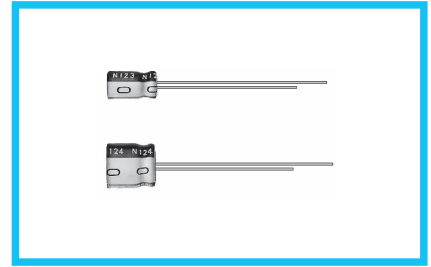


USF

7mmL, Low Impedance



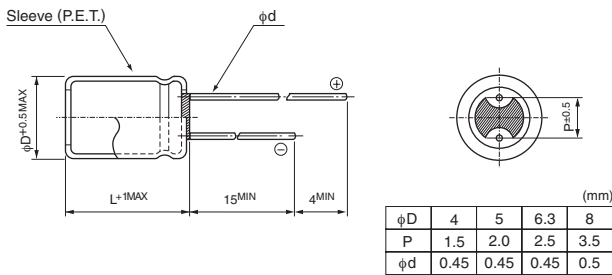
- Low impedance over wide temperature range of -55 to $+105^{\circ}\text{C}$, with 7mm height.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).



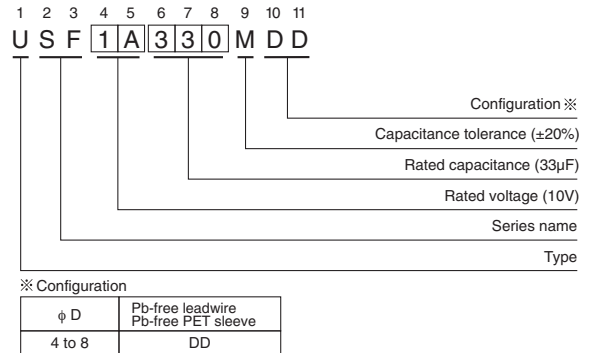
Specifications

Item	Performance Characteristics						
Category Temperature Range	-55 to $+105^{\circ}\text{C}$						
Rated Voltage Range	6.3 to 35V						
Rated Capacitance Range	6.8 to 220 μF						
Capacitance Tolerance	$\pm 20\%$ at 120Hz, 20°C						
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, Temperature : 20°C						
	Rated voltage (V)	6.3	10	16	25	35	
	tan δ (MAX.)	0.18	0.16	0.14	0.12	0.12	
Stability at Low Temperature	Measurement frequency : 120Hz						
	Rated voltage (V)	6.3	10	16	25	35	
	Impedance ratio	Z -25°C / Z $+20^{\circ}\text{C}$	2	2	2	2	
	(MAX.)	Z -55°C / Z $+20^{\circ}\text{C}$	3	3	3	3	
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 105°C .		Capacitance change				Within $\pm 20\%$ of the initial capacitance value
			tan δ				200% or less than the initial specified value
			Leakage current				Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°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 dark brown sleeve.						

Radial Lead Type



Type numbering system (Example : 10V 33 μF)



Frequency coefficient of rated ripple current

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

● Dimension table in next page.

USF

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20°C after 2 minutes)	Impedance (Ω) MAX. (20°C/100kHz)	Rated Ripple (mArms) (105°C/100kHz)	Part Number
6.3 (0J)	33	5×7	0.18	3	1.7	110	USF0J330MDD
	47	5×7	0.18	3	1.7	110	USF0J470MDD
	68	6.3×7	0.18	4.284	0.8	160	USF0J680MDD
	100	6.3×7	0.18	6.3	0.8	160	USF0J101MDD
	150	8×7	0.18	9.45	0.5	200	USF0J151MDD
	220	8×7	0.18	13.86	0.5	200	USF0J221MDD
10 (1A)	22	4×7	0.16	3	3.3	70	USF1A220MDD
	33	5×7	0.16	3.3	1.7	110	USF1A330MDD
	47	6.3×7	0.16	4.7	0.8	160	USF1A470MDD
	68	6.3×7	0.16	6.8	0.8	160	USF1A680MDD
	100	8×7	0.16	10	0.5	200	USF1A101MDD
	150	8×7	0.16	15	0.5	200	USF1A151MDD
16 (1C)	15	4×7	0.14	3	3.3	70	USF1C150MDD
	22	5×7	0.14	3.52	1.7	110	USF1C220MDD
	33	6.3×7	0.14	5.28	0.8	160	USF1C330MDD
	47	6.3×7	0.14	7.52	0.8	160	USF1C470MDD
	68	8×7	0.14	10.88	0.5	200	USF1C680MDD
	100	8×7	0.14	16	0.5	200	USF1C101MDD
25 (1E)	10	4×7	0.12	3	3.3	70	USF1E100MDD
	15	5×7	0.12	3.75	1.7	110	USF1E150MDD
	22	5×7	0.12	5.5	1.7	110	USF1E220MDD
	33	6.3×7	0.12	8.25	0.8	160	USF1E330MDD
	47	8×7	0.12	11.75	0.5	200	USF1E470MDD
	68	8×7	0.12	17	0.5	200	USF1E680MDD
35 (1V)	6.8	4×7	0.12	3	3.3	70	USF1V6R8MDD
	10	5×7	0.12	3.5	1.7	110	USF1V100MDD
	15	6.3×7	0.12	5.25	0.8	160	USF1V150MDD
	22	6.3×7	0.12	7.7	0.8	160	USF1V220MDD
	33	8×7	0.12	11.55	0.5	200	USF1V330MDD

For cut leads, formed leads or taped parts, please add the appropriate code after the size code (12th digit).
If there is no size code in the part number, please add size code "1" and then add the appropriate code.

Please refer to page 18, 19 about the formed or taped product spec.
Please refer to page 4 for the minimum order quantity.