dielectric Strength	Between Terminals	No defects or abnormalities	The capacitor should not be damaged when DC voltage of 250% of the rated voltage is applied between the terminations for 1 to 5s. (Charge/Discharge current ≦ 50mA.)
			Body Insulation	No defects or abnormalities	The capacitor is placed in a container with metal balls of 1mm diameter so that each terminal, short-circuit, is kept approximately 2mm from the balls as shown in the figure, and 250% of the rated DC voltage is impressed for 1 to 5s between capacitor terminals and metal balls. (Charge/Discharge current ≦ 50mA.) 
18	Terminal Strength	Tensile Strength	Termination not to be broken or loosened		As in the figure, fix the capacitor body, apply the force gradually to each lead in the radial direction of the capacitor until reaching 10N and then keep the force applied for 10±1s. 
		Bending Strength			Each lead wire should be subjected to a force of 2.5N and then be bent 90° at the point of egress in one direction. Each wire is then returned to the original position and bent 90° in the opposite direction at the rate of one bend per 2 to 3s.
19	Capacitance Temperature Characteristics		Within the specified Tolerance Char. XAL: -55 to 150°C: Within ±15%; 150 to 175°C: Within+15/-40% Char. XAN: -55 to 125°C: Within ±15%; 125 to 175°C: Within+15/-60%		The capacitance change should be measured after 5min at each specified temperature step. Step 1: 25±2; Step 2: -55±3; Step 3: 25±2; Step 4: 175±5; Step 5: 25±2 The ranges of capacitance change compared with the above 25°C value over the temperature ranges shown in the table should be within the specified ranges. •Pretreatment Perform the heat treatment at 150+0/-10°C for 1h and then let sit for 24±2h at room condition*. Perform the initial measurement.

* "room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

Leaded MLCC for General Purpose

RDE Series (DC25V-DC1kV)

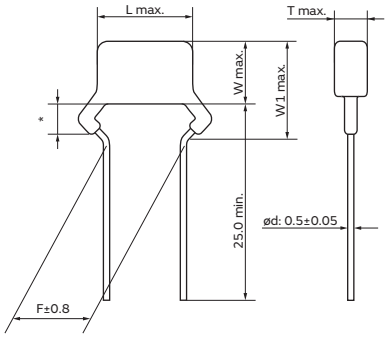
Features

1. Small size and large capacitance
2. Low ESR characteristics for high frequency
3. Meet LF (Lead Free) and HF (Halogen Free)
4. Flow soldering is available, but re-flow soldering is not available.

Applications

General electronic equipment
(Do not use for automotive-related power train and safety equipment.)

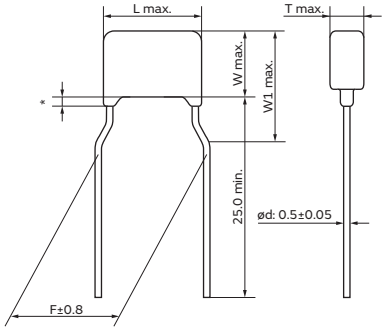
Dimensions code: 0/1/2/3
Lead style code: P1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

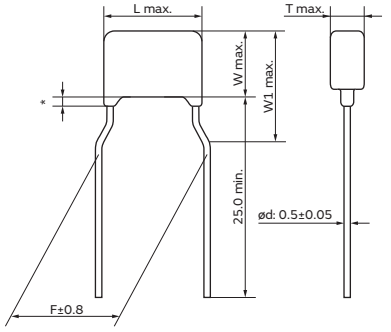
Dimensions code: 0/1
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

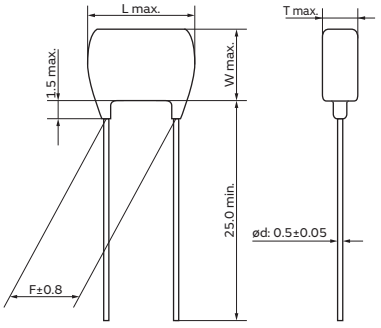
Dimensions code: 2/3/4
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

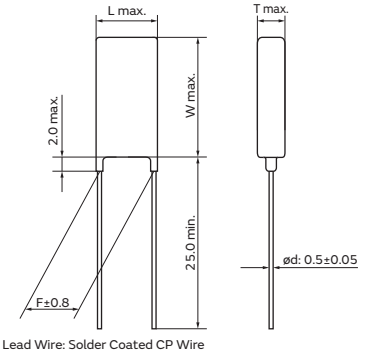
Dimensions code: 5
Lead style code: B1



· Lead Wire: Solder Coated CP Wire

(in mm)

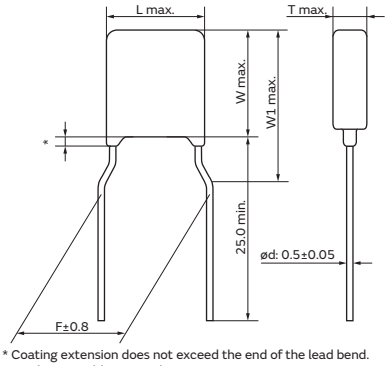
Dimensions code: U
Lead style code: B1



· Lead Wire: Solder Coated CP Wire

(in mm)

Dimensions code: W
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

Dimensions

Dimensions and Lead Style Code	Dimensions (mm)					
	L	W	W1	T	F	d
0P1/0S1	5.0	3.5	6.0	See the individual product specification	2.5	0.5
0K1/0M1	4.0	3.5	6.0		5.0	0.5
1P1/1S1	5.0	3.5	5.0		2.5	0.5
1K1/1M1	4.5	3.5	5.0		5.0	0.5
2P1/2S1	5.5	4.0	6.0		2.5	0.5
2K1/2M1	5.5	4.0	6.0		5.0	0.5
3P1/3S1	5.5	5.0	7.5		2.5	0.5
3K1/3M1	5.5	5.0	7.5		5.0	0.5
4K1/4M1	7.5	5.5	8.0		5.0	0.5
5B1/5E1	7.5	7.5*	-		5.0	0.5
UB1/UE1	7.7	12.5*	-		5.0	0.5
WK1/WM1	5.5	7.5	10.0		5.0	0.5

*DC630V, DC1kV: W+0.5mm

Marking

Dimensions Code \ Rated Voltage	DC25V		DC50V			DC100V			DC250V	DC500V	DC630V	DC1kV
Temp. Char.	X7S	X7R	C0G	X7S	X7R	C0G	X7S	X7R	X7R, U2J, C0G			
0		104K		–			–		–		–	–
1	224K	–	A 102J	–	224K	A 102J	–	224K	U 102J (U2J) 102K (X7R)	103K (X7R)	–	–
2	Ⓜ 475 K2C	–	Ⓜ 563 J5A	Ⓜ 475 K5C	Ⓜ 105 K5C	Ⓜ 103 J1A	–	Ⓜ 105 K1C	Ⓜ 103 J4U (U2J) Ⓜ 473 K4C (X7R) Ⓜ 153 J4A (C0G)	Ⓜ 153 K9C (X7R)	Ⓜ 472 J7U (U2J) Ⓜ 153 K7C (X7R) Ⓜ 332 J7A (C0G)	Ⓜ 102 JAU (U2J) Ⓜ 102 KAC (X7R) Ⓜ 102 JAA (C0G)
3, 4, W	Ⓜ 226 K2C	–	–	Ⓜ 226 K5C	Ⓜ 335 K5C	–	Ⓜ 225 K1C	–	Ⓜ 473 J4U (U2J) Ⓜ 224 K4C (X7R)	Ⓜ 104 K9C (X7R)	Ⓜ 103 J7U (U2J) Ⓜ 104 K7C (X7R)	Ⓜ 472 JAU (U2J) Ⓜ 333 KAC (X7R)
5, U	–	–	–	–	–	–	–	–	– Ⓜ 474 K4C (X7R)	Ⓜ 474 K9C (X7R)	Ⓜ 333 J7U (U2J) Ⓜ 474 M7C (X7R)	Ⓜ 103 JAU (U2J) Ⓜ 104 KAC (X7R)

Temperature Characteristics	Marked with code (C0G char.: A, X7S/X7R char.: C, U2J char.: U) A part is omitted (Please refer to the marking example.)
Nominal Capacitance	Under 100pF: Actual value 100pF and over: Marked with 3 figures
Capacitance Tolerance	Marked with code A part is omitted (Please refer to the marking example.)
Rated Voltage	Marked with code (DC25V: 2, DC50V: 5, DC100V: 1, DC250V: 4, DC500V: 9, DC630V: 7, DC1kV: A) A part is omitted (Please refer to the marking example.)
Manufacturer's Identification	Marked with Ⓜ A part is omitted (Please refer to the marking example.)

Temperature Compensating Type, C0G/U2J Characteristics

Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RDE5C1H1R0C0□□H03□	C0G (EIA)	50Vdc	1.0pF±0.25pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H1R0C0□□H03□	C0G (EIA)	50Vdc	1.0pF±0.25pF	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H2R0C0□□H03□	C0G (EIA)	50Vdc	2.0pF±0.25pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H2R0C0□□H03□	C0G (EIA)	50Vdc	2.0pF±0.25pF	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H3R0C0□□H03□	C0G (EIA)	50Vdc	3.0pF±0.25pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H3R0C0□□H03□	C0G (EIA)	50Vdc	3.0pF±0.25pF	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H4R0C0□□H03□	C0G (EIA)	50Vdc	4.0pF±0.25pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H4R0C0□□H03□	C0G (EIA)	50Vdc	4.0pF±0.25pF	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H5R0C0□□H03□	C0G (EIA)	50Vdc	5.0pF±0.25pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H5R0C0□□H03□	C0G (EIA)	50Vdc	5.0pF±0.25pF	5.0×3.5	2.5	2.5	P1	S1

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RDE5C1H6R0D0□□H03□	C0G (EIA)	50Vdc	6.0pF±0.5pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H6R0D0□□H03□	C0G (EIA)	50Vdc	6.0pF±0.5pF	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H7R0D0□□H03□	C0G (EIA)	50Vdc	7.0pF±0.5pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H7R0D0□□H03□	C0G (EIA)	50Vdc	7.0pF±0.5pF	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H8R0D0□□H03□	C0G (EIA)	50Vdc	8.0pF±0.5pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H8R0D0□□H03□	C0G (EIA)	50Vdc	8.0pF±0.5pF	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H9R0D0□□H03□	C0G (EIA)	50Vdc	9.0pF±0.5pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H9R0D0□□H03□	C0G (EIA)	50Vdc	9.0pF±0.5pF	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H100J0□□H03□	C0G (EIA)	50Vdc	10pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H100J0□□H03□	C0G (EIA)	50Vdc	10pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H120J0□□H03□	C0G (EIA)	50Vdc	12pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H120J0□□H03□	C0G (EIA)	50Vdc	12pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H150J0□□H03□	C0G (EIA)	50Vdc	15pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H150J0□□H03□	C0G (EIA)	50Vdc	15pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H180J0□□H03□	C0G (EIA)	50Vdc	18pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H180J0□□H03□	C0G (EIA)	50Vdc	18pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H220J0□□H03□	C0G (EIA)	50Vdc	22pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H220J0□□H03□	C0G (EIA)	50Vdc	22pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H270J0□□H03□	C0G (EIA)	50Vdc	27pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H270J0□□H03□	C0G (EIA)	50Vdc	27pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H330J0□□H03□	C0G (EIA)	50Vdc	33pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H330J0□□H03□	C0G (EIA)	50Vdc	33pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H390J0□□H03□	C0G (EIA)	50Vdc	39pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H390J0□□H03□	C0G (EIA)	50Vdc	39pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H470J0□□H03□	C0G (EIA)	50Vdc	47pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H470J0□□H03□	C0G (EIA)	50Vdc	47pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H560J0□□H03□	C0G (EIA)	50Vdc	56pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H560J0□□H03□	C0G (EIA)	50Vdc	56pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H680J0□□H03□	C0G (EIA)	50Vdc	68pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H680J0□□H03□	C0G (EIA)	50Vdc	68pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H820J0□□H03□	C0G (EIA)	50Vdc	82pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H820J0□□H03□	C0G (EIA)	50Vdc	82pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H101J0□□H03□	C0G (EIA)	50Vdc	100pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H101J0□□H03□	C0G (EIA)	50Vdc	100pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H121J0□□H03□	C0G (EIA)	50Vdc	120pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H121J0□□H03□	C0G (EIA)	50Vdc	120pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H151J0□□H03□	C0G (EIA)	50Vdc	150pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H151J0□□H03□	C0G (EIA)	50Vdc	150pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H181J0□□H03□	C0G (EIA)	50Vdc	180pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H181J0□□H03□	C0G (EIA)	50Vdc	180pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H221J0□□H03□	C0G (EIA)	50Vdc	220pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H221J0□□H03□	C0G (EIA)	50Vdc	220pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H271J0□□H03□	C0G (EIA)	50Vdc	270pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H271J0□□H03□	C0G (EIA)	50Vdc	270pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H331J0□□H03□	C0G (EIA)	50Vdc	330pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H331J0□□H03□	C0G (EIA)	50Vdc	330pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H391J0□□H03□	C0G (EIA)	50Vdc	390pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H391J0□□H03□	C0G (EIA)	50Vdc	390pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H471J0□□H03□	C0G (EIA)	50Vdc	470pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H471J0□□H03□	C0G (EIA)	50Vdc	470pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H561J0□□H03□	C0G (EIA)	50Vdc	560pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H561J0□□H03□	C0G (EIA)	50Vdc	560pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H681J0□□H03□	C0G (EIA)	50Vdc	680pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H681J0□□H03□	C0G (EIA)	50Vdc	680pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H821J0□□H03□	C0G (EIA)	50Vdc	820pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H821J0□□H03□	C0G (EIA)	50Vdc	820pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H102J0□□H03□	C0G (EIA)	50Vdc	1000pF±5%	4.0×3.5	2.5	5.0	K1	M1

