# **ALUMINUM ELECTROLYTIC CAPACITORS**



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



8 P 11 728 11 728	
817.8 3°95 815.8	

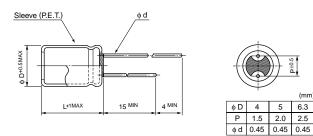
#### Specifications

Item	Performance Characteristics									
Category Temperature Range	-40 to +85°C									
Rated Voltage Range	6.3 to 50V									
Rated Capacitance Range	0.1 to 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.									
				Measu	rement frequ	ency : 120	Iz, Tempe	erature : 20°C	;	
Tangent of loss angle (tan $\delta$ )	Rated voltage (V) 6.3	1	0	16	25	3	5	50	]	
	tan δ (MAX.) 0.24	0.2	20	0.17	0.17	0.	15	0.15	]	
	Measurement frequency : 120Hz									
	Rated voltage (V)	Rated voltage (V)		10	16	25	35	50	]	
Stability at Low Temperature	Impedance ratio Z-25°C / Z+	Z-25°C / Z+20°C		3	2	2	2	2		
	ZT / Z20 (MAX.) Z-40°C / Z+	-20°C	8	6	4	4	3	3		
	The specifications listed at right s	shall he	met							1
Endurance	when the capacitors are restored	Capacitan tan δ	ice change	Within $\pm 20\%$ of the initial capacitance value						
	the rated voltage is applied for 20		urrent	200% or less than the initial specified value Less than or equal to the initial specified value						
	85°C with the polarity inverted every 250 hours.									]
Shelf Life	After storing the capacitors under no load at 85°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.									
Marking	Printed with white color letter on black sleeve.									

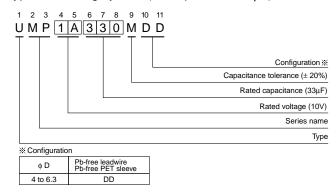
MP

Bi-polarized MA

## Radial Lead Type



#### Type numbering system (Example : $10V 33\mu F$ )



## Dimensions

	V	6.3		10	10 16 25 35			50					
Cap.(µF)	Code	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				-		i				i	4×5	4.0
1	010											4×5	8.4
2.2	2R2						i			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				l	Case size	Rated
47	470	6.3×5	45									$\phi D \times L (mm)$	ripple

(mm)

5 6.3

### • Frequency coefficient of rated ripple current

• •			• •		
Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

Rated ripple current (mArms) at 85°C 120Hz

Please refer to page 20, 21, 22 about the formed or taped product spec. Please refer to page 4 for the minimum order quantity.

