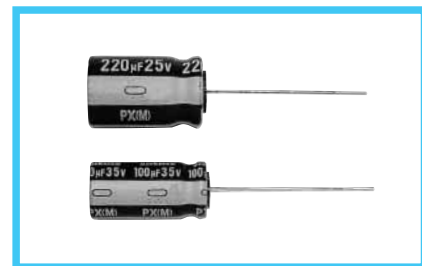


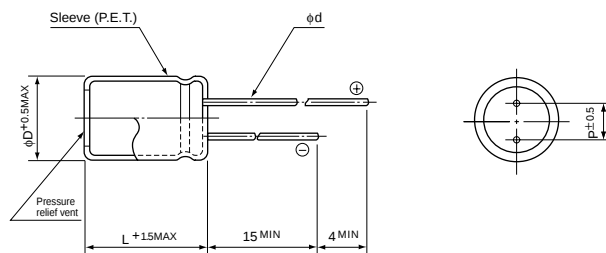
- Load life of 20000 hours at 105°C.
- Adapted to the RoHS directive (2002/95/EC).



Specifications

Item	Performance Characteristics						
Category Temperature Range	-55 ~ +105°C						
Rated Voltage Range	10 ~ 35V						
Rated Capacitance Range	1 ~ 4700μF						
Capacitance Tolerance	±20% (120Hz, 20°C)						
Leakage Current	After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4 (μA), whichever is greater.						
tan δ	Rated voltage (V)	10	16	25	35	Measurement frequency : 120Hz	
	tan δ (MAX)	0.20	0.16	0.14	0.12	Temperature : 20°C	
	For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.						
Stability at Low Temperature	Rated voltage (V)		10	16	25	35	Measurement frequency : 120Hz
	Impedance ratio	Z-25°C / Z+20°C	3	2	2	2	
		Z-40°C / Z+20°C	4	4	4	4	
Endurance	After an application of D.C. bias voltage plus the rated ripple current for 20000 hours at 105°C, the peak voltage shall not exceed the rated D.C. voltage, capacitor meet the characteristic requirements listed below.						
	Capacitance change		Within ±30% of initial value				
	tan δ		300% or less of initial specified value				
	Leakage current		Initial specified value or less				
Shelf Life	After leaving capacitors under no load at 105°C for 1000hours, they meet the specified value for endurance characteristics listed above.						
Marking	Printed with white color letter on dark brown sleeve.						

Radial Lead Type



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

Type numbering system (Example : 16V 220µF)

1	2	3	4	5	6	7	8	9	10	11
U	P	X	1	C	2	2	1	M	P	D
			Configuration ※							
			Capacitance tolerance (±20%)							
			Rated Capacitance (220µF)							
			Rated voltage (16V)							
			Series name							
			Type							

※ Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
10	PD
12.5 ~ 18	HD

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

● Dimension table in next page.

■ Dimensions

Cap. (μF)	V (Code) Item Code	10 (1A)		16 (1C)		25 (1E)		35 (1V)	
		Case size φD × L (mm)	Rated Ripple (mA rms) 105°C / 100kHz	Case size φD × L (mm)	Rated Ripple (mA rms) 105°C / 100kHz	Case size φD × L (mm)	Rated Ripple (mA rms) 105°C / 100kHz	Case size φD × L (mm)	Rated Ripple (mA rms) 105°C / 100kHz
1	010							10 × 12.5	59
2.2	2R2							10 × 12.5	84
3.3	3R3							10 × 12.5	101
4.7	4R7							10 × 12.5	143
10	100							10 × 12.5	294
22	220							10 × 12.5	336
33	330							10 × 12.5	378
47	470							10 × 12.5	420
100	101					10 × 12.5	420	10 × 20	672
220	221			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						

Ripple (mA rms) at 105°C 100kHz

• Frequency coefficient of rated ripple current

Frequency	120Hz	1kHz	10kHz	100kHz ~
Coefficient	0.75	0.8	0.9	1.0