

UJ Series 105°C

Features

Standard capacitors

Applications

- ◆ Professional power supplies
- ◆ Frequency converters
- ◆ Uninterruptible power supplies
- ◆ Used for air conditioner, general-purpose inverter

Features

- ◆ High reliability
- ◆ Long useful life
- ◆ High ripple current capability
- ◆ Aluminum case designed explosion-proof vent
- ◆ RoHS-compatible

Construction

- ◆ Charge-discharge proof, polar
- ◆ Aluminum case with insulating sleeve
- ◆ Aluminum case designed explosion-proof vent
- ◆ Snap-in solder pins to hold component in place on PC-board



Specifications

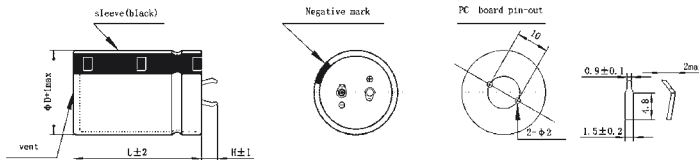
Item	Performance Characteristics		
Operating Temperature Range	-25 to +105°C		
Rated voltage V_R	400, 450 V DC		
Surge voltage V_S	1.10 V_R		
Rated capacitance C_R	330 ~ 1200 μ F		
Capacitance tolerance	$\pm 20\%$ (120Hz, +20°C)		
Dissipation Factor $\tan \delta$ (at 20°C, 120Hz)	Less than the value under table(%)		
	W.V.(V)	400	450
D.F.(%) max	20	20	
Leakage Current I_{leak} (+20°C, max)	$\leq 3 \sqrt{CV}$ (μ A) After 5 minutes with rated working voltage applied		
Self-inductance ESL	approx. 20 nH		
Useful life 105 °C; V_R, I_{AC^*R}	> 3000 h	Requirements: $\Delta C/C \leq \pm 40\%$ of initial value ESR ≤ 4 times initial specified limit Ileak \leq initial specified limit Outlier Percentage: 0 %	
Voltage Endurance test 105 °C; V_R	2000 h	Post test requirements: $\Delta C/C \leq \pm 20\%$ of initial value ESR ≤ 2 times initial specified limit Ileak \leq initial specified limit Outlier Percentage: 0 %	
Shelf Life 105 °C	1000 h	Post test requirements: $\Delta C/C \leq \pm 20\%$ of initial value ESR ≤ 2 times initial specified limit Ileak \leq initial specified limit Outlier Percentage: 0 %	
Vibration Resistance test	To IEC 60068-2-6, test Fc:		
	Displacement amplitude 0.75 mm, frequency range 10 ... 55 Hz, acceleration max. 10 g, duration 3x2 h. Capacitor mounted by its body which is rigidly clamped to the work surface.		
Characteristics at low temperature	Max. impedance ratio at 120 Hz		
	V_R	≤ 400 V	≥ 450 V
$Z_{-25^\circ\text{C}} / Z_{20^\circ\text{C}}$	8	8	
Sectional specification	IEC 60384-4 and JIS-C-5101		

Multiplier for Ripple Current vs. Frequency

CAP(μF)/Frequency(Hz)	50(60)	120	400	1K	10K	50K-100K
100≤CAP≤1000	0.8	1	1.16	1.25	1.35	1.38
1000<CAP	0.8	1	1.11	1.17	1.25	1.28

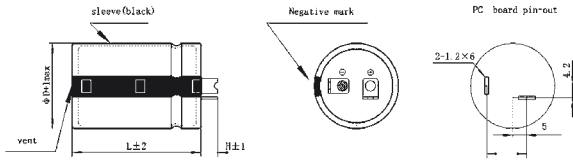
Dimensional drawings

Standard 2 terminals



Standard snap-in terminals: length(6.0±1)mm · Also available with length of (4.0±1)mm

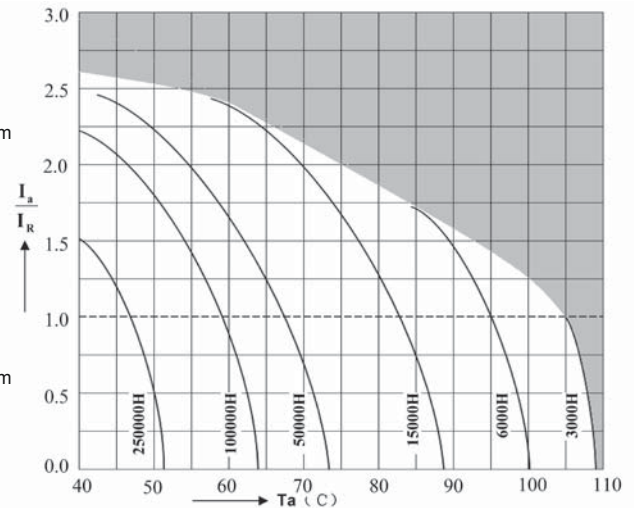
Vibration proof terminal T type



Standard snap-in terminals: length(4.5±1)mm · Also available with length of (5.5±1)mm

Useful life

depending on ambient temperature T_a versus under ripple current operating conditions



Case Size

WV	400V					450V				
	Size	Ripple	Typ. ESR 20°C 120Hz	MAX ESR 20°C 120Hz	Zmax (mΩ/20°C 10KHz)	Size	Ripple	Typ. ESR 20°C 120Hz	MAX ESR 20°C 120Hz	Zmax (mΩ/20°C 10KHz)
330	30x41	1700	440	610	310	30x46	1580	460	630	330
330	35x37	1780	440	610	310	35x42	1600	460	630	330
390	30x46	1920	360	510	250	35x42	1800	380	530	270
390	35x37	1920	360	510	250	35x47	1880	380	530	270
470	30x51	2180	310	430	220	35x47	2030	330	450	240
470	35x42	2180	310	430	220	35x52	2120	330	450	240
470	35x47	2280	310	430	220					
560	30x56	2500	260	360	180	35x57	2480	280	380	200
560	35x47	2500	260	360	180	35x62	2570	280	380	200
560	35x52	2630	260	360	180					
680	35x52	2800	210	300	150	35x62	2800	230	320	170
680	35x57	2900	210	300	150	40x62	3050	230	320	170
820	35x62	3200	170	240	120	40x62	3400	190	260	140
820	35x67	3300	170	240	120					
820	40x57	3300	170	240	120					
1000	40x62	3600	140	200	100					
1200	40x70	4000	120	170	90					

Ripple Current (m A, rms) at 105°C 120Hz