

## UC Series 85°C

### Features

#### Long usefull life

#### 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

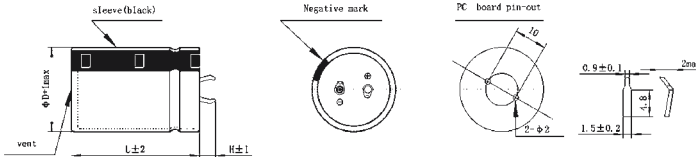
Item	Performance Characteristics		
Operating Temperature Range	-25 to +85°C		
Rated voltage $V_R$	400, 450 V DC		
Surge voltage $V_S$	1.10 $V_R$		
Rated capacitance $C_R$	330 ~ 1200 $\mu$ F		
Capacitance tolerance	$\pm 20\%$ (120Hz,+20°C)		
Dissipation Factor $\tan \delta$ (at 20°C · 120Hz)	Less than the value under table(%)		
	W.V.(V)	400	450
	D.F.(%) max	15	20
Leakage Current $I_{leak}$ (+20°C,max)	$\leq 3 \sqrt{CV}$ ( $\mu$ A)After 5minutes with rated working voltage applied		
Self-inductance ESL	approx. 20 nH		
Useful life 85 °C; $V_R, I_{AC}^2 R$	> 6000 h	Requirements: $\Delta C/C \leq \pm 40\%$ of initial value ESR $\leq 4$ times initial specified limit Ileak $\leq$ initial specified limit Outlier Percentage:0 %	
Voltage Endurance test 85 °C; $V_R$	3000 h	Post test requirements: $\Delta C/C \leq \pm 20\%$ of initial value ESR $\leq 2$ times initial specified limit Ileak $\leq$ initial specified limit Outlier Percentage:0 %	
Shelf Life 85 °C	1000 h	Post test requirements: $\Delta C/C \leq \pm 20\%$ of initial value ESR $\leq 2$ 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		
	$V_R$	$\leq 400$ V	$\geq 450$ V
	$Z_{-25^\circ C} / Z_{20^\circ C}$	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

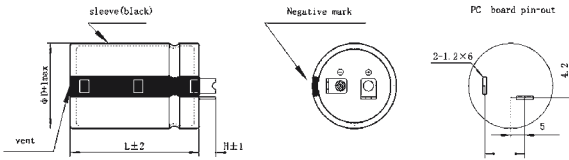
## Dimensional drawings

Standard 2 terminals



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

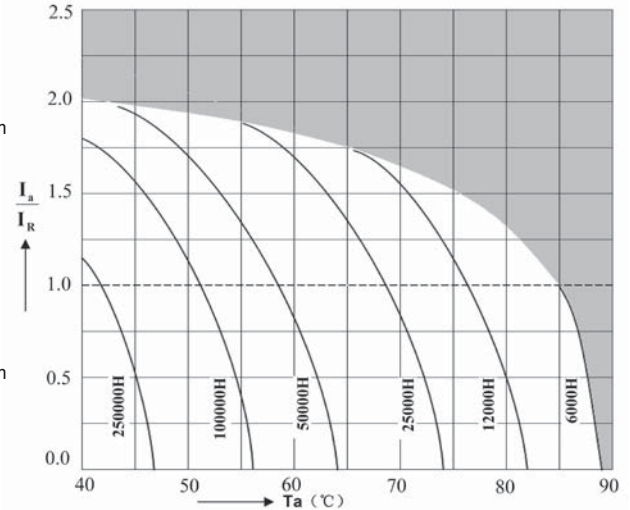
Vibration proof terminal T type



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	1800	400	560	280	30x46	1580	420	580	300
330	35x37	1900	400	560	280	35x42	1650	420	580	300
390	30x41	1960	340	480	240	35x42	1800	360	500	260
390	30x46	2050	340	480	240	35x47	1900	360	500	260
390	35x37	2050	340	480	240					
470	30x51	2370	290	400	200	35x47	2000	310	420	220
470	35x42	2370	290	400	200	35x52	2200	310	420	220
470	35x47	2500	290	400	200					
560	30x56	2700	240	330	170	35x57	2460	260	350	190
560	35x47	2700	240	330	170	35x62	2560	260	350	190
560	35x52	2850	240	330	170					
680	35x52	3130	190	270	130	35x62	2800	210	290	150
680	35x57	3260	190	270	130	40x62	3000	210	290	150
820	35x57	3400	160	230	110	40x62	3200	180	250	130
820	35x62	3540	160	230	110					
1000	35x70	3760	140	190	90	40x70	3400	160	210	110
1000	40x62	3830	140	190	90					
1200	40x70	4000	110	160	80					

Ripple Current (mA, rms) at 85°C 120Hz