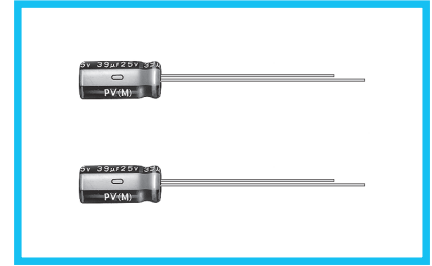


# ALUMINUM ELECTROLYTIC CAPACITORS

**UPV** Miniature Sized, Low Impedance,  
High Reliability



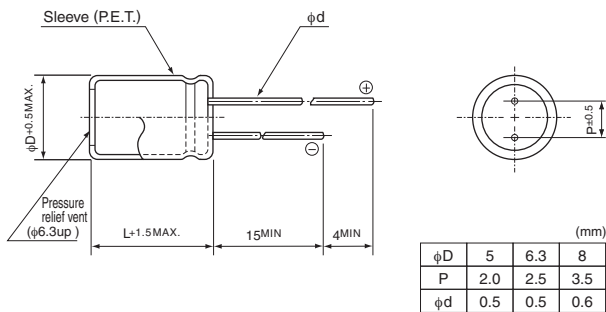
- Miniature sized low impedance series withstanding 5000 hours load life at +105°C.
- Compliant to the RoHS directive (2011/65/EU).



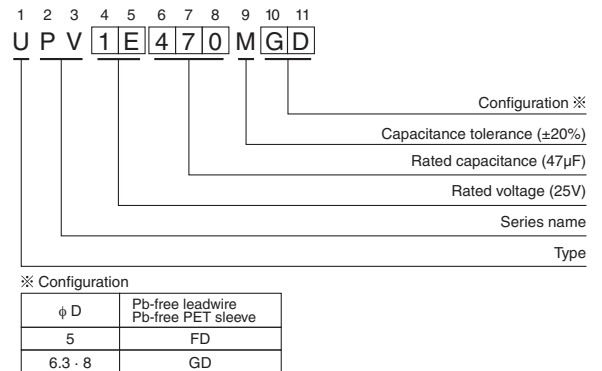
## Specifications

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 at 20°C, 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	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.							

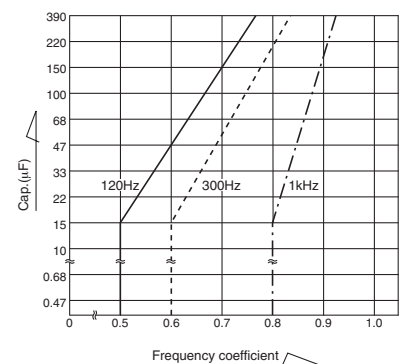
## Radial Lead Type



## 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.

## UPV

### ■ Dimensions

V(Code)		6.3 (0J)			10 (1A)			16 (1C)			25 (1E)			
Cap. (μF)	Code	Item	Case size	Impedance	Rated ripple	Case size	Impedance	Rated ripple	Case size	Impedance	Rated ripple	Case size	Impedance	Rated ripple
			φ D × L (mm)	(Ω) MAX. 20°C/100kHz	(mA <sub>rms</sub> ) 105°C/100kHz	φ D × L (mm)	(Ω) MAX. 20°C/100kHz	(mA <sub>rms</sub> ) 105°C/100kHz	φ D × L (mm)	(Ω) MAX. 20°C/100kHz	(mA <sub>rms</sub> ) 105°C/100kHz	φ D × L (mm)	(Ω) MAX. 20°C/100kHz	(mA <sub>rms</sub> ) 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)		35 (1V)			50 (1H)			
Cap. (μF)	Code	Item	Case size	Impedance	Rated ripple	Case size	Impedance	Rated ripple
			φ D × L (mm)	(Ω) MAX. 20°C/100kHz	(mA <sub>rms</sub> ) 105°C/100kHz	φ D × L (mm)	(Ω) MAX. 20°C/100kHz	(mA <sub>rms</sub> ) 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				