



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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UPX

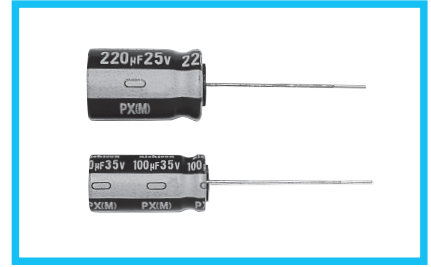
Long Life Assurance



- Load life of 20000 hours at 105°C.
- Compliant to the RoHS directive (2011/65/EU).



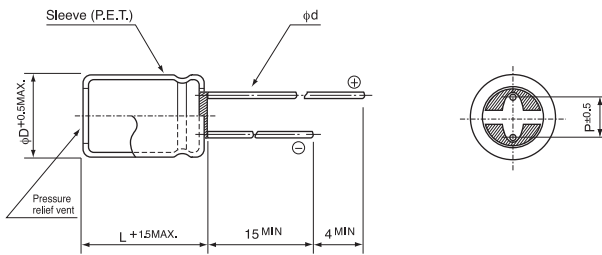
Products which are scheduled to be discontinued.
Not recommended for new designs



Specifications

Item	Performance Characteristics						
Category Temperature Range	-55 to +105°C						
Rated Voltage Range	10 to 35V						
Rated Capacitance Range	1 to 4700µF						
Capacitance Tolerance	±20% (120Hz, 20°C)						
Leakage Current	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV or 4 (µA), whichever is greater.						
Tangent of loss angle (tan δ)	Rated voltage (V)	10	16	25	35	Measurement frequency : 120Hz Temperature : 20°C	
	tan δ (MAX)	0.20	0.16	0.14	0.12		
	For capacitance of more than 1000µF, add 0.02 for every increase of 1000µF.						
Stability at Low Temperature	Rated voltage (V)	Impedance ratio (MAX.)	Measurement frequency : 120Hz				
			Z-25°C / Z+20°C	3	2	2	2
			Z-40°C / Z+20°C	4	4	4	4
Endurance	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, the peak voltage shall not exceed the rated voltage.					Capacitance change	Within ±30% of the initial capacitance value
						tan δ	300% 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.						

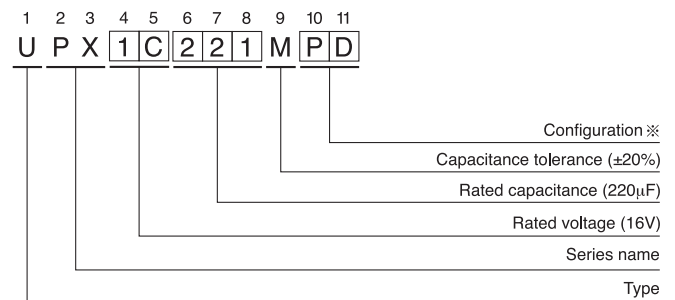
Radial Lead Type



	(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

● Please refer to page 20 about the end seal configuration.

Type numbering system (Example : 16V 220µF)



※ Configuration

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

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

● Dimension table in next page.



■ Dimensions

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

• Frequency coefficient of rated ripple current

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