

USA

7mmL, For General Purposes

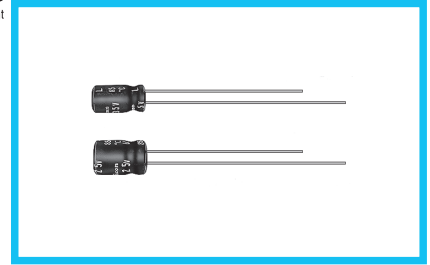
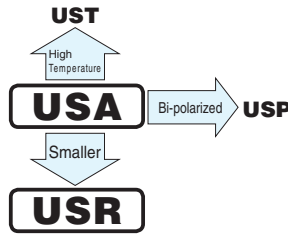
USR

7mmL, High CV



- Standard miniature series with 7mm height.
- Compliant to the RoHS directive (2011/65/EU).

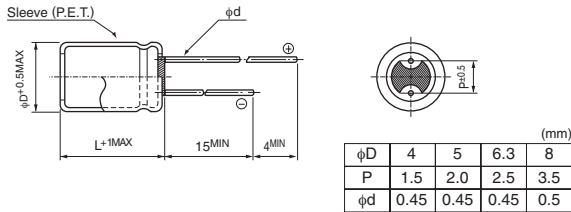
- Higher CV series with 7mm height.



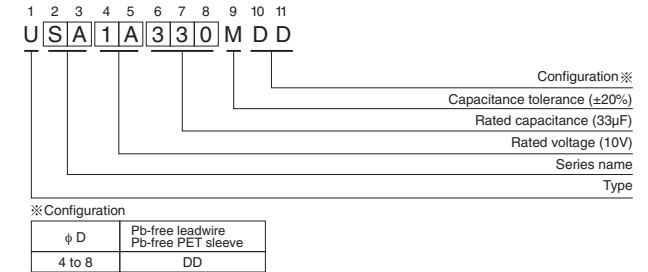
Specifications

Item	USA	USR						
Category Temperature Range	-40 to +85°C	-40 to +85°C						
Rated Voltage Range	6.3 to 50V	4 to 50V						
Rated Capacitance Range	1 to 220μF	1 to 470μF						
Capacitance Tolerance	±20% at 120Hz, 20°C	1 to 470μF						
Leakage Current	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3 (μA), whichever is greater.							
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C							
	Rated voltage (V)	4	6.3	10	16	25	35	50
Stability at Low Temperature	Measurement frequency : 120Hz							
	Rated voltage (V)	4	6.3	10	16	25	35	50
	Impedance ratio	Z-25°C / Z+20°C	6	4	3	2	2	2
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 85°C.							
	Capacitance change	Within ±20% of the initial capacitance value						
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.							
	tan δ	200% or less than the initial specified value						
Marking	Printed with white color letter on black sleeve.							
	Leakage current	Less than or equal to the initial specified value						

Radial Lead Type



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



Dimensions

Cap. (μF)	V(Code) Type·Series Code	4 (0G)		6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
		USR	USA	USR	USA	USR	USA	USR	USA	USR	USA	USR	USA	USR	
1	010													4 × 7	4 × 7
2.2	2R2													10	10
3.3	3R3													4 × 7	4 × 7
4.7	4R7													24	24
10	100							4 × 7	4 × 7	5 × 7	4 × 7	5 × 7	4 × 7	6.3 × 7	5 × 7
22	220		4 × 7	4 × 7	5 × 7	4 × 7	5 × 7	4 × 7	4 × 7	6.3 × 7	5 × 7	6.3 × 7	5 × 7	8 × 7	6.3 × 7
33	330	4 × 7	5 × 7	4 × 7	5 × 7	4 × 7	6.3 × 7	5 × 7	6.3 × 7	5 × 7	8 × 7	6.3 × 7			8 × 7
47	470	4 × 7	5 × 7	4 × 7	6.3 × 7	5 × 7	6.3 × 7	5 × 7	8 × 7	6.3 × 7			8 × 7		
100	101	5 × 7	6.3 × 7	5 × 7	8 × 7	6.3 × 7	8 × 7	6.3 × 7	8 × 7		8 × 7				
220	221	6.3 × 7	8 × 7	6.3 × 7		8 × 7		8 × 7							
330	331	8 × 7		8 × 7											
470	471	8 × 7													

Rated ripple current (mA rms) at 85°C 120Hz

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

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