

## UK Series 105°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

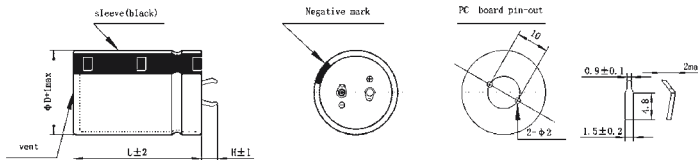
Item	Performance Characteristics		
Operating Temperature Range	-25 to +105°C		
Rated voltage $V_R$	400, 450 V DC		
Surge voltage $V_S$	1.10 $V_R$		
Rated capacitance $C_R$	330 ~ 1200 $\mu$ F		
Capacitance tolerance	$\pm 20\%$ (120Hz,+20°C)		
Dissipation Factor $\tan \delta$ (at 20°C · 120Hz)	Less than the value under table(%)		
	W.V.(V)	400	450
	D.F.(%) max	20	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 105 °C; $V_R, I_{AC^*R}$	> 5000 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 105 °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 105 °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

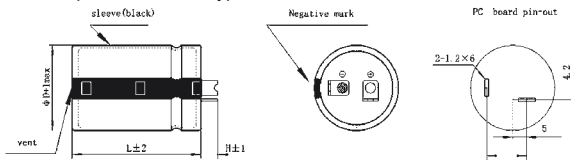
## Dimensional drawings

Standard 2 terminals



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

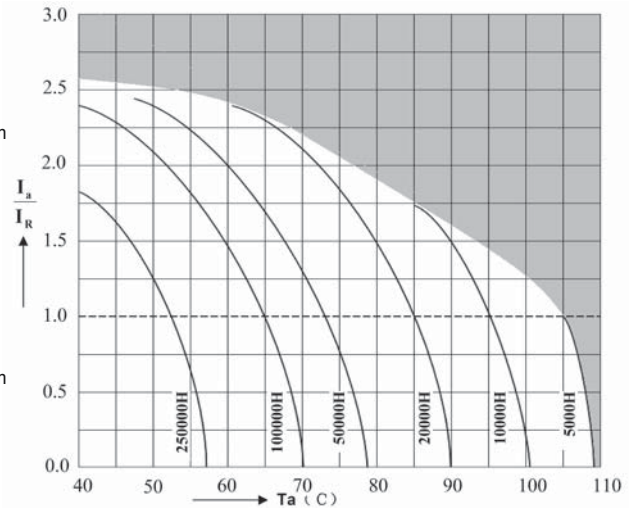
Vibration proof terminal T type



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	1600	370	520	260	30x46	1500	390	540	280
330	35x37	1680	370	520	260	35x42	1580	390	540	280
390	30x46	1800	310	440	220	35x42	1720	330	460	240
390	35x37	1800	310	440	220	35x47	1800	330	460	240
470	30x51	2020	260	370	180	35x52	2000	280	390	200
470	35x42	2020	260	370	180	35x57	2160	280	390	200
470	35x47	2100	260	370	180					
560	30x56	2320	220	310	150	35x57	2360	240	330	170
560	35x47	2320	220	310	150	35x62	2450	240	330	170
560	35x52	2440	220	310	150					
680	35x52	2700	180	250	130	35x67	2800	200	270	150
680	35x57	2700	180	250	130	40x62	2900	200	270	150
820	35x62	3080	150	210	110	40x62	3100	170	230	130
820	35x67	3200	150	210	110	40x70	3350	170	230	130
820	40x57	3200	150	210	110					
1000	40x62	3250	120	170	80					
1200	40x70	3400	100	140	70					

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