

**TZV SERIES**
**105°C Low Impedance, Lead Free Reflow Soldering.**
**◆FEATURES**

- Load Life : 105°C 2000 hours. •RoHS compliance.
- Lead free reflow soldering is available.
- Available for high density mounting.
- Prescribe Impedance value at 100 kHz.

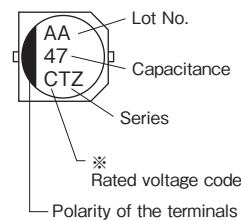

**◆SPECIFICATIONS**

Items	Characteristics																												
Category Temperature Range	-55~+105°C																												
Rated Voltage Range	6.3~50V.DC																												
Capacitance Tolerance	±20% (20°C, 120Hz)																												
Leakage Current(MAX)	I=0.01CV or 3μA whichever is greater.(After 2 minutes application of rated voltage) I=Leakage Current(μA)      C=Capacitance(μF)      V=Rated Voltage(V)																												
(tanδ) Dissipation Factor(MAX)	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>Rated Voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>tanδ</td> <td>0.26</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> </tr> </table> <span style="margin-left: 10px;">(20°C, 120Hz)</span>	Rated Voltage (V)	6.3	10	16	25	35	50	tanδ	0.26	0.19	0.16	0.14	0.12	0.10														
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tanδ	0.26	0.19	0.16	0.14	0.12	0.10																							
Endurance	After applying rated voltage with rated ripple current for 2000 hours at 105°C, the capacitors shall meet the following requirements. <table border="1" style="margin-left: 20px;"> <tr> <td>Capacitance Change</td> <td>Within ±30% of the initial value.</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value.</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> </tr> </table>	Capacitance Change	Within ±30% of the initial value.	Dissipation Factor	Not more than 200% of the specified value.	Leakage Current	Not more than the specified value.																						
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Low Temperature Stability Impedance Ratio(MAX)	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>Rated Voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> <tr> <td>Z(-55°C)/Z(20°C)</td> <td>4</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table> <span style="margin-left: 10px;">(120Hz)</span>	Rated Voltage (V)	6.3	10	16	25	35	50	Z(-25°C)/Z(20°C)	2	2	2	2	2	2	Z(-40°C)/Z(20°C)	3	3	3	3	3	3	Z(-55°C)/Z(20°C)	4	4	4	3	3	3
Rated Voltage (V)	6.3	10	16	25	35	50																							
Z(-25°C)/Z(20°C)	2	2	2	2	2	2																							
Z(-40°C)/Z(20°C)	3	3	3	3	3	3																							
Z(-55°C)/Z(20°C)	4	4	4	3	3	3																							

**◆MULTIPLIER FOR RIPPLE CURRENT**

Frequency Coefficient

Frequency (Hz)		120	1k	10k	100k≤
Coefficient	4.7μF	0.42	0.60	0.80	1.00
	10~33μF	0.45	0.75	0.90	1.00
	47~100μF	0.50	0.80	0.95	1.00
	220~1000μF	0.60	0.85	0.95	1.00