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RDE5C1H102J0□□H03□	C0G (EIA)	50Vdc	1000pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H122J0□□H03□	C0G (EIA)	50Vdc	1200pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H122J0□□H03□	C0G (EIA)	50Vdc	1200pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H152J0□□H03□	C0G (EIA)	50Vdc	1500pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H152J0□□H03□	C0G (EIA)	50Vdc	1500pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H182J0□□H03□	C0G (EIA)	50Vdc	1800pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H182J0□□H03□	C0G (EIA)	50Vdc	1800pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H222J0□□H03□	C0G (EIA)	50Vdc	2200pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H222J0□□H03□	C0G (EIA)	50Vdc	2200pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H272J0□□H03□	C0G (EIA)	50Vdc	2700pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H272J0□□H03□	C0G (EIA)	50Vdc	2700pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H332J0□□H03□	C0G (EIA)	50Vdc	3300pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H332J0□□H03□	C0G (EIA)	50Vdc	3300pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H392J0□□H03□	C0G (EIA)	50Vdc	3900pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C1H392J0□□H03□	C0G (EIA)	50Vdc	3900pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C1H472J1□□H03□	C0G (EIA)	50Vdc	4700pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE5C1H472J1□□H03□	C0G (EIA)	50Vdc	4700pF±5%	5.0×3.5	3.15	2.5	P1	S1
RDE5C1H562J1□□H03□	C0G (EIA)	50Vdc	5600pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE5C1H562J1□□H03□	C0G (EIA)	50Vdc	5600pF±5%	5.0×3.5	3.15	2.5	P1	S1
RDE5C1H682J1□□H03□	C0G (EIA)	50Vdc	6800pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE5C1H682J1□□H03□	C0G (EIA)	50Vdc	6800pF±5%	5.0×3.5	3.15	2.5	P1	S1
RDE5C1H822J1□□H03□	C0G (EIA)	50Vdc	8200pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE5C1H822J1□□H03□	C0G (EIA)	50Vdc	8200pF±5%	5.0×3.5	3.15	2.5	P1	S1
RDE5C1H103J1□□H03□	C0G (EIA)	50Vdc	10000pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE5C1H103J1□□H03□	C0G (EIA)	50Vdc	10000pF±5%	5.0×3.5	3.15	2.5	P1	S1
RDE5C1H123J1□□H03□	C0G (EIA)	50Vdc	12000pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE5C1H123J1□□H03□	C0G (EIA)	50Vdc	12000pF±5%	5.0×3.5	3.15	2.5	P1	S1
RDE5C1H153J1□□H03□	C0G (EIA)	50Vdc	15000pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE5C1H153J1□□H03□	C0G (EIA)	50Vdc	15000pF±5%	5.0×3.5	3.15	2.5	P1	S1
RDE5C1H183J1□□H03□	C0G (EIA)	50Vdc	18000pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE5C1H183J1□□H03□	C0G (EIA)	50Vdc	18000pF±5%	5.0×3.5	3.15	2.5	P1	S1
RDE5C1H223J1□□H03□	C0G (EIA)	50Vdc	22000pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE5C1H223J1□□H03□	C0G (EIA)	50Vdc	22000pF±5%	5.0×3.5	3.15	2.5	P1	S1
RDE5C1H273J2□□H03□	C0G (EIA)	50Vdc	27000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C1H273J2□□H03□	C0G (EIA)	50Vdc	27000pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C1H333J2□□H03□	C0G (EIA)	50Vdc	33000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C1H333J2□□H03□	C0G (EIA)	50Vdc	33000pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C1H393J2□□H03□	C0G (EIA)	50Vdc	39000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C1H393J2□□H03□	C0G (EIA)	50Vdc	39000pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C1H473J2□□H03□	C0G (EIA)	50Vdc	47000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C1H473J2□□H03□	C0G (EIA)	50Vdc	47000pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C1H563J2□□H03□	C0G (EIA)	50Vdc	56000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C1H563J2□□H03□	C0G (EIA)	50Vdc	56000pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C1H683J2□□H03□	C0G (EIA)	50Vdc	68000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C1H683J2□□H03□	C0G (EIA)	50Vdc	68000pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C1H823J2□□H03□	C0G (EIA)	50Vdc	82000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C1H823J2□□H03□	C0G (EIA)	50Vdc	82000pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C1H104J2□□H03□	C0G (EIA)	50Vdc	0.1μF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C1H104J2□□H03□	C0G (EIA)	50Vdc	0.1μF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C2A1R0C0□□H03□	C0G (EIA)	100Vdc	1.0pF±0.25pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A1R0C0□□H03□	C0G (EIA)	100Vdc	1.0pF±0.25pF	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A2R0C0□□H03□	C0G (EIA)	100Vdc	2.0pF±0.25pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A2R0C0□□H03□	C0G (EIA)	100Vdc	2.0pF±0.25pF	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A3R0C0□□H03□	C0G (EIA)	100Vdc	3.0pF±0.25pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A3R0C0□□H03□	C0G (EIA)	100Vdc	3.0pF±0.25pF	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A4R0C0□□H03□	C0G (EIA)	100Vdc	4.0pF±0.25pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A4R0C0□□H03□	C0G (EIA)	100Vdc	4.0pF±0.25pF	5.0×3.5	2.5	2.5	P1	S1

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RDE5C2A5R0C0□□H03□	C0G (EIA)	100Vdc	5.0pF±0.25pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A5R0C0□□H03□	C0G (EIA)	100Vdc	5.0pF±0.25pF	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A6R0D0□□H03□	C0G (EIA)	100Vdc	6.0pF±0.5pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A6R0D0□□H03□	C0G (EIA)	100Vdc	6.0pF±0.5pF	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A7R0D0□□H03□	C0G (EIA)	100Vdc	7.0pF±0.5pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A7R0D0□□H03□	C0G (EIA)	100Vdc	7.0pF±0.5pF	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A8R0D0□□H03□	C0G (EIA)	100Vdc	8.0pF±0.5pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A8R0D0□□H03□	C0G (EIA)	100Vdc	8.0pF±0.5pF	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A9R0D0□□H03□	C0G (EIA)	100Vdc	9.0pF±0.5pF	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A9R0D0□□H03□	C0G (EIA)	100Vdc	9.0pF±0.5pF	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A100J0□□H03□	C0G (EIA)	100Vdc	10pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A100J0□□H03□	C0G (EIA)	100Vdc	10pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A120J0□□H03□	C0G (EIA)	100Vdc	12pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A120J0□□H03□	C0G (EIA)	100Vdc	12pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A150J0□□H03□	C0G (EIA)	100Vdc	15pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A150J0□□H03□	C0G (EIA)	100Vdc	15pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A180J0□□H03□	C0G (EIA)	100Vdc	18pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A180J0□□H03□	C0G (EIA)	100Vdc	18pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A220J0□□H03□	C0G (EIA)	100Vdc	22pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A220J0□□H03□	C0G (EIA)	100Vdc	22pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A270J0□□H03□	C0G (EIA)	100Vdc	27pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A270J0□□H03□	C0G (EIA)	100Vdc	27pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A330J0□□H03□	C0G (EIA)	100Vdc	33pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A330J0□□H03□	C0G (EIA)	100Vdc	33pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A390J0□□H03□	C0G (EIA)	100Vdc	39pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A390J0□□H03□	C0G (EIA)	100Vdc	39pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A470J0□□H03□	C0G (EIA)	100Vdc	47pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A470J0□□H03□	C0G (EIA)	100Vdc	47pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A560J0□□H03□	C0G (EIA)	100Vdc	56pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A560J0□□H03□	C0G (EIA)	100Vdc	56pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A680J0□□H03□	C0G (EIA)	100Vdc	68pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A680J0□□H03□	C0G (EIA)	100Vdc	68pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A820J0□□H03□	C0G (EIA)	100Vdc	82pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A820J0□□H03□	C0G (EIA)	100Vdc	82pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A101J0□□H03□	C0G (EIA)	100Vdc	100pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A101J0□□H03□	C0G (EIA)	100Vdc	100pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A121J0□□H03□	C0G (EIA)	100Vdc	120pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A121J0□□H03□	C0G (EIA)	100Vdc	120pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A151J0□□H03□	C0G (EIA)	100Vdc	150pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A151J0□□H03□	C0G (EIA)	100Vdc	150pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A181J0□□H03□	C0G (EIA)	100Vdc	180pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A181J0□□H03□	C0G (EIA)	100Vdc	180pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A221J0□□H03□	C0G (EIA)	100Vdc	220pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A221J0□□H03□	C0G (EIA)	100Vdc	220pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A271J0□□H03□	C0G (EIA)	100Vdc	270pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A271J0□□H03□	C0G (EIA)	100Vdc	270pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A331J0□□H03□	C0G (EIA)	100Vdc	330pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A331J0□□H03□	C0G (EIA)	100Vdc	330pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A391J0□□H03□	C0G (EIA)	100Vdc	390pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A391J0□□H03□	C0G (EIA)	100Vdc	390pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A471J0□□H03□	C0G (EIA)	100Vdc	470pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A471J0□□H03□	C0G (EIA)	100Vdc	470pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A561J0□□H03□	C0G (EIA)	100Vdc	560pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A561J0□□H03□	C0G (EIA)	100Vdc	560pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A681J0□□H03□	C0G (EIA)	100Vdc	680pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A681J0□□H03□	C0G (EIA)	100Vdc	680pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A821J0□□H03□	C0G (EIA)	100Vdc	820pF±5%	4.0×3.5	2.5	5.0	K1	M1

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RDE5C2A821J0□□H03□	C0G (EIA)	100Vdc	820pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A102J0□□H03□	C0G (EIA)	100Vdc	1000pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A102J0□□H03□	C0G (EIA)	100Vdc	1000pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A122J0□□H03□	C0G (EIA)	100Vdc	1200pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A122J0□□H03□	C0G (EIA)	100Vdc	1200pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A152J0□□H03□	C0G (EIA)	100Vdc	1500pF±5%	4.0×3.5	2.5	5.0	K1	M1
RDE5C2A152J0□□H03□	C0G (EIA)	100Vdc	1500pF±5%	5.0×3.5	2.5	2.5	P1	S1
RDE5C2A182J1□□H03□	C0G (EIA)	100Vdc	1800pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE5C2A182J1□□H03□	C0G (EIA)	100Vdc	1800pF±5%	5.0×3.5	3.15	2.5	P1	S1
RDE5C2A222J1□□H03□	C0G (EIA)	100Vdc	2200pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE5C2A222J1□□H03□	C0G (EIA)	100Vdc	2200pF±5%	5.0×3.5	3.15	2.5	P1	S1
RDE5C2A272J1□□H03□	C0G (EIA)	100Vdc	2700pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE5C2A272J1□□H03□	C0G (EIA)	100Vdc	2700pF±5%	5.0×3.5	3.15	2.5	P1	S1
RDE5C2A332J1□□H03□	C0G (EIA)	100Vdc	3300pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE5C2A332J1□□H03□	C0G (EIA)	100Vdc	3300pF±5%	5.0×3.5	3.15	2.5	P1	S1
RDE5C2A392J2□□H03□	C0G (EIA)	100Vdc	3900pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2A392J2□□H03□	C0G (EIA)	100Vdc	3900pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C2A472J2□□H03□	C0G (EIA)	100Vdc	4700pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2A472J2□□H03□	C0G (EIA)	100Vdc	4700pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C2A562J2□□H03□	C0G (EIA)	100Vdc	5600pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2A562J2□□H03□	C0G (EIA)	100Vdc	5600pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C2A682J2□□H03□	C0G (EIA)	100Vdc	6800pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2A682J2□□H03□	C0G (EIA)	100Vdc	6800pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C2A822J2□□H03□	C0G (EIA)	100Vdc	8200pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2A822J2□□H03□	C0G (EIA)	100Vdc	8200pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C2A103J2□□H03□	C0G (EIA)	100Vdc	10000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2A103J2□□H03□	C0G (EIA)	100Vdc	10000pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C2A123J2□□H03□	C0G (EIA)	100Vdc	12000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2A123J2□□H03□	C0G (EIA)	100Vdc	12000pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C2A153J2□□H03□	C0G (EIA)	100Vdc	15000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2A153J2□□H03□	C0G (EIA)	100Vdc	15000pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C2A183J2□□H03□	C0G (EIA)	100Vdc	18000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2A183J2□□H03□	C0G (EIA)	100Vdc	18000pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C2A223J2□□H03□	C0G (EIA)	100Vdc	22000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2A223J2□□H03□	C0G (EIA)	100Vdc	22000pF±5%	5.5×4.0	3.15	2.5	P1	S1
RDE5C2E100J2□□H03□	C0G (EIA)	250Vdc	10pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E120J2□□H03□	C0G (EIA)	250Vdc	12pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E150J2□□H03□	C0G (EIA)	250Vdc	15pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E180J2□□H03□	C0G (EIA)	250Vdc	18pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E220J2□□H03□	C0G (EIA)	250Vdc	22pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E270J2□□H03□	C0G (EIA)	250Vdc	27pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E330J2□□H03□	C0G (EIA)	250Vdc	33pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E390J2□□H03□	C0G (EIA)	250Vdc	39pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E470J2□□H03□	C0G (EIA)	250Vdc	47pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E560J2□□H03□	C0G (EIA)	250Vdc	56pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E680J2□□H03□	C0G (EIA)	250Vdc	68pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E820J2□□H03□	C0G (EIA)	250Vdc	82pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E101J2□□H03□	C0G (EIA)	250Vdc	100pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E121J2□□H03□	C0G (EIA)	250Vdc	120pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E151J2□□H03□	C0G (EIA)	250Vdc	150pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E181J2□□H03□	C0G (EIA)	250Vdc	180pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E221J2□□H03□	C0G (EIA)	250Vdc	220pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E271J2□□H03□	C0G (EIA)	250Vdc	270pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E331J2□□H03□	C0G (EIA)	250Vdc	330pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E391J2□□H03□	C0G (EIA)	250Vdc	390pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E471J2□□H03□	C0G (EIA)	250Vdc	470pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E561J2□□H03□	C0G (EIA)	250Vdc	560pF±5%	5.5×4.0	3.15	5.0	K1	M1

