

**MP** 5mmL, Bi-Polarized  
series



- Bi-polarized series with 5mm height.
- Adapted to the RoHS directive (2002/95/EC).

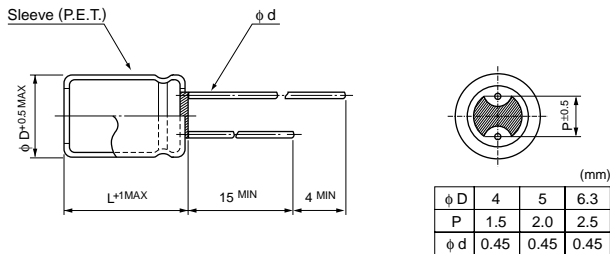
MP ← Bi-polarized MA



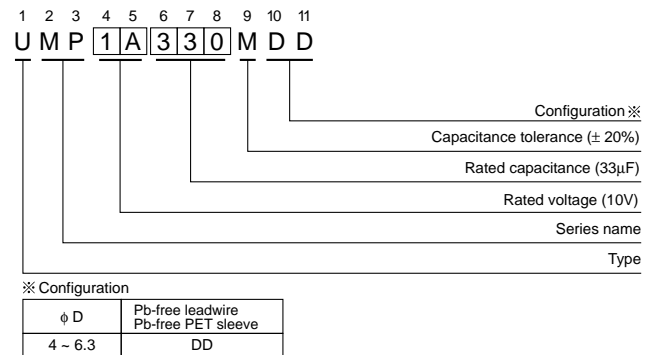
## Specifications

Item	Performance Characteristics							
Category Temperature Range	-40 ~ +85°C							
Rated Voltage Range	6.3 ~ 50V							
Rated Capacitance Range	0.1 ~ 47μF							
Rated Capacitance Tolerance	±20% at 120Hz, 20°C							
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.05CV or 10 (μA), whichever is greater.							
tan δ	Measurement frequency : 120Hz, Temperature : 20°C							
	Rated voltage (V)	6.3	10	16	25	35	50	
	tan δ (MAX.)	0.24	0.20	0.17	0.17	0.15	0.15	
Stability at Low Temperature	Measurement frequency : 120Hz							
	Rated voltage (V)		6.3	10	16	25	35	50
	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	4	3	2	2	2	2
		Z-40°C / Z+20°C	8	6	4	4	3	3
Endurance	After 2000 hours' application of rated voltage at 85°C with the polarity inverted every 250 hours, capacitors meet the characteristic requirements listed at right.				Capacitance change			Within ±20% of initial value
					tan δ			200% or less of initial specified value
					Leakage current			Initial specified value or less
Shelf Life	After storing the capacitors under no load at 85°C for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the specified value for endurance characteristics listed above.							
Marking	Printed with white color letter on black sleeve.							

## Radial Lead Type



## Type numbering system (Example : 10V 33μF)



## Dimensions

V	6.3	10	16	25	35	50
Cap.(μF)	0J	1A	1C	1E	1V	1H
0.1	0R1					4×5 1.0
0.22	R22					4×5 2.0
0.33	R33					4×5 2.8
0.47	R47					4×5 4.0
1	010					4×5 8.4
2.2	2R2				4×5 8.4	5×5 13
3.3	3R3			5×5 12	5×5 16	5×5 17
4.7	4R7		4×5 12	5×5 16	5×5 18	6.3×5 20
10	100	4×5 17	5×5 23	6.3×5 27	6.3×5 29	
22	220	5×5 28	6.3×5 33	6.3×5 37		
33	330	6.3×5 37	6.3×5 41	6.3×5 49		
47	470	6.3×5 45				
						Case size φ D×L (mm)
						Rated ripple

Rated Ripple (mArms) at 85°C 120Hz

## Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz ~
Coefficient	0.70	1.00	1.17	1.36	1.50

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