



Miniature Sized, Low Impedance, High Reliability

series



Low Impedance

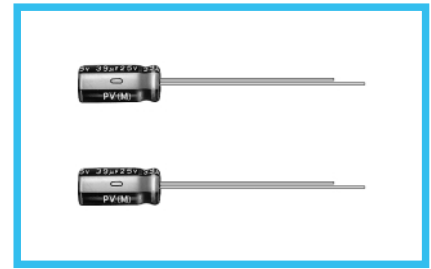
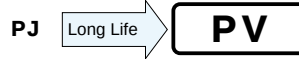


Long Life



Anti-Solvent Feature

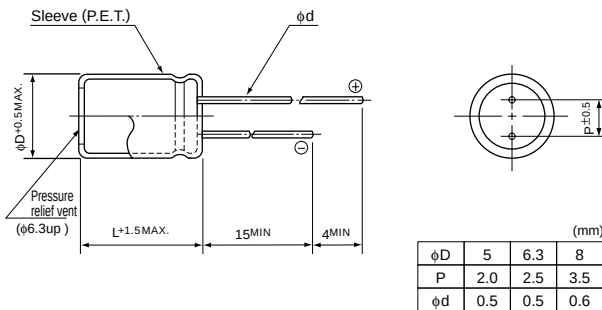
- Miniature sized low impedance series withstanding 5000 hours load life at +105°C.
- Compliant to the RoHS directive (2011/65/EU).



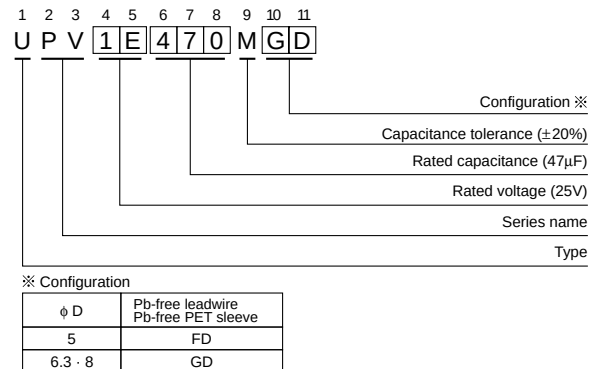
Specifications

Item	Performance Characteristics						
Category Temperature Range	-55 to +105°C						
Rated Voltage Range	6.3 to 50V						
Rated Capacitance Range	0.47 to 390μF						
Capacitance Tolerance	±20% at 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.						
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C						
	Rated voltage (V)	6.3	10	16	25	35	50
	tan δ (MAX.)	0.22	0.19	0.16	0.14	0.12	0.10
Stability at Low Temperature	Measurement frequency : 120Hz						
	Rated voltage (V)	6.3	10	16	25	35	50
	Impedance ratio ZT / Z20 (MAX.)	Z-55°C / Z+20°C	5	5	4	3	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 5000 hours at 105°C.				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 at right.				Capacitance change		Within ±20% of the initial capacitance value
					tan δ		150% or less than the initial specified value
					Leakage current		Less than or equal to the initial specified value
Marking	Printed with white color letter on dark brown sleeve.						

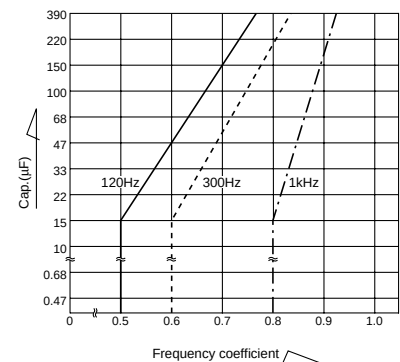
Radial Lead Type



Type numbering system (Example : 25V 47μF)



- Frequency coefficient of rated ripple current (10kHz to 200kHz=1)



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

V(Code) Item Cap.(μF) Code		6.3 (0J)			10 (1A)			16 (1C)			25 (1E)		
		Case size φ D × L (mm)	Impedance (Ω) MAX. 20°C/100kHz	Rated ripple (mAmps) 105°C/100kHz	Case size φ D × L (mm)	Impedance (Ω) MAX. 20°C/100kHz	Rated ripple (mAmps) 105°C/100kHz	Case size φ D × L (mm)	Impedance (Ω) MAX. 20°C/100kHz	Rated ripple (mAmps) 105°C/100kHz	Case size φ D × L (mm)	Impedance (Ω) MAX. 20°C/100kHz	Rated ripple (mAmps) 105°C/100kHz
33	330										5 × 11	1.40	155
39	390										5 × 11	1.10	175
47	470							5 × 11	1.40	155	6.3 × 11	0.94	210
56	560							5 × 11	1.10	175	6.3 × 11	0.75	235
68	680				5 × 11	1.40	155	6.3 × 11	0.85	220	6.3 × 11	0.61	260
82	820				5 × 11	1.10	175	6.3 × 11	0.71	240	6.3 × 11	0.51	285
100	101	5 × 11	1.50	150	6.3 × 11	0.94	210	6.3 × 11	0.60	265	8 × 11.5	0.41	370
120	121	5 × 11	1.10	175	6.3 × 11	0.75	235	6.3 × 11	0.49	290	8 × 11.5	0.34	405
150	151	6.3 × 11	0.83	225	6.3 × 11	0.60	265	8 × 11.5	0.39	375	8 × 11.5	0.27	460
180	181	6.3 × 11	0.66	250	6.3 × 11	0.49	290	8 × 11.5	0.34	405			
220	221	6.3 × 11	0.51	285	8 × 11.5	0.41	370	8 × 11.5	0.27	460			
270	271	8 × 11.5	0.41	370	8 × 11.5	0.34	405						
330	331	8 × 11.5	0.34	405	8 × 11.5	0.27	460						
390	391	8 × 11.5	0.29	445									

V(Code) Item Cap.(μF) Code		35 (1V)			50 (1H)		
		Case size φ D × L (mm)	Impedance (Ω) MAX. 20°C/100kHz	Rated ripple (mAmps) 105°C/100kHz	Case size φ D × L (mm)	Impedance (Ω) MAX. 20°C/100kHz	Rated ripple (mAmps) 105°C/100kHz
0.47	R47				5 × 11	32.0	22
0.68	R68				5 × 11	22.0	28
1	010				5 × 11	15.0	36
1.5	1R5				5 × 11	11.0	45
2.2	2R2				5 × 11	7.00	54
3.3	3R3				5 × 11	4.60	66
4.7	4R7				5 × 11	3.10	81
6.8	6R8				5 × 11	2.50	91
10	100				5 × 11	2.00	115
12	120				5 × 11	1.70	125
15	150				5 × 11	1.30	145
18	180				5 × 11	1.10	155
22	220	5 × 11	1.30	160	6.3 × 11	0.91	195
27	270	5 × 11	1.00	180	6.3 × 11	0.74	215
33	330	6.3 × 11	0.83	225	6.3 × 11	0.60	240
39	390	6.3 × 11	0.70	245	6.3 × 11	0.50	260
47	470	6.3 × 11	0.58	270	8 × 11.5	0.42	330
56	560	6.3 × 11	0.48	295	8 × 11.5	0.35	360
68	680	8 × 11.5	0.41	370	8 × 11.5	0.28	410
82	820	8 × 11.5	0.32	415			
100	101	8 × 11.5	0.27	460			