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RDE5C2E681J2□□H03□	C0G (EIA)	250Vdc	680pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E821J2□□H03□	C0G (EIA)	250Vdc	820pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E102J2□□H03□	C0G (EIA)	250Vdc	1000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E122J2□□H03□	C0G (EIA)	250Vdc	1200pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E152J2□□H03□	C0G (EIA)	250Vdc	1500pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E182J2□□H03□	C0G (EIA)	250Vdc	1800pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E222J2□□H03□	C0G (EIA)	250Vdc	2200pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E272J2□□H03□	C0G (EIA)	250Vdc	2700pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E332J2□□H03□	C0G (EIA)	250Vdc	3300pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E392J2□□H03□	C0G (EIA)	250Vdc	3900pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E472J2□□H03□	C0G (EIA)	250Vdc	4700pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E562J2□□H03□	C0G (EIA)	250Vdc	5600pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E682J2□□H03□	C0G (EIA)	250Vdc	6800pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E822J2□□H03□	C0G (EIA)	250Vdc	8200pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E103J2□□H03□	C0G (EIA)	250Vdc	10000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E123J2□□H03□	C0G (EIA)	250Vdc	12000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2E153J2□□H03□	C0G (EIA)	250Vdc	15000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J100J2□□H03□	C0G (EIA)	630Vdc	10pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J120J2□□H03□	C0G (EIA)	630Vdc	12pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J150J2□□H03□	C0G (EIA)	630Vdc	15pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J180J2□□H03□	C0G (EIA)	630Vdc	18pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J220J2□□H03□	C0G (EIA)	630Vdc	22pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J270J2□□H03□	C0G (EIA)	630Vdc	27pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J330J2□□H03□	C0G (EIA)	630Vdc	33pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J390J2□□H03□	C0G (EIA)	630Vdc	39pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J470J2□□H03□	C0G (EIA)	630Vdc	47pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J560J2□□H03□	C0G (EIA)	630Vdc	56pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J680J2□□H03□	C0G (EIA)	630Vdc	68pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J820J2□□H03□	C0G (EIA)	630Vdc	82pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J101J2□□H03□	C0G (EIA)	630Vdc	100pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J121J2□□H03□	C0G (EIA)	630Vdc	120pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J151J2□□H03□	C0G (EIA)	630Vdc	150pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J181J2□□H03□	C0G (EIA)	630Vdc	180pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J221J2□□H03□	C0G (EIA)	630Vdc	220pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J271J2□□H03□	C0G (EIA)	630Vdc	270pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J331J2□□H03□	C0G (EIA)	630Vdc	330pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J391J2□□H03□	C0G (EIA)	630Vdc	390pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J471J2□□H03□	C0G (EIA)	630Vdc	470pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J561J2□□H03□	C0G (EIA)	630Vdc	560pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J681J2□□H03□	C0G (EIA)	630Vdc	680pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J821J2□□H03□	C0G (EIA)	630Vdc	820pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J102J2□□H03□	C0G (EIA)	630Vdc	1000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J122J2□□H03□	C0G (EIA)	630Vdc	1200pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J152J2□□H03□	C0G (EIA)	630Vdc	1500pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J182J2□□H03□	C0G (EIA)	630Vdc	1800pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J222J2□□H03□	C0G (EIA)	630Vdc	2200pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J272J2□□H03□	C0G (EIA)	630Vdc	2700pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C2J332J2□□H03□	C0G (EIA)	630Vdc	3300pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A100J2□□H03□	C0G (EIA)	1000Vdc	10pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A120J2□□H03□	C0G (EIA)	1000Vdc	12pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A150J2□□H03□	C0G (EIA)	1000Vdc	15pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A180J2□□H03□	C0G (EIA)	1000Vdc	18pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A220J2□□H03□	C0G (EIA)	1000Vdc	22pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A270J2□□H03□	C0G (EIA)	1000Vdc	27pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A330J2□□H03□	C0G (EIA)	1000Vdc	33pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A390J2□□H03□	C0G (EIA)	1000Vdc	39pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A470J2□□H03□	C0G (EIA)	1000Vdc	47pF±5%	5.5×4.0	3.15	5.0	K1	M1

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RDE5C3A560J2□□H03□	C0G (EIA)	1000Vdc	56pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A680J2□□H03□	C0G (EIA)	1000Vdc	68pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A820J2□□H03□	C0G (EIA)	1000Vdc	82pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A101J2□□H03□	C0G (EIA)	1000Vdc	100pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A121J2□□H03□	C0G (EIA)	1000Vdc	120pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A151J2□□H03□	C0G (EIA)	1000Vdc	150pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A181J2□□H03□	C0G (EIA)	1000Vdc	180pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A221J2□□H03□	C0G (EIA)	1000Vdc	220pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A271J2□□H03□	C0G (EIA)	1000Vdc	270pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A331J2□□H03□	C0G (EIA)	1000Vdc	330pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A391J2□□H03□	C0G (EIA)	1000Vdc	390pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A471J2□□H03□	C0G (EIA)	1000Vdc	470pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A561J2□□H03□	C0G (EIA)	1000Vdc	560pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A681J2□□H03□	C0G (EIA)	1000Vdc	680pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A821J2□□H03□	C0G (EIA)	1000Vdc	820pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE5C3A102J2□□H03□	C0G (EIA)	1000Vdc	1000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2E101J1□□H03□	U2J (EIA)	250Vdc	100pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE7U2E151J1□□H03□	U2J (EIA)	250Vdc	150pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE7U2E221J1□□H03□	U2J (EIA)	250Vdc	220pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE7U2E331J1□□H03□	U2J (EIA)	250Vdc	330pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE7U2E471J1□□H03□	U2J (EIA)	250Vdc	470pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE7U2E681J1□□H03□	U2J (EIA)	250Vdc	680pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE7U2E102J1□□H03□	U2J (EIA)	250Vdc	1000pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE7U2E152J1□□H03□	U2J (EIA)	250Vdc	1500pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE7U2E222J1□□H03□	U2J (EIA)	250Vdc	2200pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE7U2E332J1□□H03□	U2J (EIA)	250Vdc	3300pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE7U2E472J1□□H03□	U2J (EIA)	250Vdc	4700pF±5%	4.5×3.5	3.15	5.0	K1	M1
RDE7U2E682J2□□H03□	U2J (EIA)	250Vdc	6800pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2E103J2□□H03□	U2J (EIA)	250Vdc	10000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2E153J2□□H03□	U2J (EIA)	250Vdc	15000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2E223J2□□H03□	U2J (EIA)	250Vdc	22000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2E333J3□□H03□	U2J (EIA)	250Vdc	33000pF±5%	5.5×5.0	4.0	5.0	K1	M1
RDE7U2E473J3□□H03□	U2J (EIA)	250Vdc	47000pF±5%	5.5×5.0	4.0	5.0	K1	M1
RDE7U2J100J2□□H03□	U2J (EIA)	630Vdc	10pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J150J2□□H03□	U2J (EIA)	630Vdc	15pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J220J2□□H03□	U2J (EIA)	630Vdc	22pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J330J2□□H03□	U2J (EIA)	630Vdc	33pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J470J2□□H03□	U2J (EIA)	630Vdc	47pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J680J2□□H03□	U2J (EIA)	630Vdc	68pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J101J2□□H03□	U2J (EIA)	630Vdc	100pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J151J2□□H03□	U2J (EIA)	630Vdc	150pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J221J2□□H03□	U2J (EIA)	630Vdc	220pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J331J2□□H03□	U2J (EIA)	630Vdc	330pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J471J2□□H03□	U2J (EIA)	630Vdc	470pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J681J2□□H03□	U2J (EIA)	630Vdc	680pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J102J2□□H03□	U2J (EIA)	630Vdc	1000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J152J2□□H03□	U2J (EIA)	630Vdc	1500pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J222J2□□H03□	U2J (EIA)	630Vdc	2200pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J332J2□□H03□	U2J (EIA)	630Vdc	3300pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J472J2□□H03□	U2J (EIA)	630Vdc	4700pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U2J682J3□□H03□	U2J (EIA)	630Vdc	6800pF±5%	5.5×5.0	4.0	5.0	K1	M1
RDE7U2J103J3□□H03□	U2J (EIA)	630Vdc	10000pF±5%	5.5×5.0	4.0	5.0	K1	M1
RDE7U2J153J4□□H03□	U2J (EIA)	630Vdc	15000pF±5%	7.5×5.5	4.0	5.0	K1	M1
RDE7U2J223J4□□H03□	U2J (EIA)	630Vdc	22000pF±5%	7.5×5.5	4.0	5.0	K1	M1
RDE7U2J333J5□□H03□	U2J (EIA)	630Vdc	33000pF±5%	7.5×8.0	4.0	5.0	B1	E1
RDE7U2J473J5□□H03□	U2J (EIA)	630Vdc	47000pF±5%	7.5×8.0	4.0	5.0	B1	E1
RDE7U2J943JU□□H03□	U2J (EIA)	630Vdc	94000pF±5%	7.7×13.0	4.0	5.0	B1	E1

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RDE7U3A100J2□□H03□	U2J (EIA)	1000Vdc	10pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U3A150J2□□H03□	U2J (EIA)	1000Vdc	15pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U3A220J2□□H03□	U2J (EIA)	1000Vdc	22pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U3A330J2□□H03□	U2J (EIA)	1000Vdc	33pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U3A470J2□□H03□	U2J (EIA)	1000Vdc	47pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U3A680J2□□H03□	U2J (EIA)	1000Vdc	68pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U3A101J2□□H03□	U2J (EIA)	1000Vdc	100pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U3A151J2□□H03□	U2J (EIA)	1000Vdc	150pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U3A221J2□□H03□	U2J (EIA)	1000Vdc	220pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U3A331J2□□H03□	U2J (EIA)	1000Vdc	330pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U3A471J2□□H03□	U2J (EIA)	1000Vdc	470pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U3A681J2□□H03□	U2J (EIA)	1000Vdc	680pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U3A102J2□□H03□	U2J (EIA)	1000Vdc	1000pF±5%	5.5×4.0	3.15	5.0	K1	M1
RDE7U3A152J3□□H03□	U2J (EIA)	1000Vdc	1500pF±5%	5.5×5.0	4.0	5.0	K1	M1
RDE7U3A222J3□□H03□	U2J (EIA)	1000Vdc	2200pF±5%	5.5×5.0	4.0	5.0	K1	M1
RDE7U3A332J4□□H03□	U2J (EIA)	1000Vdc	3300pF±5%	7.5×5.5	4.0	5.0	K1	M1
RDE7U3A472J4□□H03□	U2J (EIA)	1000Vdc	4700pF±5%	7.5×5.5	4.0	5.0	K1	M1
RDE7U3A682J5□□H03□	U2J (EIA)	1000Vdc	6800pF±5%	7.5×8.0	4.0	5.0	B1	E1
RDE7U3A103J5□□H03□	U2J (EIA)	1000Vdc	10000pF±5%	7.5×8.0	4.0	5.0	B1	E1
RDE7U3A203JU□□H03□	U2J (EIA)	1000Vdc	20000pF±5%	7.7×13.0	4.0	5.0	B1	E1

Two blank columns are filled with the lead style code. Please refer to the 3 columns on the right for the appropriate code.
The last blank column is filled with the packaging code. (B: bulk, A: ammo pack)

High Dielectric Constant Type, X7R/X7S Characteristics

Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RDER71E104K0□□H03□	X7R (EIA)	25Vdc	0.1μF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71E104K0□□H03□	X7R (EIA)	25Vdc	0.1μF±10%	5.0×3.5	2.5	2.5	P1	S1
RDEC71E224K0□□H03□	X7S (EIA)	25Vdc	0.22μF±10%	4.0×3.5	2.5	5.0	K1	M1
RDEC71E224K0□□H03□	X7S (EIA)	25Vdc	0.22μF±10%	5.0×3.5	2.5	2.5	P1	S1
RDEC71E474K0□□H03□	X7S (EIA)	25Vdc	0.47μF±10%	4.0×3.5	2.5	5.0	K1	M1
RDEC71E474K0□□H03□	X7S (EIA)	25Vdc	0.47μF±10%	5.0×3.5	2.5	2.5	P1	S1
RDEC71E105K0□□H03□	X7S (EIA)	25Vdc	1.0μF±10%	4.0×3.5	2.5	5.0	K1	M1
RDEC71E105K0□□H03□	X7S (EIA)	25Vdc	1.0μF±10%	5.0×3.5	2.5	2.5	P1	S1
RDEC71E225K1□□H03□	X7S (EIA)	25Vdc	2.2μF±10%	4.5×3.5	3.15	5.0	K1	M1
RDEC71E225K1□□H03□	X7S (EIA)	25Vdc	2.2μF±10%	5.0×3.5	3.15	2.5	P1	S1
RDEC71E475K2□□H03□	X7S (EIA)	25Vdc	4.7μF±10%	5.5×4.0	3.15	2.5	P1	S1
RDEC71E475K2□□H03□	X7S (EIA)	25Vdc	4.7μF±10%	5.5×4.0	3.15	5.0	K1	M1
RDEC71E106K2□□H03□	X7S (EIA)	25Vdc	10μF±10%	5.5×4.0	3.15	2.5	P1	S1
RDEC71E106K2□□H03□	X7S (EIA)	25Vdc	10μF±10%	5.5×4.0	3.15	5.0	K1	M1
RDEC71E226K3□□H03□	X7S (EIA)	25Vdc	22μF±10%	5.5×5.0	4.0	2.5	P1	S1
RDEC71E226K3□□H03□	X7S (EIA)	25Vdc	22μF±10%	5.5×5.0	4.0	5.0	K1	M1
RDEC71E476MW□□H03□	X7S (EIA)	25Vdc	47μF±20%	5.5×7.5	4.0	5.0	K1	M1
RDER71H221K0□□H03□	X7R (EIA)	50Vdc	220pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71H221K0□□H03□	X7R (EIA)	50Vdc	220pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H331K0□□H03□	X7R (EIA)	50Vdc	330pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71H331K0□□H03□	X7R (EIA)	50Vdc	330pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H471K0□□H03□	X7R (EIA)	50Vdc	470pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71H471K0□□H03□	X7R (EIA)	50Vdc	470pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H681K0□□H03□	X7R (EIA)	50Vdc	680pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71H681K0□□H03□	X7R (EIA)	50Vdc	680pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H102K0□□H03□	X7R (EIA)	50Vdc	1000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71H102K0□□H03□	X7R (EIA)	50Vdc	1000pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H152K0□□H03□	X7R (EIA)	50Vdc	1500pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71H152K0□□H03□	X7R (EIA)	50Vdc	1500pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H222K0□□H03□	X7R (EIA)	50Vdc	2200pF±10%	4.0×3.5	2.5	5.0	K1	M1

