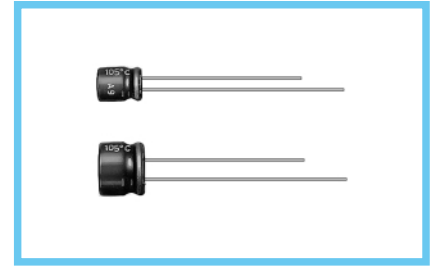


**MF** 5mmL, Low Impedance series



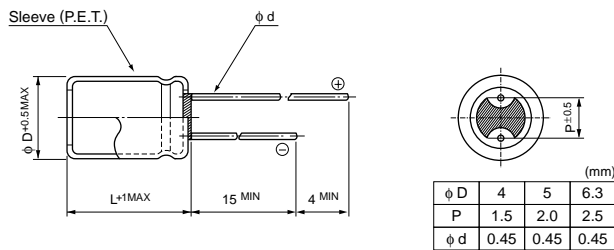
- Low impedance over wide temperature range of  $-55 \sim +105^{\circ}\text{C}$ , with 5mm height.
- Suited for DC-DC converters where smaller case size and lower impedance are required.
- Adapted to the RoHS directive (2002/95/EC).



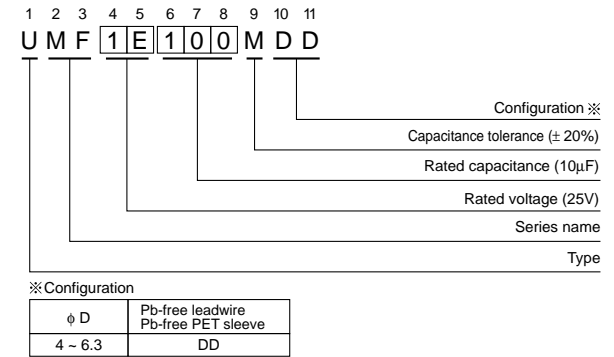
## Specifications

Item	Performance Characteristics						
Category Temperature Range	$-55 \sim +105^{\circ}\text{C}$						
Rated Voltage Range	6.3 ~ 35V						
Rated Capacitance Range	1 ~ 100 $\mu\text{F}$						
Rated Capacitance Tolerance	$\pm 20\%$ at 120Hz, 20 $^{\circ}\text{C}$						
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 ( $\mu\text{A}$ ), whichever is greater.						
tan $\delta$	Measurement frequency : 120Hz, Temperature : 20 $^{\circ}\text{C}$						
	Rated voltage (V)	6.3	10	16	25	35	
Stability at Low Temperature	Measurement frequency : 120Hz						
	Rated voltage (V)		6.3	10	16	25	35
	Impedance ratio ZT / Z20 (MAX.)	Z-25 $^{\circ}\text{C}$ / Z+20 $^{\circ}\text{C}$	2	2	2	2	2
Endurance	After 1000 hours' application of rated voltage at 105 $^{\circ}\text{C}$ capacitors meet the characteristic requirements listed at right.		Capacitance change		Within $\pm 20\%$ of initial value		
			tan $\delta$		200% or less of initial specified value		
			Leakage current		Initial specified value or less		
Shelf Life	After storing the capacitors under no load at 105 $^{\circ}\text{C}$ for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20 $^{\circ}\text{C}$ , they will meet the specified value for endurance characteristics listed above.						
Marking	Printed with white color letter on dark brown sleeve.						

## Radial Lead Type



## Type numbering system (Example : 25V 10 $\mu\text{F}$ )



## Dimensions

Cap. ( $\mu\text{F}$ )	Code	6.3			10			16			25			35			
		0J			1A			1C			1E			1V			
1	010														4x5	5.0	50
1.5	1R5														4x5	5.0	50
2.2	2R2														4x5	5.0	50
3.3	3R3														4x5	5.0	50
4.7	4R7										4x5	5.0	50		4x5	5.0	50
6.8	6R8										4x5	5.0	50		5x5	2.6	80
10	100							4x5	5.0	50	5x5	2.6	80	5x5	2.6	80	
15	150							5x5	2.6	80	6.3x5	1.3	115	6.3x5	1.3	115	
22	220	4x5	5.0	50	5x5	2.6	80	5x5	2.6	80	6.3x5	1.3	115	6.3x5	1.3	115	
33	330	5x5	2.6	80	5x5	2.6	80	6.3x5	1.3	115	6.3x5	1.3	115				
47	470	5x5	2.6	80	6.3x5	1.3	115	6.3x5	1.3	115							
68	680	6.3x5	1.3	115													
100	101	6.3x5	1.3	115													

Max. Impedance ( $\Omega$ ) at 20 $^{\circ}\text{C}$  100kHz  
Rated Ripple (mArms) at 105 $^{\circ}\text{C}$  100kHz

## Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz ~
Coefficient	0.35	0.50	0.64	0.83	1.00

Please refer to page 21, 22, 23 about the formed or taped product spec.  
Please refer to page 3 for the minimum order quantity.