**◆MARKING**


※ Voltage Code

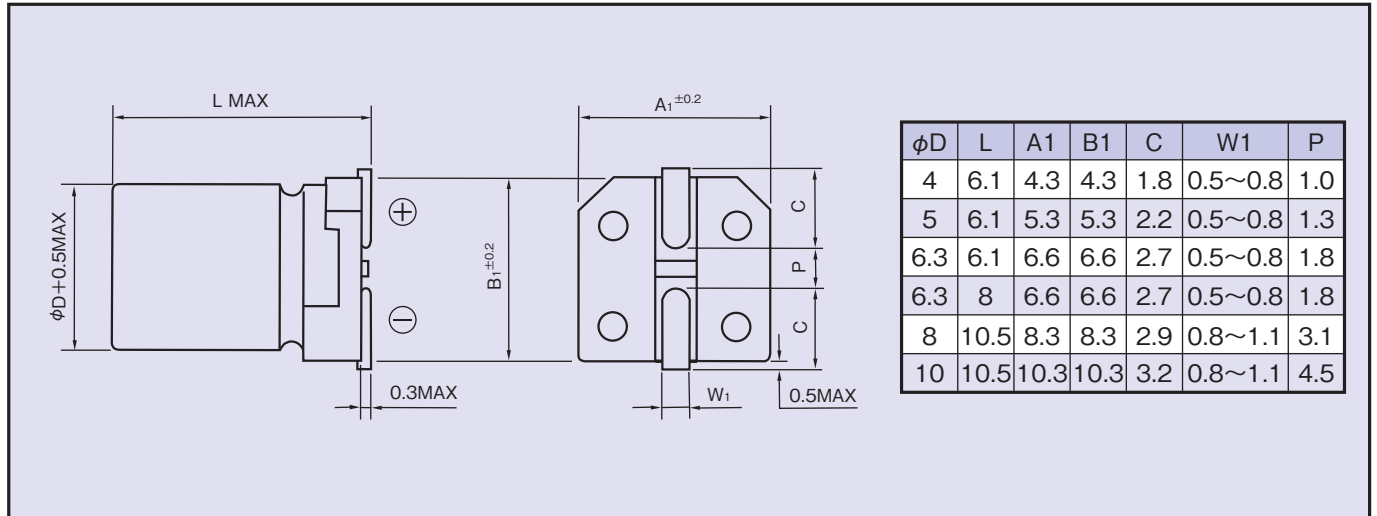
Rated Voltage (V)	6.3	10	16	25	35	50
Rated Voltage code	j	A	C	E	V	H

**◆PART NUMBER**

□□□	TZV	□□□□□	M	□□□	D×L
Rated Voltage	Series	Capacitance	Capacitance Tolerance	Option	Case Size

◆ **DIMENSIONS**

(mm)



◆ **STANDARD SIZE**

Size φD×L(mm), Ripple Current (mA r.m.s./105°C, 100kHz), Impedance(Ω MAX/20°C, 100kHz)

Cap(μF) \ WV (V.DC)	6.3 (0J)			10 (1A)			16 (1C)		
	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance
10							4×6.1	90	1.35
22	4×6.1	90	1.35				4×6.1	90	1.35
							5×6.1	170	0.70
33				4×6.1	90	1.35	5×6.1	170	0.70
47	4×6.1	90	1.35				5×6.1	170	0.70
	5×6.1	170	0.70				6.3×6.1	250	0.36
100	5×6.1	170	0.70				6.3×6.1	250	0.36
	6.3×6.1	250	0.36				6.3×8	300	0.34
220	6.3×6.1	250	0.36	6.3×8	300	0.34	6.3×8	300	0.34
	6.3×8	300	0.34						
330	6.3×8	300	0.34				8×10.5	600	0.16
470				8×10.5	600	0.16	8×10.5	600	0.16
680				8×10.5	600	0.16	10×10.5	850	0.08
1000	8×10.5	600	0.16	10×10.5	850	0.08			

Cap(μF) \ WV (V.DC)	25 (1E)			35 (1V)			50 (1H)		
	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance
4.7				4×6.1	90	1.45	4×6.1	60	2.90
10				4×6.1	90	1.45	5×6.1	85	1.52
				5×6.1	170	0.70	6.3×6.1	165	0.88
22				5×6.1	170	0.70	6.3×6.1	165	0.88
				6.3×6.1	250	0.36			
33	5×6.1	170	0.70	6.3×6.1	250	0.36	6.3×8	195	0.68
	6.3×6.1	250	0.36						
47	6.3×6.1	250	0.36	6.3×6.1	250	0.36	6.3×8	195	0.68
				6.3×8	300	0.34			
				6.3×8	300	0.34			
100	6.3×8	300	0.34	6.3×8	300	0.34	8×10.5	350	0.34
				8×10.5	600	0.16			
220	8×10.5	600	0.16	8×10.5	600	0.16	10×10.5	670	0.18
330	8×10.5	600	0.16	10×10.5	850	0.09			
470	10×10.5	850	0.09						