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RDER71H222K0□□H03□	X7R (EIA)	50Vdc	2200pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H332K0□□H03□	X7R (EIA)	50Vdc	3300pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71H332K0□□H03□	X7R (EIA)	50Vdc	3300pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H472K0□□H03□	X7R (EIA)	50Vdc	4700pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71H472K0□□H03□	X7R (EIA)	50Vdc	4700pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H682K0□□H03□	X7R (EIA)	50Vdc	6800pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71H682K0□□H03□	X7R (EIA)	50Vdc	6800pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H103K0□□H03□	X7R (EIA)	50Vdc	10000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71H103K0□□H03□	X7R (EIA)	50Vdc	10000pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H153K0□□H03□	X7R (EIA)	50Vdc	15000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71H153K0□□H03□	X7R (EIA)	50Vdc	15000pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H223K0□□H03□	X7R (EIA)	50Vdc	22000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71H223K0□□H03□	X7R (EIA)	50Vdc	22000pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H333K0□□H03□	X7R (EIA)	50Vdc	33000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71H333K0□□H03□	X7R (EIA)	50Vdc	33000pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H473K0□□H03□	X7R (EIA)	50Vdc	47000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71H473K0□□H03□	X7R (EIA)	50Vdc	47000pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H683K0□□H03□	X7R (EIA)	50Vdc	68000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71H683K0□□H03□	X7R (EIA)	50Vdc	68000pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H104K0□□H03□	X7R (EIA)	50Vdc	0.1μF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER71H104K0□□H03□	X7R (EIA)	50Vdc	0.1μF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER71H154K1□□H03□	X7R (EIA)	50Vdc	0.15μF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER71H154K1□□H03□	X7R (EIA)	50Vdc	0.15μF±10%	5.0×3.5	3.15	2.5	P1	S1
RDER71H224K1□□H03□	X7R (EIA)	50Vdc	0.22μF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER71H224K1□□H03□	X7R (EIA)	50Vdc	0.22μF±10%	5.0×3.5	3.15	2.5	P1	S1
RDER71H334K1□□H03□	X7R (EIA)	50Vdc	0.33μF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER71H334K1□□H03□	X7R (EIA)	50Vdc	0.33μF±10%	5.0×3.5	3.15	2.5	P1	S1
RDER71H474K1□□H03□	X7R (EIA)	50Vdc	0.47μF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER71H474K1□□H03□	X7R (EIA)	50Vdc	0.47μF±10%	5.0×3.5	3.15	2.5	P1	S1
RDER71H684K2□□H03□	X7R (EIA)	50Vdc	0.68μF±10%	5.5×4.0	3.15	2.5	P1	S1
RDER71H684K2□□H03□	X7R (EIA)	50Vdc	0.68μF±10%	5.5×4.0	3.15	5.0	K1	M1
RDEC71H105K1□□H03□	X7S (EIA)	50Vdc	1.0μF±10%	4.5×3.5	3.15	5.0	K1	M1
RDEC71H105K1□□H03□	X7S (EIA)	50Vdc	1.0μF±10%	5.0×3.5	3.15	2.5	P1	S1
RDER71H105K2□□H03□	X7R (EIA)	50Vdc	1.0μF±10%	5.5×4.0	3.15	2.5	P1	S1
RDER71H105K2□□H03□	X7R (EIA)	50Vdc	1.0μF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER71H155K2□□H03□	X7R (EIA)	50Vdc	1.5μF±10%	5.5×4.0	3.15	2.5	P1	S1
RDER71H155K2□□H03□	X7R (EIA)	50Vdc	1.5μF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER71H225K2□□H03□	X7R (EIA)	50Vdc	2.2μF±10%	5.5×4.0	3.15	2.5	P1	S1
RDER71H225K2□□H03□	X7R (EIA)	50Vdc	2.2μF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER71H335K3□□H03□	X7R (EIA)	50Vdc	3.3μF±10%	5.5×5.0	4.0	2.5	P1	S1
RDER71H335K3□□H03□	X7R (EIA)	50Vdc	3.3μF±10%	5.5×5.0	4.0	5.0	K1	M1
RDEC71H475K2□□H03□	X7S (EIA)	50Vdc	4.7μF±10%	5.5×4.0	3.15	2.5	P1	S1
RDEC71H475K2□□H03□	X7S (EIA)	50Vdc	4.7μF±10%	5.5×4.0	3.15	5.0	K1	M1
RDEC71H106K3□□H03□	X7S (EIA)	50Vdc	10μF±10%	5.5×5.0	4.0	2.5	P1	S1
RDEC71H106K3□□H03□	X7S (EIA)	50Vdc	10μF±10%	5.5×5.0	4.0	5.0	K1	M1
RDEC71H226MW□□H03□	X7S (EIA)	50Vdc	22μF±20%	5.5×7.5	4.0	5.0	K1	M1
RDER72A221K0□□H03□	X7R (EIA)	100Vdc	220pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER72A221K0□□H03□	X7R (EIA)	100Vdc	220pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER72A331K0□□H03□	X7R (EIA)	100Vdc	330pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER72A331K0□□H03□	X7R (EIA)	100Vdc	330pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER72A471K0□□H03□	X7R (EIA)	100Vdc	470pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER72A471K0□□H03□	X7R (EIA)	100Vdc	470pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER72A681K0□□H03□	X7R (EIA)	100Vdc	680pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER72A681K0□□H03□	X7R (EIA)	100Vdc	680pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER72A102K0□□H03□	X7R (EIA)	100Vdc	1000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER72A102K0□□H03□	X7R (EIA)	100Vdc	1000pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER72A152K0□□H03□	X7R (EIA)	100Vdc	1500pF±10%	4.0×3.5	2.5	5.0	K1	M1

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Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RDER72A152K0□□H03□	X7R (EIA)	100Vdc	1500pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER72A222K0□□H03□	X7R (EIA)	100Vdc	2200pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER72A222K0□□H03□	X7R (EIA)	100Vdc	2200pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER72A332K0□□H03□	X7R (EIA)	100Vdc	3300pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER72A332K0□□H03□	X7R (EIA)	100Vdc	3300pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER72A472K0□□H03□	X7R (EIA)	100Vdc	4700pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER72A472K0□□H03□	X7R (EIA)	100Vdc	4700pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER72A682K0□□H03□	X7R (EIA)	100Vdc	6800pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER72A682K0□□H03□	X7R (EIA)	100Vdc	6800pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER72A103K0□□H03□	X7R (EIA)	100Vdc	10000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER72A103K0□□H03□	X7R (EIA)	100Vdc	10000pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER72A153K0□□H03□	X7R (EIA)	100Vdc	15000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER72A153K0□□H03□	X7R (EIA)	100Vdc	15000pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER72A223K0□□H03□	X7R (EIA)	100Vdc	22000pF±10%	4.0×3.5	2.5	5.0	K1	M1
RDER72A223K0□□H03□	X7R (EIA)	100Vdc	22000pF±10%	5.0×3.5	2.5	2.5	P1	S1
RDER72A333K1□□H03□	X7R (EIA)	100Vdc	33000pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72A333K1□□H03□	X7R (EIA)	100Vdc	33000pF±10%	5.0×3.5	3.15	2.5	P1	S1
RDER72A473K1□□H03□	X7R (EIA)	100Vdc	47000pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72A473K1□□H03□	X7R (EIA)	100Vdc	47000pF±10%	5.0×3.5	3.15	2.5	P1	S1
RDER72A683K1□□H03□	X7R (EIA)	100Vdc	68000pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72A683K1□□H03□	X7R (EIA)	100Vdc	68000pF±10%	5.0×3.5	3.15	2.5	P1	S1
RDER72A104K1□□H03□	X7R (EIA)	100Vdc	0.1μF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72A104K1□□H03□	X7R (EIA)	100Vdc	0.1μF±10%	5.0×3.5	3.15	2.5	P1	S1
RDER72A154K2□□H03□	X7R (EIA)	100Vdc	0.15μF±10%	5.5×4.0	3.15	2.5	P1	S1
RDER72A154K2□□H03□	X7R (EIA)	100Vdc	0.15μF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72A224K1□□H03□	X7R (EIA)	100Vdc	0.22μF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72A224K1□□H03□	X7R (EIA)	100Vdc	0.22μF±10%	5.0×3.5	3.15	2.5	P1	S1
RDER72A334K1□□H03□	X7R (EIA)	100Vdc	0.33μF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72A334K1□□H03□	X7R (EIA)	100Vdc	0.33μF±10%	5.0×3.5	3.15	2.5	P1	S1
RDER72A474K1□□H03□	X7R (EIA)	100Vdc	0.47μF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72A474K1□□H03□	X7R (EIA)	100Vdc	0.47μF±10%	5.0×3.5	3.15	2.5	P1	S1
RDER72A684K2□□H03□	X7R (EIA)	100Vdc	0.68μF±10%	5.5×4.0	3.15	2.5	P1	S1
RDER72A684K2□□H03□	X7R (EIA)	100Vdc	0.68μF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72A105K2□□H03□	X7R (EIA)	100Vdc	1.0μF±10%	5.5×4.0	3.15	2.5	P1	S1
RDER72A105K2□□H03□	X7R (EIA)	100Vdc	1.0μF±10%	5.5×4.0	3.15	5.0	K1	M1
RDEC72A155K3□□H03□	X7S (EIA)	100Vdc	1.5μF±10%	5.5×5.0	4.0	2.5	P1	S1
RDEC72A155K3□□H03□	X7S (EIA)	100Vdc	1.5μF±10%	5.5×5.0	4.0	5.0	K1	M1
RDEC72A225K3□□H03□	X7S (EIA)	100Vdc	2.2μF±10%	5.5×5.0	4.0	2.5	P1	S1
RDEC72A225K3□□H03□	X7S (EIA)	100Vdc	2.2μF±10%	5.5×5.0	4.0	5.0	K1	M1
RDEC72A475MW□□H03□	X7S (EIA)	100Vdc	4.7μF±20%	5.5×7.5	4.0	5.0	K1	M1
RDER72E102K1□□H03□	X7R (EIA)	250Vdc	1000pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72E152K1□□H03□	X7R (EIA)	250Vdc	1500pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72E222K1□□H03□	X7R (EIA)	250Vdc	2200pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72E332K1□□H03□	X7R (EIA)	250Vdc	3300pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72E472K1□□H03□	X7R (EIA)	250Vdc	4700pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72E682K1□□H03□	X7R (EIA)	250Vdc	6800pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72E103K1□□H03□	X7R (EIA)	250Vdc	10000pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72E153K1□□H03□	X7R (EIA)	250Vdc	15000pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72E223K1□□H03□	X7R (EIA)	250Vdc	22000pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72E333K2□□H03□	X7R (EIA)	250Vdc	33000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72E473K2□□H03□	X7R (EIA)	250Vdc	47000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72E683K2□□H03□	X7R (EIA)	250Vdc	68000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72E104K2□□H03□	X7R (EIA)	250Vdc	0.10μF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72E154K3□□H03□	X7R (EIA)	250Vdc	0.15μF±10%	5.5×5.0	3.15	5.0	K1	M1
RDER72E224K3□□H03□	X7R (EIA)	250Vdc	0.22μF±10%	5.5×5.0	3.15	5.0	K1	M1
RDER72E334K4□□H03□	X7R (EIA)	250Vdc	0.33μF±10%	7.5×5.5	4.0	5.0	K1	M1
RDER72E474K4□□H03□	X7R (EIA)	250Vdc	0.47μF±10%	7.5×5.5	4.0	5.0	K1	M1

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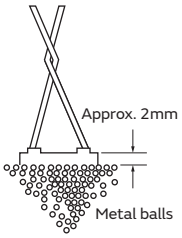
Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RDER72E684K5□□H03□	X7R (EIA)	250Vdc	0.68μF±10%	7.5×7.5	4.0	5.0	B1	E1
RDER72E105K5□□H03□	X7R (EIA)	250Vdc	1.0μF±10%	7.5×7.5	4.0	5.0	B1	E1
RDER72E225MU□□H03□	X7R (EIA)	250Vdc	2.2μF±20%	7.7×12.5	4.0	5.0	B1	E1
RDER72H102K1□□H03□	X7R (EIA)	500Vdc	1000pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72H152K1□□H03□	X7R (EIA)	500Vdc	1500pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72H222K1□□H03□	X7R (EIA)	500Vdc	2200pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72H332K1□□H03□	X7R (EIA)	500Vdc	3300pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72H472K1□□H03□	X7R (EIA)	500Vdc	4700pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72H682K1□□H03□	X7R (EIA)	500Vdc	6800pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72H103K1□□H03□	X7R (EIA)	500Vdc	10000pF±10%	4.5×3.5	3.15	5.0	K1	M1
RDER72H153K2□□H03□	X7R (EIA)	500Vdc	15000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72H223K2□□H03□	X7R (EIA)	500Vdc	22000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72H333K2□□H03□	X7R (EIA)	500Vdc	33000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72H473K2□□H03□	X7R (EIA)	500Vdc	47000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72H683K3□□H03□	X7R (EIA)	500Vdc	68000pF±10%	5.5×5.0	4.0	5.0	K1	M1
RDER72H104K3□□H03□	X7R (EIA)	500Vdc	0.1μF±10%	5.5×5.0	4.0	5.0	K1	M1
RDER72H154K4□□H03□	X7R (EIA)	500Vdc	0.15μF±10%	7.5×5.5	4.0	5.0	K1	M1
RDER72H224K4□□H03□	X7R (EIA)	500Vdc	0.22μF±10%	7.5×5.5	4.0	5.0	K1	M1
RDER72H334K5□□H03□	X7R (EIA)	500Vdc	0.33μF±10%	7.5×7.5	4.0	5.0	B1	E1
RDER72H474K5□□H03□	X7R (EIA)	500Vdc	0.47μF±10%	7.5×7.5	4.0	5.0	B1	E1
RDER72H684MU□□H03□	X7R (EIA)	500Vdc	0.68μF±20%	7.7×12.5	4.0	5.0	B1	E1
RDER72H105MU□□H03□	X7R (EIA)	500Vdc	1.0μF±20%	7.7×12.5	4.0	5.0	B1	E1
RDER72J102K2□□H03□	X7R (EIA)	630Vdc	1000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72J152K2□□H03□	X7R (EIA)	630Vdc	1500pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72J222K2□□H03□	X7R (EIA)	630Vdc	2200pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72J332K2□□H03□	X7R (EIA)	630Vdc	3300pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72J472K2□□H03□	X7R (EIA)	630Vdc	4700pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72J682K2□□H03□	X7R (EIA)	630Vdc	6800pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72J103K2□□H03□	X7R (EIA)	630Vdc	10000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72J153K2□□H03□	X7R (EIA)	630Vdc	15000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72J223K2□□H03□	X7R (EIA)	630Vdc	22000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER72J333K3□□H03□	X7R (EIA)	630Vdc	33000pF±10%	5.5×5.0	4.0	5.0	K1	M1
RDER72J473K3□□H03□	X7R (EIA)	630Vdc	47000pF±10%	5.5×5.0	4.0	5.0	K1	M1
RDER72J683K4□□H03□	X7R (EIA)	630Vdc	68000pF±10%	7.5×5.5	4.0	5.0	K1	M1
RDER72J104K4□□H03□	X7R (EIA)	630Vdc	0.10μF±10%	7.5×5.5	4.0	5.0	K1	M1
RDER72J154K5□□H03□	X7R (EIA)	630Vdc	0.15μF±10%	7.5×8.0	4.0	5.0	B1	E1
RDER72J224K5□□H03□	X7R (EIA)	630Vdc	0.22μF±10%	7.5×8.0	4.0	5.0	B1	E1
RDER72J474MU□□H03□	X7R (EIA)	630Vdc	0.47μF±20%	7.7×13.0	4.0	5.0	B1	E1
RDER73A471K2□□H03□	X7R (EIA)	1000Vdc	470pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER73A681K2□□H03□	X7R (EIA)	1000Vdc	680pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER73A102K2□□H03□	X7R (EIA)	1000Vdc	1000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER73A152K2□□H03□	X7R (EIA)	1000Vdc	1500pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER73A222K2□□H03□	X7R (EIA)	1000Vdc	2200pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER73A332K2□□H03□	X7R (EIA)	1000Vdc	3300pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER73A472K2□□H03□	X7R (EIA)	1000Vdc	4700pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER73A682K2□□H03□	X7R (EIA)	1000Vdc	6800pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER73A103K2□□H03□	X7R (EIA)	1000Vdc	10000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDER73A153K3□□H03□	X7R (EIA)	1000Vdc	15000pF±10%	5.5×5.0	4.0	5.0	K1	M1
RDER73A223K3□□H03□	X7R (EIA)	1000Vdc	22000pF±10%	5.5×5.0	4.0	5.0	K1	M1
RDER73A333K4□□H03□	X7R (EIA)	1000Vdc	33000pF±10%	7.5×5.5	4.0	5.0	K1	M1
RDER73A473K4□□H03□	X7R (EIA)	1000Vdc	47000pF±10%	7.5×5.5	4.0	5.0	K1	M1
RDER73A683K5□□H03□	X7R (EIA)	1000Vdc	68000pF±10%	7.5×8.0	4.0	5.0	B1	E1
RDER73A104K5□□H03□	X7R (EIA)	1000Vdc	0.10μF±10%	7.5×8.0	4.0	5.0	B1	E1
RDER73A224MU□□H03□	X7R (EIA)	1000Vdc	0.22μF±20%	7.7×13.0	4.0	5.0	B1	E1

