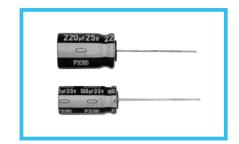




- Load life of 20000 hours at 105°C.
- Compliant to the RoHS directive (2002/95/EC).

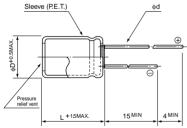




Specifications

Item	Performance Characteristitcs											
Category Temperature Range	-55 to +105°C											
Rated Voltage Range	10 to 35V											
Rated Capacitance Range	1 to 4700μF	1 to 4700µF										
Capacitance Tolerance	±20% (120Hz, 2	±20% (120Hz, 20°C)										
Leakage Current	After 1 minute's a	After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4 (mA), whichever is greater.										
	Rated voltage (V) 10 16			16	25	35		Measurement frequency : 120Hz				
Tangent of loss angle (tan δ)	tan δ (MAX) 0.20			0.16	0.14	0.12	2	Temperature : 20°C				
	For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.											
	Rated voltage (V)			10	16	25		35	Measurem	urement frequency : 120Hz		
Stability at Low Temperature	Impedance ratio	Z-25°C / Z+20°C		3	2	2		2				
	(MAX.)	Z-40°C / Z+20°C		4	4	4		4				
	The specifications listed at right shall be met when the capacitors are restored to 20°C after D.C. bias plus rated ripple current is applied for 20000 hours at 105°C,									Within ±30% of the initial capacitance value		
Endurance										300% or less than the initial specified value		
									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





				(mm)	
φD	10	12.5	16	18	l
Р	5.0	5.0	7.5	7.5	l
φd	0.6	0.6	0.8	0.8	

U P X 1 C 2 2 1 M P D

Configuration **
Capacitance tolerance (±20%)
Rated capacitance (220μF)
Rated voltage (16V)
Series name
Type

Type numbering system (Example : 16V 220μF)

1 2 3 4 5 6 7 8 9 10 11

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

[•] Please refer to page 20 about the end seal configulation.



Dimensions

V (Code)		10 ((1A)	16	(1C)	25	(1E)	35 (1V)	
Cap. (μF)	Item Code	Case size $\phi D \times L$ (mm)	Rated ripple (mArms) 105°C / 100kHz	Case size φD × L (mm)	Rated ripple (mArms) 105°C / 100kHz	Case size $\phi D \times L$ (mm)	Rated ripple (mArms) 105°C / 100kHz	Case size φD × L (mm)	Rated ripple (mArms) 105°C / 100kHz
1	010		 		1		1 1 1	10×12.5	59
2.2	2R2		1 1 1					10× 12.5	84
3.3	3R3		 - -		 			10×12.5	101
4.7	4R7		1					10× 12.5	143
10	100							10× 12.5	294
22	220		_		1			10× 12.5	336
33	330				1			10× 12.5	378
47	470				1			10× 12.5	420
100	101		 - -		1	10× 12.5	420	10×20	672
220	221		I	10×16	504	12.5 × 20	840	12.5×25	1008
330	331	10×16	504	10×20	672	12.5×25	1008	16×25	1344
470	471	10×20	672	12.5 × 20	1008	16×25	1344	16×31.5	1680
1000	102	12.5 × 25	1008	16×25	1344	16×31.5	1680	18×40	2184
2200	222	16×31.5	1680	18×35.5	2016				
3300	332	18×35.5	2016	18×40	2184				
4700	472	18×40	2184						

• Frequency coefficient of rated ripple current

Frequency	120Hz	1kHz	10kHz	100kHz or more	
Coefficient	0.75	0.80	0.90	1.00	