Two blank columns are filled with the lead style code. Please refer to the 3 columns on the right for the appropriate code.
The last blank column is filled with the packaging code. (B: bulk, A: ammo pack)

Specifications and Test Methods

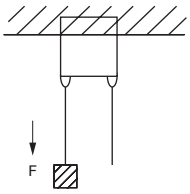
<table>
<tr><th rowspan="2">No.</th><th rowspan="2" colspan="2">Item</th><th colspan="2">Specifications</th><th rowspan="2">Test Method</th></tr>
<tr><th>Temperature Compensating Type</th><th>High Dielectric Constant Type</th></tr>
<tr><td>1</td><td colspan="2">Operating Temperature Range</td><td>-55 to +125°C</td><td>Char. X7R, X7S: -55 to +125°C</td><td>–</td></tr>
<tr><td>2</td><td colspan="2">Appearance</td><td colspan="2">No defects or abnormalities</td><td>Visual inspection</td></tr>
<tr><td>3</td><td colspan="2">Dimension and Marking</td><td colspan="2">See previous pages</td><td>Visual inspection, Vernier Caliper</td></tr>
<tr><td rowspan="2">4</td><td rowspan="2">Dielectric Strength</td><td>Between Terminals</td><td colspan="2">No defects or abnormalities</td><td>The capacitors should not be damaged when test voltages of Table are applied between the terminals for 1 to 5s. (Charge/Discharge current ≦ 50mA)
<table>
<tr><th></th><th>Rated Voltage</th><th>Test Voltage</th></tr>
<tr><td rowspan="4">Temperature Compensating Type</td><td>DC50V, DC100V</td><td>300% of the rated voltage</td></tr>
<tr><td>DC250V</td><td>200% of the rated voltage</td></tr>
<tr><td>DC630V</td><td>150% of the rated voltage</td></tr>
<tr><td>DC1kV</td><td>130% of the rated voltage</td></tr>
<tr><td rowspan="4">High Dielectric Constant Type</td><td>DC25V, DC50V, DC100V</td><td>250% of the rated voltage</td></tr>
<tr><td>DC250V</td><td>200% of the rated voltage</td></tr>
<tr><td>DC500V, DC630V</td><td>150% of the rated voltage</td></tr>
<tr><td>DC1kV</td><td>120% of the rated voltage</td></tr>
</table></td></tr>
<tr><td>Body Insulation</td><td colspan="2">No defects or abnormalities</td><td>The capacitor is placed in a container with metal balls of 1mm diameter so that each terminal, short-circuited, is kept approximately 2mm from the balls as shown in the figure, for 1 to 5s between capacitor terminals and metal balls. (Charge/Discharge current ≦ 50mA)


<table>
<tr><th>Rated Voltage</th><th>Test Voltage</th></tr>
<tr><td>DC25V,DC50V,DC100V</td><td>250% of the rated voltage</td></tr>
<tr><td>DC250V, DC500V</td><td>200% of the rated voltage</td></tr>
<tr><td>DC630V, DC1kV</td><td>DC1300V</td></tr>
</table></td></tr>
<tr><td>5</td><td>Insulation Resistance</td><td>Between Terminals</td><td>More than 10000M or 500MΩ ▪ μF (Whichever is smaller)</td><td>Rated voltage:
DC25V, DC50V, DC100V
More than 10000M or 500MΩ ▪ μF (Whichever is smaller)
Rated voltage:
DC250V, DC500V, DC630V, DC1kV
More than 10000M or 100MΩ ▪ μF (Whichever is smaller)</td><td>The insulation resistance should be measured with a DC voltage not exceeding the rated voltage (DC500V in case of rated vlotage: DC500V, DC630V, DC1kV) at normal temperature and humidity and within 2min of charging.
(Charge/Discharge current ≦ 50mA)</td></tr>
<tr><td>6</td><td colspan="2">Capacitance</td><td colspan="2">Within the specified tolerance</td><td rowspan="2">The capacitance, Q/D.F. should be measured at 25°C at the frequency and voltage shown in the table.
Temperature Compensating Type
<table>
<tr><th>Capacitance</th><th>Frequency</th><th>Voltage</th></tr>
<tr><td>C ≦ 1000pF</td><td>1±0.1MHz</td><td>AC0.5 to 5V (r.m.s.)</td></tr>
<tr><td>C > 1000pF</td><td>1±0.1kHz</td><td>AC1±0.2V (r.m.s.)</td></tr>
</table>
High Dielectric Constant Type
<table>
<tr><th>Capacitance</th><th>Frequency</th><th>Voltage</th></tr>
<tr><td>C ≦ 10μF</td><td>1±0.1kHz</td><td>AC1±0.2V (r.m.s.)</td></tr>
<tr><td>C > 10μF</td><td>120±24Hz</td><td>AC0.5±0.1V (r.m.s.)</td></tr>
</table></td></tr>
<tr><td>7</td><td colspan="2">Q/Dissipation Factor (D.F.)</td><td>30pF min.: Q ≧ 1000
30pF max.: Q ≧ 400+20C
C: Nominal capacitance (pF)</td><td>Char. X7R: 0.025 max.
Char. X7S: 0.125 max.</td></tr>
</table>

Continued on the following page. ↗

Specifications and Test Methods

Continued from the preceding page. ↘

<table>
<tr><th rowspan="2">No.</th><th rowspan="2" colspan="2">Item</th><th colspan="2">Specifications</th><th rowspan="2">Test Method</th></tr>
<tr><th>Temperature Compensating Type</th><th>High Dielectric Constant Type</th></tr>
<tr><td>8</td><td colspan="2">Capacitance Temperature Characteristics</td><td>
<table>
<tr><th>Char.</th><th>Temperature Coefficient</th></tr>
<tr><td>C0G</td><td>25 to 125°C : 0±30ppm/°C
-55 to 25°C : 0+30/-72ppm/°C</td></tr>
<tr><td>U2J</td><td>25 to 125°C : -750±120ppm/°C
-55 to 25°C : -750+120/-347ppm/°C</td></tr>
</table>
</td><td>
<table>
<tr><th>Char.</th><th>Capacitance Change</th></tr>
<tr><td>X7R</td><td>Within ± 15%</td></tr>
<tr><td>X7S</td><td>Within ± 22%</td></tr>
</table>
</td><td>The capacitance change should be measured after 5 min at each specified temperature stage.
The temperature coefficient is determined using the capacitance measured in step 3 as a reference. When cycling the temperature sequentially from step 1 through 5 (-55 to +125°C) the capacitance should be within the specified tolerance for the temperature coefficient and capacitance change.
<table>
<tr><th>Step</th><th>Temperature (°C)</th></tr>
<tr><td>1</td><td>25±2</td></tr>
<tr><td>2</td><td>-55±3</td></tr>
<tr><td>3</td><td>25±2</td></tr>
<tr><td>4</td><td>125±3</td></tr>
<tr><td>5</td><td>25±2</td></tr>
</table>
▪ Pretreatment (for high dielectric constant type)
Perform a heat treatment at 150+0/-10°C for 1h, and then let sit at room temperature for 24±2h.</td></tr>
<tr><td rowspan="2">9</td><td rowspan="2">Terminal Strength</td><td>Tensile Strength</td><td colspan="2">Termination not to be broken or loosened</td><td>As in the figure, fix the capacitor body, apply the force gradually to each lead in the radial direction of the capacitor until reaching 10N and then keep the force applied for 10±1s.
 
</td></tr>
<tr><td>Bending Strength</td><td colspan="2">Termination not to be broken or loosened</td><td>Each lead wire should be subjected to a force of 2.5N and then bent 90° at the point of egress in one direction. Each wire is then returned to the original position and bent 90° in the opposite direction at the rate of one bend per 2 to 3s.</td></tr>
<tr><td rowspan="3">10</td><td rowspan="3">Vibration Resistance</td><td>Appearance</td><td colspan="2">No defects or abnormalities</td><td rowspan="3">The capacitor should be firmly soldered to the supporting lead wire and vibrated at a frequency range of 10 to 55Hz, 1.5mm in total amplitude, with about a 1 minute rate of vibration change from 10 to 55Hz and back to 10Hz. Apply for a total of 6h, 2h each in 3 mutually perpendicular directions.</td></tr>
<tr><td>Capacitance</td><td colspan="2">Within the specified tolerance</td></tr>
<tr><td>Q/D.F.</td><td>30pF min.: Q ≧ 1000
30pF max.: Q ≧ 400+20C
C: Nominal capacitance (pF)</td><td>Char. X7R: 0.025 max.
Char. X7S: 0.125 max.</td></tr>
<tr><td>11</td><td colspan="2">Solderability of Leads</td><td colspan="2">Lead wire should be soldered with uniform coating on the axial direction over 3/4 of the circumferential direction.</td><td>The terminal of a capacitor is dipped into a 25% ethanol (JIS-K-8101) solution of rosin (JIS-K-5902) and then into molten solder for 2±0.5s. In both cases the depth of dipping is up to about 1.5 to 2mm from the terminal body.
Temp. of solder: 245±5°C Lead Free Solder (Sn-3.0Ag-0.5Cu)
235±5°C H60A or H63A Eutectic Solder</td></tr>
<tr><td rowspan="4">12
-
1</td><td rowspan="4">Resistance to Soldering Heat (Non-Preheat)</td><td colspan="2">The measured and observed characteristics should satisfy the specifications in the following table.</td><td colspan="2" rowspan="4">The lead wires should be immersed in the melted solder 1.5 to 2.0mm from the root of terminal at 260±5°C for 7.5+0/-1s.
Pre-treatment
Capacitor should be stored at 150+0/-10°C for 1h, then place at room temperature for 24±2h before initial measurement. (For Char. X7R, X7S)
Post-treatment
Capacitor should be stored for 24±2h at room condition*.</td></tr>
<tr><td>Appearance</td><td colspan="2">No defects or abnormalities</td></tr>
<tr><td>Capacitance Change</td><td>Within ±2.5% or ±0.25pF (Whichever is larger)</td><td>Char. X7R: Within ±7.5%
Char. X7S: Within ±10%</td></tr>
<tr><td>Dielectric Strength (Between Terminals)</td><td colspan="2">No defects</td></tr>
</table>

* “room condition” Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

Continued on the following page. ↗

Specifications and Test Methods

Continued from the preceding page.↘

No.	Item		Specifications		Test Method
			Temperature Compensating Type	High Dielectric Constant Type	
12-2	Resistance to Soldering Heat (On-Preheat)		The measured and observed characteristics should satisfy the specifications in the following table.		First the capacitor should be stored at 120+0/-5°C for 60+0/-5s. Then, the lead wires should be immersed in the melted solder 1.5 to 2.0mm from the root of terminal at 260±5°C for 7.5+0/-1s. Pre-treatment Capacitor should be stored at 150+0/-10°C for 1h, then place at room temperature for 24±2h before initial measurement. (For Char. X7R, X7S) Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Appearance	No defects or abnormalities		
		Capacitance Change	Within ±2.5% or ±0.25pF (Whichever is larger)	Char. X7R: Within ±7.5% Char. X7S: Within ±10%	
		Dielectric Strength (Between Terminals)	No defects		
12-3	Resistance to Soldering Heat (Soldering Iron Method)		The measured and observed characteristics should satisfy the specifications in the following table.		Test condition Temperrature of iron-tip: 350±10°C Soldering time: 3.5±0.5s. Soldering position Straight Lead: 1.5 to 2.0mm from the root of terminal. Crimp Lead: 1.5 to 2.0mm from the end of lead bend. Pre-treatment Capacitor should be stored at 150+0/-10°C for 1h, then place at room temperature for 24±2h before initial measurement. (For Char. X7R, X7S) Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Appearance	No defects or abnormalities		
		Capacitance Change	Within ±2.5% or ±0.25pF (Whichever is larger)	Char. X7R: Within ±7.5% Char. X7S: Within ±10%	
		Dielectric Strength (Between Terminals)	No defects		
13	Temperature Cycle	Appearance	No defects or abnormalities		The capacitor should be subjected to 5 temperature cycles. Set for 24±2h at room temperature, then measure. Step / Temperature (°C) / Time (min) 1 / Min. Operating Temp. ±3 / 30±3 2 / Room Temp. / 3 max. 3 / Max. Operating Temp. ±3 / 30±3 4 / Room Temp. / 3 max. • Pretreatment (for high dielectric constant type) Perform a heat treatment at 150+0/-10°C for 1h, and then let sit at room temperature for 24±2h.
		Capacitance Change	Within ±5% or ±0.5pF (whichever is larger)	Char. X7R, X7S: Within ±12.5%	
		Q/D.F.	30pF min.: Q ≧ 350 10pF to 30pF: Q ≧ 275+5C/2 10pF max.: Q ≧ 200+10C C: Nominal capacitance (pF)	Char. X7R: 0.05 max. Char. X7S: 0.2 max.	
		Insulation Resistance	1000MΩ, 50MΩ • μF min. (whichever is smaller)		
		Dielectric Strength (Between Terminals)	No defects or abnormalities		
14	Humidity (Steady State)	Appearance	No defects or abnormalities		Set the capacitor at 40±2°C and relative humidity of 90 to 95% for 500^{+24}_{0}h. Remove and set for 24±2h at room temperature, then measure. • Pretreatment (for high dielectric constant type) Perform a heat treatment at 150+0/-10°C for 1h, and then let sit at room temperature for 24±2h.
		Capacitance Change	Within ±5% or ±0.5pF (whichever is larger)	Char. X7R, X7S: Within ±12.5%	
		Q/D.F.	30pF min.: Q ≧ 350 10pF to 30pF: Q ≧ 275+5C/2 10pF max.: Q ≧ 200+10C C: Nominal capacitance (pF)	Char. X7R: 0.05 max. Char. X7S: 0.2 max.	
		Insulation Resistance	1000MΩ, 50MΩ • μF min. (whichever is smaller)		
15	Humidity Load	Appearance	No defects or abnormalities		Apply the rated voltage for 500^{+24}_{0}h at 40±2°C and in 90 to 95% humidity. Remove and set for 24±2h at room temperature, then measure. (Charge/Discharge current ≦ 50mA) • Pretreatment (for high dielectric constant type) Perform a heat treatment at 150+0/-10°C for 1h, and then let sit at room temperature for 24±2h.
		Capacitance Change	Within ±5% or ±0.5pF (whichever is larger)	Char. X7R, X7S: Within ±12.5%	
		Q/D.F.	30pF min.: Q ≧ 200 30pF max.: Q ≧ 100+10C/3 C: Nominal capacitance (pF)	Char. X7R: 0.05 max. Char. X7S: 0.2 max.	
		Insulation Resistance	500MΩ or 25MΩ • μF min. (whichever is smaller)		

* "room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

Continued on the following page.↗

Specifications and Test Methods

Continued from the preceding page.↘

<table>
<tr><th rowspan="2">No.</th><th colspan="2" rowspan="2">Item</th><th colspan="2">Specifications</th><th rowspan="2">Test Method</th></tr>
<tr><th>Temperature Compensating Type</th><th>High Dielectric Constant Type</th></tr>
<tr><td rowspan="4">16</td><td rowspan="4">High Temperature Load</td><td>Appearance</td><td colspan="2">No defects or abnormalities</td><td rowspan="4">Apply voltage in Table for 1000$^{+48}_{0}$h at the maximum operating temperature±3°C.
Remove and set for 24±2h at room temperature, then measure. (Charge/Discharge current ≦ 50mA)
<table><tr><th></th><th>Rated Voltage</th><th>Test Voltage</th></tr><tr><td rowspan="2">Temperature Compensating Type</td><td>DC50V, DC100V, DC250V</td><td>150% of the rated voltage</td></tr><tr><td>DC630V, DC1kV</td><td>120% of the rated voltage</td></tr><tr><td rowspan="3">High Dielectric Constant Type</td><td>DC25V, DC50V, DC100V, DC250V</td><td>150% of the rated voltage</td></tr><tr><td>DC500V, DC630V</td><td>120% of the rated voltage</td></tr><tr><td>DC1kV</td><td>110% of the rated voltage</td></tr></table>• Pretreatment (for high dielectric constant type)
Appy test voltage for 1h at test temperature. Remove and set for 24±2h at room temperature.</td></tr>
<tr><td>Capacitance Change</td><td>Within ±3% or ±0.3pF (whichever is larger)</td><td>Char. X7R, X7S: Within ±12.5%</td></tr>
<tr><td>Q/D.F.</td><td>30pF min.: Q ≧ 350
10pF to 30pF: Q ≧ 275+5C/2
10pF max.: Q ≧ 200+10C
C: Nominal capacitance (pF)</td><td>Char. X7R: 0.04 max.
Char. X7S: 0.2 max.</td></tr>
<tr><td>Insulation Resistance</td><td colspan="2">1000MΩ, 50MΩ • μF min. (whichever is smaller)</td></tr>
<tr><td rowspan="2">17</td><td rowspan="2">Solvent Resistance</td><td>Appearance</td><td colspan="2">No defects or abnormalities</td><td rowspan="2">The capacitor should be fully immersed, unagitated, in reagent at 20 to 25°C for 30±5s and then removed gently. Marking on the surface of the capacitor should immediately be visually examined.
Reagent:
• Isopropyl alcohol</td></tr>
<tr><td>Marking</td><td colspan="2">Legible</td></tr>
</table>

Leaded MLCC for General Purpose

RDE Series Large Capacitance and High Allowable Ripple Current (DC250V-DC630V)

Features

1. Higher capacitance with DC-Bias; approximately 40% higher than X7R under loaded rated voltage.
2. Meet LF (Lead Free) and HF (Halogen Free)
3. Allowable higher ripple current
4. Reduces acoustic noise
   Approximately 15dB reduction in comparison to leaded X7R characteristics parts.
   Approximately 30dB reduction in comparison to SMD X7R characteristics part because the contact area is smaller than a SMD.

Applications

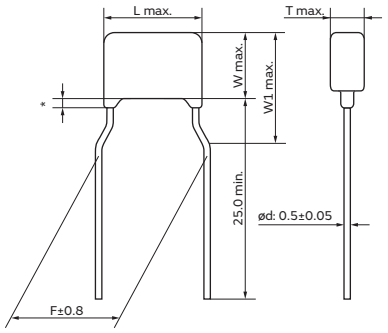
1. DC smoothing capacitor for LED bulb
2. PFC capacitor for general use SMPS
3. Replace Al-E capacitor for long-life equipment

Dimensions

Dimensions and Lead Style Code	DC Rated Voltage	Dimensions (mm)					
		L	W	W1	T	F	d
2K1/2M1	250V/450V/630V	5.5	4.0	6.0	See the individual product specification	5.0	0.5
3K1/3M1	250V/450V/630V	5.5	5.0	7.5		5.0	0.5
4K1/4M1	250V/450V/630V	7.5	5.5	8.0		5.0	0.5
5B1/5E1	250V/450V/630V	7.5	7.5*	-		5.0	0.5
UB1/UE1	250V/450V/630V	7.7	12.5*	-		5.0	0.5

*DC630V: W+0.5mm

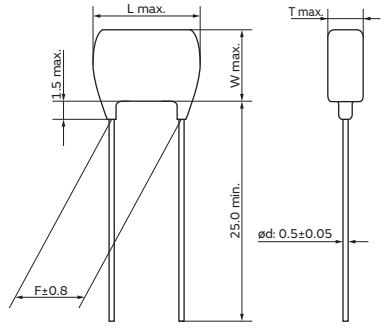
Dimensions code: 2/3/4
Lead style code: K1



* Coating extension does not exceed the end of the lead bend.
· Lead Wire: Solder Coated CP Wire

(in mm)

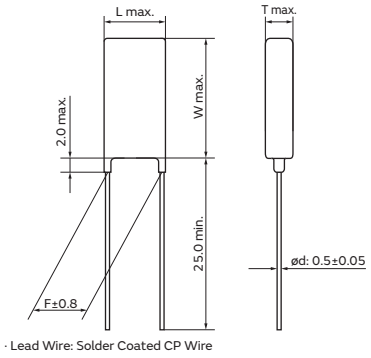
Dimensions code: 5
Lead style code: B1



· Lead Wire: Solder Coated CP Wire

(in mm)

Dimensions code: U
Lead style code: B1



· Lead Wire: Solder Coated CP Wire

(in mm)

Marking

Dimensions Code \ Rated Voltage	DC250V	DC450V	DC630V
Temp. Char.	X7T		
2			
3, 8			
5, U			
Temperature Characteristics	Marked with code (X7T char.: 7)		
Nominal Capacitance	Marked with 3 figures		
Capacitance Tolerance	Marked with code		
Rated Voltage	Marked with code (DC250V: 4, DC450V: 9, DC630V: 7)		
Manufacturer's Identification	Marked with Ⓜ		

High Dielectric Constant Type, X7T Characteristics

Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RDED72E333K2□□H03□	X7T (EIA)	250Vdc	33000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDED72E473K2□□H03□	X7T (EIA)	250Vdc	47000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDED72E683K2□□H03□	X7T (EIA)	250Vdc	68000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDED72E104K3□□H03□	X7T (EIA)	250Vdc	0.10μF±10%	5.5×5.0	4.0	5.0	K1	M1
RDED72E154K3□□H03□	X7T (EIA)	250Vdc	0.15μF±10%	5.5×5.0	4.0	5.0	K1	M1
RDED72E224K4□□H03□	X7T (EIA)	250Vdc	0.22μF±10%	7.5×5.5	4.0	5.0	K1	M1
RDED72E334K4□□H03□	X7T (EIA)	250Vdc	0.33μF±10%	7.5×5.5	4.0	5.0	K1	M1
RDED72E474K5□□H03□	X7T (EIA)	250Vdc	0.47μF±10%	7.5×7.5	4.5	5.0	B1	E1
RDED72E684K5□□H03□	X7T (EIA)	250Vdc	0.68μF±10%	7.5×7.5	4.5	5.0	B1	E1
RDED72E105K5□□H03□	X7T (EIA)	250Vdc	1.0μF±10%	7.5×7.5	4.5	5.0	B1	E1
RDED72E225MU□□H03□	X7T (EIA)	250Vdc	2.2μF±20%	7.7×12.5	4.5	5.0	B1	E1
RDED72W103K2□□H03□	X7T (EIA)	450Vdc	10000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDED72W153K2□□H03□	X7T (EIA)	450Vdc	15000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDED72W223K2□□H03□	X7T (EIA)	450Vdc	22000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDED72W333K2□□H03□	X7T (EIA)	450Vdc	33000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDED72W473K2□□H03□	X7T (EIA)	450Vdc	47000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDED72W683K3□□H03□	X7T (EIA)	450Vdc	68000pF±10%	5.5×5.0	4.0	5.0	K1	M1
RDED72W104K3□□H03□	X7T (EIA)	450Vdc	0.10μF±10%	5.5×5.0	4.0	5.0	K1	M1
RDED72W154K4□□H03□	X7T (EIA)	450Vdc	0.15μF±10%	7.5×5.5	4.0	5.0	K1	M1
RDED72W224K5□□H03□	X7T (EIA)	450Vdc	0.22μF±10%	7.5×7.5	4.5	5.0	B1	E1
RDED72W334K5□□H03□	X7T (EIA)	450Vdc	0.33μF±10%	7.5×7.5	4.5	5.0	B1	E1
RDED72W474K5□□H03□	X7T (EIA)	450Vdc	0.47μF±10%	7.5×7.5	4.5	5.0	B1	E1
RDED72W564K5□□H03□	X7T (EIA)	450Vdc	0.56μF±10%	7.5×7.5	4.5	5.0	B1	E1
RDED72W105MU□□H03□	X7T (EIA)	450Vdc	1.0μF±20%	7.7×12.5	4.5	5.0	B1	E1
RDED72W125MU□□H03□	X7T (EIA)	450Vdc	1.2μF±20%	7.7×12.5	4.5	5.0	B1	E1
RDED72J103K2□□H03□	X7T (EIA)	630Vdc	10000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDED72J153K2□□H03□	X7T (EIA)	630Vdc	15000pF±10%	5.5×4.0	3.15	5.0	K1	M1
RDED72J223K3□□H03□	X7T (EIA)	630Vdc	22000pF±10%	5.5×5.0	4.0	5.0	K1	M1
RDED72J333K3□□H03□	X7T (EIA)	630Vdc	33000pF±10%	5.5×5.0	4.0	5.0	K1	M1
RDED72J473K3□□H03□	X7T (EIA)	630Vdc	47000pF±10%	5.5×5.0	4.0	5.0	K1	M1
RDED72J683K4□□H03□	X7T (EIA)	630Vdc	68000pF±10%	7.5×5.5	4.0	5.0	K1	M1
RDED72J104K5□□H03□	X7T (EIA)	630Vdc	0.10μF±10%	7.5×8.0	4.5	5.0	B1	E1
RDED72J154K5□□H03□	X7T (EIA)	630Vdc	0.15μF±10%	7.5×8.0	4.5	5.0	B1	E1
RDED72J224K5□□H03□	X7T (EIA)	630Vdc	0.22μF±10%	7.5×8.0	4.5	5.0	B1	E1

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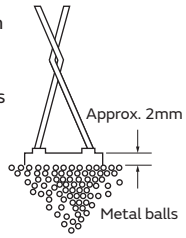
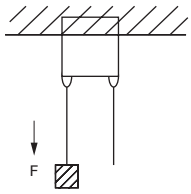
Part Number	Temp. Char.	Rated Voltage	Capacitance	Dimensions LxW (mm)	Dimension T (mm)	Lead Space F (mm)	Lead Style Code Bulk	Lead Style Code Taping
RDED72J274K5□□H03□	X7T (EIA)	630Vdc	0.27μF±10%	7.5×8.0	4.5	5.0	B1	E1
RDED72J474MU□□H03□	X7T (EIA)	630Vdc	0.47μF±20%	7.7×13.0	4.5	5.0	B1	E1
RDED72J564MU□□H03□	X7T (EIA)	630Vdc	0.56μF±20%	7.7×13.0	4.5	5.0	B1	E1

Two blank columns are filled with the lead style code. Please refer to the 3 columns on the right for the appropriate code.
The last blank column is filled with the packaging code. (B: bulk, A: ammo pack)

Specifications and Test Methods

<table>
<tr><th>No.</th><th colspan="2">Item</th><th>Specifications</th><th>Test Method</th></tr>
<tr><td>1</td><td colspan="2">Operating Temperature Range</td><td>-55 to +125°C</td><td>–</td></tr>
<tr><td>2</td><td colspan="2">Appearance</td><td>No defects or abnormalities</td><td>Visual inspection</td></tr>
<tr><td>3</td><td colspan="2">Dimension and Marking</td><td>See previous pages</td><td>Visual inspection, Vernier Caliper</td></tr>
<tr><td rowspan="2">4</td><td rowspan="2">Dielectric Strength</td><td>Between Terminals</td><td>No defects or abnormalities</td><td>The capacitor should not be damaged when voltage in Table is applied between the terminations for 1 to 5s.
(Charge/Discharge current ≦ 50mA)
<table><tr><th>Rated Voltage</th><th>Test Voltage</th></tr><tr><td>DC250V</td><td>200% of the rated voltage</td></tr><tr><td>DC450V</td><td>150% of the rated voltage</td></tr><tr><td>DC630V</td><td>120% of the rated voltage</td></tr></table></td></tr>
<tr><td>Body Insulation</td><td>No defects or abnormalities</td><td>The capacitor is placed in a container with metal balls of 1mm diameter so that each terminal, short-circuit, is kept approximately 2mm from the balls as shown in the figure, and 200% of the rated DC voltage is impressed for 1 to 5s between capacitor terminals and metal balls. (Charge/Discharge current ≦ 50mA)
 
</td></tr>
<tr><td>5</td><td>Insulation Resistance</td><td>Between Terminals</td><td>More than 10000MΩ or 100MΩ • μF, Whichever is smaller</td><td>The insulation resistance should be measured with DC500V (DC250V in case of rated voltage: DC250V,DC450V) at normal temperature and humidity and within 2min of charging.
(Charge/Discharge current ≦ 50mA)</td></tr>
<tr><td>6</td><td colspan="2">Capacitance</td><td>Within the specified tolerance</td><td rowspan="2">The capacitance/D.F. should be measured at the frequency of 1±0.1kHz and a voltage of AC1±0.2V(r.m.s.).</td></tr>
<tr><td>7</td><td colspan="2">Dissipation Factor (D.F.)</td><td>0.01 max.</td></tr>
<tr><td>8</td><td colspan="2">Capacitance Temperature Characteristics</td><td>Within +22/-33%</td><td>The capacitance change should be measured after 5min at each specified temperature stage.
<table><tr><th>Step</th><th>Temperature (°C)</th></tr><tr><td>1</td><td>25±2</td></tr><tr><td>2</td><td>-55±3</td></tr><tr><td>3</td><td>25±2</td></tr><tr><td>4</td><td>125±3</td></tr><tr><td>5</td><td>25±2</td></tr></table></td></tr>
<tr><td rowspan="2">9</td><td rowspan="2">Terminal Strength</td><td>Tensile Strength</td><td>Termination not to be broken or loosened</td><td>As in the figure, fix the capacitor body, apply the force gradually to each lead in the radial direction of the capacitor until reaching 10N and then keep the force applied for 10±1s.
 
</td></tr>
<tr><td>Bending Strength</td><td>Termination not to be broken or loosened</td><td>Each lead wire should be subjected to a force of 2.5N and then bent 90° at the point of egress in one direction. Each wire is then returned to the original position and bent 90° in the opposite direction at the rate of one bend per 2 to 3s.</td></tr>
<tr><td rowspan="3">10</td><td rowspan="3">Vibration Resistance</td><td>Appearance</td><td>No defects or abnormalities</td><td rowspan="3">The capacitor should be firmly soldered to the supporting lead wire and vibrated at a frequency range of 10 to 55Hz, 1.5mm in total amplitude, with about a 1 minute rate of vibration change from 10 to 55Hz and back to 10Hz. Apply for a total of 6h, 2h each in 3 mutually perpendicular directions.</td></tr>
<tr><td>Capacitance</td><td>Within the specified tolerance</td></tr>
<tr><td>D.F.</td><td>0.01 max.</td></tr>
</table>

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Specifications and Test Methods

Continued from the preceding page.↘

No.	Item		Specifications	Test Method
11	Solderability of Leads		Lead wire should be soldered with uniform coating on the axial direction over 3/4 of the circumferential direction.	The terminal of a capacitor is dipped into a solution of ethanol (JIS-K-8101) and rosin (JIS-K-5902) (25% rosin in weight proportion) and then into molten solder (JIS-Z-3282) for 2±0.5s. In both cases the depth of dipping is up to about 1.5 to 2mm from the terminal body. Temp. of solder: 245±5°C Lead Free Solder (Sn-3.0Ag-0.5Cu) 235±5°C H60A or H63A Eutectic Solder
12-1	Resistance to Soldering Heat (Non-Preheat)		The measured and observed characteristics should satisfy the specifications in the following table.	The lead wires should be immersed in the melted solder 1.5 to 2.0mm from the root of terminal at 260±5°C for 7.5+0/-1s. Pre-treatment Capacitor should be stored at 150+0/-10°C for 1h, then place at room temperature for 24±2h before initial measurement. Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±10%	
		Dielectric Strength (Between Terminals)	No defects	
12-2	Resistance to Soldering Heat (On-Preheat)		The measured and observed characteristics should satisfy the specifications in the following table.	First the capacitor should be stored at 120+0/-5°C for 60+0/-5s. Then, the lead wires should be immersed in the melted solder 1.5 to 2.0mm from the root of terminal at 260±5°C for 7.5+0/-1s. Pre-treatment Capacitor should be stored at 150+0/-10°C for 1h, then place at room temperature for 24±2h before initial measurement. Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±10%	
		Dielectric Strength (Between Terminals)	No defects	
12-3	Resistance to Soldering Heat (Soldering Iron Method)		The measured and observed characteristics should satisfy the specifications in the following table.	Test condition Temperrature of iron-tip: 350±10°C Soldering time: 3.5±0.5s. Soldering position Straight Lead: 1.5 to 2.0mm from the root of terminal. Crimp Lead: 1.5 to 2.0mm from the end of lead bend. Pre-treatment Capacitor should be stored at 150+0/-10°C for 1h, then place at room temperature for 24±2h before initial measurement. Post-treatment Capacitor should be stored for 24±2h at room condition*.
		Appearance	No defects or abnormalities	
		Capacitance Change	Within ±10%	
		Dielectric Strength (Between Terminals)	No defects	
13	Temperature Cycle	Appearance	No defects or abnormalities	The capacitor should be subjected to 5 temperature cycles. Step / Temperature (°C) / Time (min) 1 / -55±3 / 30±3 2 / Room Temp. / 3 max. 3 / 125±3 / 30±3 4 / Room Temp. / 3 max. ▪ Pretreatment Perform a heat treatment at 150+0/-10°C for 1h, and then let sit at room temperature for 24±2h.
		Capacitance Change	Within ±12.5%	
		D.F.	0.01 max.	
		Insulation Resistance	More than 1000MΩ or 50MΩ ▪ μF (Whichever is smaller)	
		Dielectric Strength (Between Terminals)	No defects or abnormalities	
14	Humidity (Steady State)	Appearance	No defects or abnormalities	Set the capacitor at 40±2°C and relative humidity of 90 to 95% for 500^{+24}_{0}h. Remove and set for 24±2h at room temperature, then measure. ▪ Pretreatment Perform a heat treatment at 150+0/-10°C for 1h and then let sit at room temperature for 24±2h.
		Capacitance Change	Within ±12.5%	
		D.F.	0.02 max.	
		Insulation Resistance	More than 1000MΩ or 50MΩ ▪ μF (Whichever is smaller)	
15	Humidity Load	Appearance	No defects or abnormalities	Apply the rated voltage at 40±2°C and relative humidity of 90 to 95% for 500^{+24}_{0}h. Remove and set for 24±2h at room temperature, then measure. (Charge/Discharge current ≦ 50mA) ▪ Pretreatment Perform a heat treatment at 150+0/-10°C for 1h and then let sit at room temperature for 24±2h.
		Capacitance Change	Within ±12.5%	
		D.F.	0.02 max.	
		Insulation Resistance	More than 500MΩ or 25MΩ ▪ μF (Whichever is smaller)	

* "room condition" Temperature: 15 to 35°C, Relative humidity: 45 to 75%, Atmosphere pressure: 86 to 106kPa

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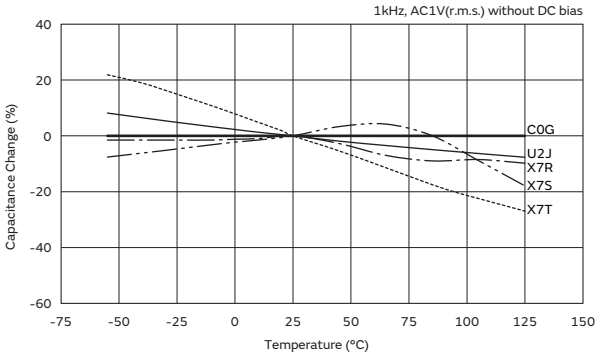
Specifications and Test Methods

Continued from the preceding page.↘

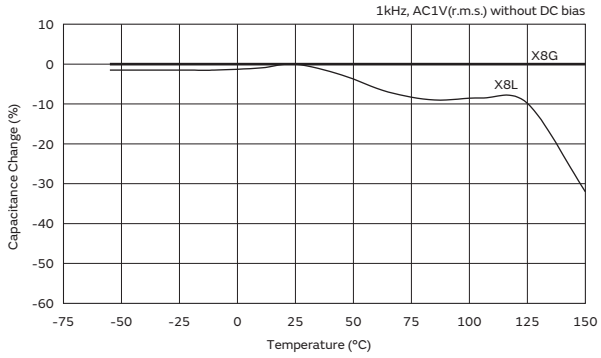
<table>
<tr><th>No.</th><th colspan="2">Item</th><th>Specifications</th><th>Test Method</th></tr>
<tr><td rowspan="4">16</td><td rowspan="4">High Temperature Load</td><td>Appearance</td><td>No defects or abnormalities</td><td rowspan="4">Apply voltage in Table for 1000$^{+48}_{0}$h at the maximum operating temperature. Remove and set for 24±2h at room temperature, then measure.
(Charge/Discharge current ≦ 50mA)
<table><tr><th>Rated Voltage</th><th>Test Voltage</th></tr><tr><td>DC250V</td><td>150% of the rated voltage</td></tr><tr><td>DC450V</td><td>130% of the rated voltage</td></tr><tr><td>DC630V</td><td>120% of the rated voltage</td></tr></table>• Pretreatment
Apply test voltage for 1h, at test temperature. Remove and set for 24±2h at room temperature.</td></tr>
<tr><td>Capacitance Change</td><td>Within ±12.5%</td></tr>
<tr><td>D.F.</td><td>0.02 max.</td></tr>
<tr><td>Insulation Resistance</td><td>More than 1000MΩ or 50MΩ • μF (Whichever is smaller)</td></tr>
<tr><td rowspan="2">17</td><td rowspan="2">Solvent Resistance</td><td>Appearance</td><td>No defects or abnormalities</td><td rowspan="2">The capacitor should be fully immersed, unagitated, in reagent at 20 to 25°C for 30±5s and then removed gently. Marking on the surface of the capacitor should immediately be visually examined.
Reagent :
• Isopropyl alcohol</td></tr>
<tr><td>Marking</td><td>Legible</td></tr>
</table>

Characteristics Reference Data (Typical Example)

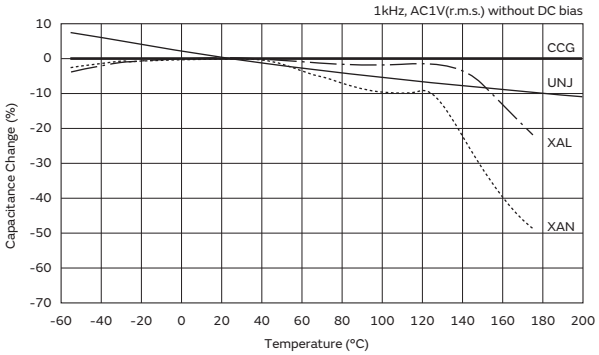
Capacitance - Temperature Characteristics (RCE, RDE Series)



Capacitance - Temperature Characteristics (RHE Series)

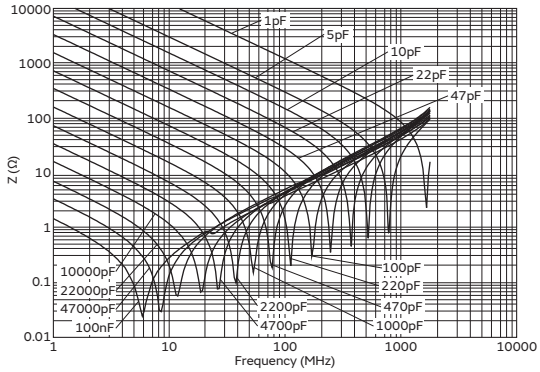


Capacitance - Temperature Characteristics (RHS Series)

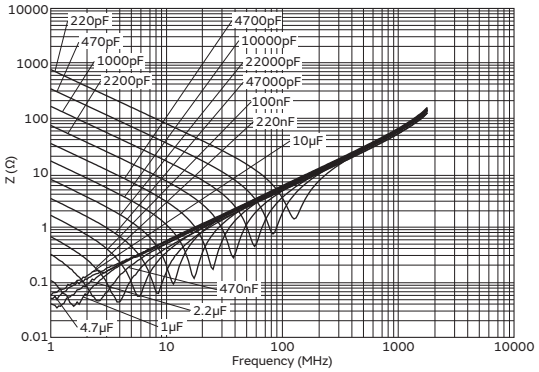


Impedance - Frequency Characteristics

Temperature Compensating Type

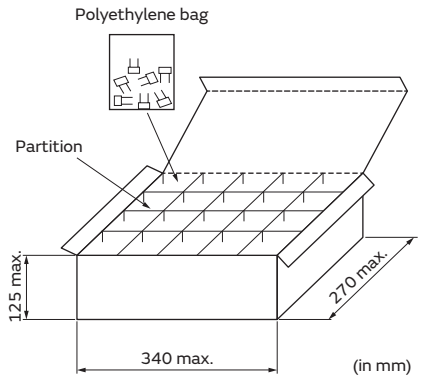
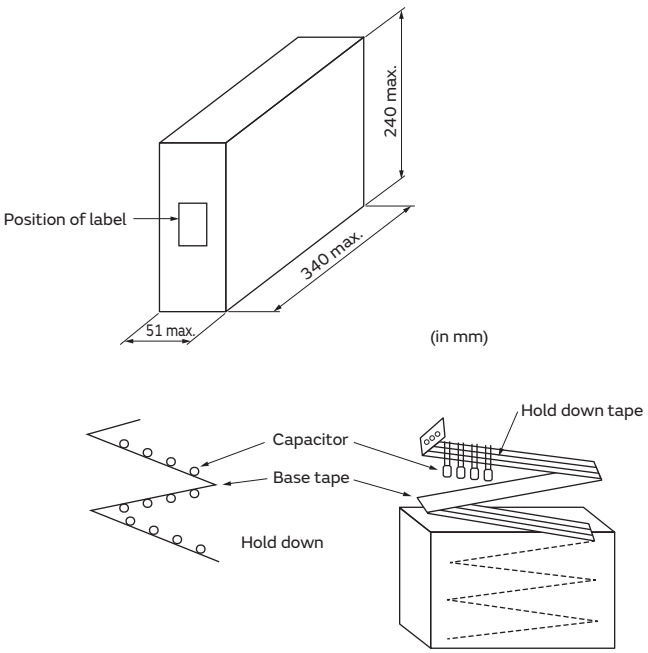


High Dielectric Constant Type



Packaging

Packing Styles

Bulk	Taping
	

Minimum Quantity

[Bulk]

Series	Dimensions Code	Minimum Quantity (pcs./Bag)*
RCE	Except for "U"	500
	U	200
RHE	0, 1, 2, 3, W	500
RHS	0, 1, 2	500
RDE	Except for "U"	500
	U	200

[Taping]

Series	Dimensions Code	Minimum Quantity (pcs./Ammo Pack)*
RCE	0, 1, 2	2000
	3	2000 or 1500
	4, 5, U, W	1500
RHE	0, 1, 2	2000
	3, W	1500
RHS	0, 1	2000
	2	1500
RDE	0, 1, 2	2000
	3	2000 or 1500
	4, 5, W	1500
	U	1500 or 1000

Please order with an integral multiple of the minimum quantity above.
*Minimum Quantity may change depends on part number.
Please check our website "Product details".

"Minimum Quantity" means the numbers of units of each delivery or order. The quantity should be an integral multiple of the "minimum quantity." (Please note that the actual delivery quantity in a package may change sometimes.)

Continued on the following page.↗

Packaging

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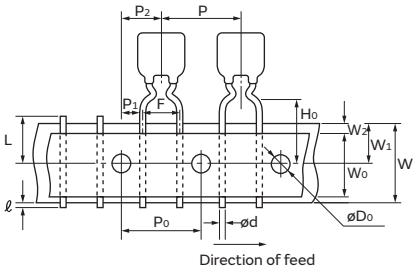
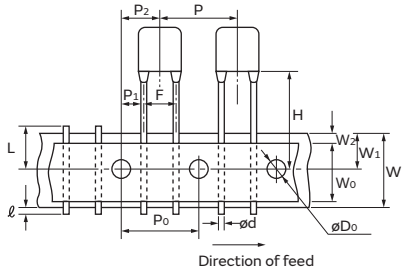
Taping Dimensions

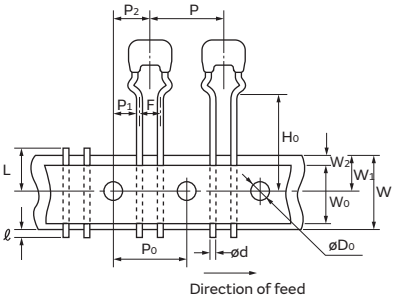
Inside Crimp Taping
Lead Spacing 5.0mm (Lead Code: M1, M2)

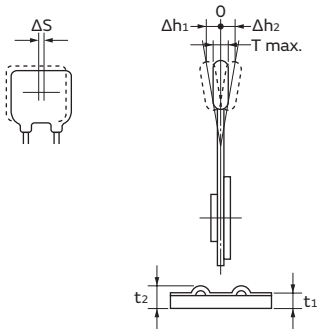


Straight Taping
Lead Spacing 2.5mm (Lead Code: DB, DG)
Lead Spacing 5.0mm (Lead Code: E1)



Outside Crimp Taping
Lead Spacing 2.5mm (Lead Code: S1)





Dimension of capacitors on tape (in mm)

Item	Code	Lead Code					
		DB	DG	E1	M1	M2	S1
Pitch of component	P	12.7±1.0					
Pitch of sprocket hole	P0	12.7±0.2					
Lead spacing	F	$2.5^{+0.4}_{-0.2}$		$5.0^{+0.6}_{-0.2}$			$2.5^{+0.4}_{-0.2}$
Length from hole center to component center	P2	6.35±1.3					
Length from hole center to lead	P1	5.1±0.7		3.85±0.7			5.1±0.7
	254±1.5 total length of componestspitch × 20						
Deviation along tape, left or right defect	ΔS	0±2.0					
Carrier tape width	W	18.0±0.5					
Position of sprocket hole	W1	$9.0^{+0}_{-0.5}$					
Lead distance between reference and bottom plane	H0	–			16.0±0.5	20.0±0.5	16.0±0.5
	H	16.0±0.5	20.0±0.5	17.5±0.5	–		
Protrusion length	ℓ	0.5 max.					
Diameter of sprocket hole	D0	4.0±0.1					
Lead diameter	d	0.5±0.05					
Total tape thickness	t1	0.6±0.3					
Total thickness of tape and lead wire	t2	1.5 max.					
Body thickness	T	Depends on Part Number					
Deviation across tape	Δh1	1.0 max. (Dimension code W, U: 2.0 max.)					
	Δh2						
Portion to cut in case of defect	L	$11.0^{+0}_{-1.0}$					
Hold down tape width	W0	9.5 min.					
Hold down tape position	W2	1.5±1.5					

⚠Caution

⚠Caution (Storage and Operating Condition)

Operating and storage environment

The insulating coating of capacitors does not form a perfect seal; therefore, do not use or store capacitors in a corrosive atmosphere, especially where chloride gas, sulfide gas, acid, alkali, salt or the like are present. Also avoid exposure to moisture. Before cleaning, bonding or molding this product, verify that these processes do not affect product quality by testing the performance of a cleaned, bonded or molded product in the intended equipment. Store the capacitors where the temperature and relative humidity do not exceed 5 to 40 degrees centigrade and 20 to 70%.

Use capacitors within 6 months after delivery.

FAILURE TO FOLLOW THE ABOVE CAUTIONS MAY RESULT, WORST CASE, IN A SHORT CIRCUIT AND CAUSE FUMING OR PARTIAL DISPERSION WHEN THE PRODUCT IS USED.

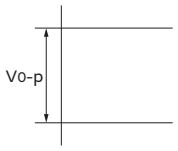
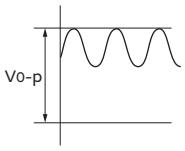
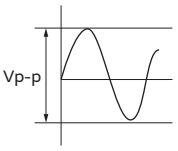
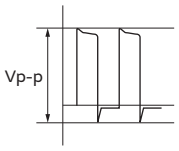
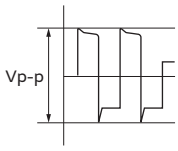
⚠Caution (Rating)

1. Operating Voltage

When DC-rated capacitors are to be used in AC or ripple current circuits, be sure to maintain the Vp-p value of the applied voltage or the V0-p which contains DC bias within the rated voltage range.

When the voltage is applied to the circuit, starting or stopping may generate irregular voltage for a transit period because of resonance or switching. Be sure to use a capacitor with a rated voltage range that includes these irregular voltages.

When DC-rated capacitors are to be used in input circuits from commercial power source (AC filter), be sure to use Safety Recognized Capacitors because various regulations on withstand voltage or impulse withstand established for all equipment should be taken into consideration.

Voltage	DC Voltage	DC+AC Voltage	AC Voltage	Pulse Voltage (1)	Pulse Voltage (2)
Positional Measurement					

2. Operating Temperature

Keep the surface temperature of a capacitor below the upper limit of its rated operating temperature range. Be sure to take into account the heat generated by the capacitor itself (Please refer to the following column 3) and by peripheral components.

3. Self-generated Heat

When the capacitor is used in a high-frequency current, pulse current or similar current, it may have self-generated heat due to dielectric loss. In the case of "High Dielectric Constant Type Capacitors", applied voltage load should be such that self-generated heat is within 20 °C under the condition where the capacitor is subjected at an atmosphere temperature of 25 °C. Excessive heat may lead to deterioration of the capacitor's characteristics and reliability.

Please contact us if self-generated heat occurs with "Temperature Compensating Type Capacitors".

4. Measurement of Temperature

The surface temperature of capacitor should be measured under the condition where an atmosphere temperature and a heat from peripheral components are stable.

The self-generated heat should be measured under the conditions where the capacitor is subjected at an atmosphere temperature 25°C and is not affected by radiant heat from other components or wind from surroundings.

When measuring, use a thermocouple of small thermal capacity -K of ø0.1mm.

Never attempt to perform measurement with the cooling fan running. Otherwise, accurate measurement cannot be ensured.

5. Fail-Safe

Be sure to provide an appropriate fail-safe function on your product to prevent a second damage that may be caused by the abnormal function or the failure of our product.

FAILURE TO FOLLOW THE ABOVE CAUTIONS MAY RESULT, WORST CASE, IN A SHORT CIRCUIT AND CAUSE FUMING OR PARTIAL DISPERSION WHEN THE PRODUCT IS USED.

⚠Caution

⚠Caution (Soldering and Mounting)

1. Vibration and impact

Do not expose a capacitor or its leads to excessive shock or vibration during use.

2. Soldering

When soldering this product to a PCB/PWB, do not exceed the solder heat resistance specification of the capacitor. Subjecting this product to excessive heating could melt the internal junction solder and may result in thermal shocks that can crack the ceramic element.

3. Bonding, resin molding and coating

In case of bonding, molding or coating this product, verify that these processes do not affect the quality of the capacitor by testing the performance of the bonded, molded or coated product in the intended equipment.

In case the amount of application, dryness/ hardening conditions of adhesives and molding resins containing organic solvents (ethyl acetate, methyl ethyl ketone, toluene, etc.) are unsuitable, the outer coating resin of a capacitor may be damaged by the organic solvents and may result, worst case, in a short circuit.

The variation in thickness of adhesive or molding resin or coating may cause an outer coating resin cracking and/or ceramic element cracking of a capacitor in a temperature cycling.

4. Treatment after bonding, resin molding and coating

When the outer coating is hot (over 100 degrees centigrade) after soldering, it becomes soft and fragile, so please be careful not to give it mechanical stress.

FAILURE TO FOLLOW THE ABOVE CAUTIONS MAY RESULT, WORST CASE, IN A SHORT CIRCUIT AND CAUSE FUMING OR PARTIAL DISPERSION WHEN THE PRODUCT IS USED.

⚠Caution (Handling)

Vibration and impact

Do not expose a capacitor or its leads to excessive shock or vibration during use.

FAILURE TO FOLLOW THE ABOVE CAUTIONS MAY RESULT, WORST CASE, IN A SHORT CIRCUIT AND CAUSE FUMING OR PARTIAL DISPERSION WHEN THE PRODUCT IS USED.

Notice

Notice (Rating)

Capacitance change of capacitor

In case of high dielectric constant type capacitors

Capacitors have an aging characteristic, whereby the capacitor continually decreases its capacitance slightly if the capacitor is left on for a long time. Moreover, capacitance might change greatly depending on the surrounding temperature or an applied voltage.

Notice (Soldering and Mounting)

1. **Cleaning (ultrasonic cleaning)**

   To perform ultrasonic cleaning, observe the following conditions.

   Rinse bath capacity: Output of 20 watts per liter or less.

   Rinsing time: 5 min. maximum.

   Do not vibrate the PCB/PWB directly.

   Excessive ultrasonic cleaning may lead to fatigue destruction of the lead wires.

2. **Soldering and Mounting**

   Insertion of the Lead Wire

   - When soldering, insert the lead wire into the PCB without mechanically stressing the lead wire.
   - Insert the lead wire into the PCB with a distance appropriate to the lead space.

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Global Locations

For details please visit www.murata.com

⚠Note

1 Export Control

For customers outside Japan:

No Murata products should be used or sold, through any channels, for use in the design, development, production, utilization, maintenance or operation of, or otherwise contribution to (1) any weapons (Weapons of Mass Destruction [nuclear, chemical or biological weapons or missiles] or conventional weapons) or (2) goods or systems specially designed or intended for military end-use or utilization by military end-users.

For customers in Japan:

For products which are controlled items subject to the "Foreign Exchange and Foreign Trade Law" of Japan, the export license specified by the law is required for export.

2 Please contact our sales representatives or product engineers before using the products in this catalog for the applications listed below, which require especially high reliability for the prevention of defects which might directly damage a third party's life, body or property, or when one of our products is intended for use in applications other than those specified in this catalog.

1. *Aircraft equipment*
2. *Aerospace equipment*
3. *Undersea equipment*
4. *Power plant equipment*
5. *Medical equipment*
6. *Transportation equipment (vehicles, trains, ships, etc.)*
7. *Traffic signal equipment*
8. *Disaster prevention / crime prevention equipment*
9. *Data-processing equipment*
10. *Application of similar complexity and/or reliability requirements to the applications listed above*

3 Product specifications in this catalog are as of February 2018. They are subject to change or our products in it may be discontinued without advance notice. Please check with our sales representatives or product engineers before ordering. If there are any questions, please contact our sales representatives or product engineers.

4 Please read rating and ⚠CAUTION (for storage, operating, rating, soldering, mounting and handling) in this catalog to prevent smoking and/or burning, etc.

5 This catalog has only typical specifications. Therefore, please approve our product specifications or transact the approval sheet for product specifications before ordering.

6 Please note that unless otherwise specified, we shall assume no responsibility whatsoever for any conflict or dispute that may occur in connection with the effect of our and/or a third party's intellectual property rights and other related rights in consideration of your use of our products and/or information described or contained in our catalogs. In this connection, no representation shall be made to the effect that any third parties are authorized to use the rights mentioned above under licenses without our consent.

7 No ozone depleting substances (ODS) under the Montreal Protocol are used in our manufacturing process.

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