

EM Series

Features

- Snap-in, over voltage vent operation facility
- Endurance with ripple current: 105°C 2000 hours
- High ripple current capability
- Safety vent designed on aluminum case
- RoHS2.0 Compliant

Applications

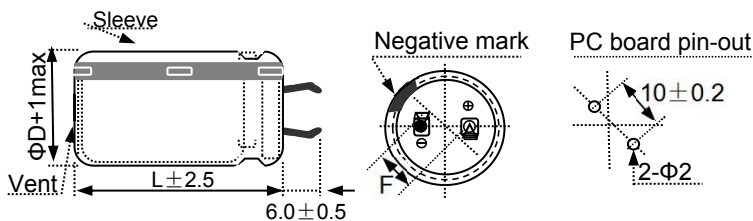
- Professional power supply
- Inverter
- UPS
- Air conditioner, general purpose inverter
- Professional arena power amplifier
- Frequency converters
- Medical power supply
- And others

规格表 Specifications

项目 Items	特性参数 Characteristics	
使用温度范围 Category Temperature Range	-25 ~ +105°C	
额定工作电压范围 Rated Voltage Range	200 ~ 450V.DC	
电容量允许偏差 Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)	
漏电流 Leakage Current	I ≤ 3√CV 施加额定工作电压5分钟 After 5 minutes application of rated voltage. Note: I = Max. leakage current (μA), C = Nominal capacitance (μF), V = Rated voltage (V) (at 20°C)	
损耗角正切值 tanδ Dissipation Factor	200~250VDC: 0.15 Max. (0.20 Max. for ΦD=35mm) 400~450VDC: 0.15 Max. (at 20°C, 120Hz)	
低温特性 Low Temperature Characteristics (Max. Impedance Ratio)	阻抗比值不得超过下表中列出的值 The impedance ratio shall not exceed the values listed in the below table. (at 120Hz)	
	Rated voltage(V)	200 ~ 450V
	Z(-25°C)/Z(+20°C)	4
ESL 串联等效电感	50nH max. (at 20°C, 1MHz)	
耐久性 Endurance	在105°C环境中, 不超过额定电压的范围内叠加最大允许纹波电流, 连续2000小时, 经恢复到20°C后, 电容器满足以下各项要求。 The following specifications shall be satisfied when the capacitors are restored to 20°C after applied within maximum allowable ripple current and not over rated voltage range for 2000 hours at 105°C.	
	Capacitance change	≅ ±20% of the initial value
	D.F.(tanδ)	≅ 200% of the initial specified value
	Leakage current	≅ The initial specified value
高温储存特性 Shelf Life	在105°C环境中, 不施加电压条件下储存1000小时, 经恢复到20°C后, 电容器满足以下各项要求。 The following specifications shall be satisfied when the capacitors are restored at 20°C after exposing them for 1000 hours at 105°C without voltage applied.	
	Capacitance change	≅ ±15% of the initial value
	D.F.(tanδ)	≅ 150% of the initial specified value
	Leakage current	≅ 200% of the initial specified value

尺寸图 (单位: mm) DIMENSIONS (Unit:mm)

• Standard Terminal Type : (Φ22 ~ Φ35)



纹波电流修正系数 Rated Ripple Current Coefficient

• 频率系数 Frequency Coefficient


Frequency (Hz)	50	120	300	1k	10k	50K~
200 ~ 450V	0.76	1.00	1.15	1.31	1.42	1.45



EM Series

◆ 标准品一览表 Standard Ratings

WV(V) Cap.(μF)	200(2D)				250(2E)			
120					22×20 0.68			
180	22×20 0.81				22×25 0.87	25×20 0.92		
220	22×25 0.89				22×30 1.01			
270	22×25 1.01				22×35 1.15	25×25 1.12	30×20 1.24	
330	22×30 1.19	25×25 1.19			22×40 1.27	25×30 1.28	30×25	
390	22×30 1.36	25×25 1.36			22×45 1.41	25×35 1.45	30×25 1.51	
470	22×35 1.45	25×30 1.45	30×25 1.47			25×40 1.63	30×30 1.66	
560	22×40 1.61	25×30 1.59	30×25 1.59			25×45 1.81	30×35 1.86	35×25 1.98
680		25×35 1.81	30×30 1.8	35×25 1.85			30×40 2.11	3.5×30 2.18
820		25×45 2.12	30×35 2.12	35×25 2.12			30×45 2.38	35×35 2.41
1,000			30×35 2.41	35×30 2.41				
1,200			30×45 2.68	35×35 2.64				

WV(V) Cap.(μF)	400(2G)				450(2W)			
56	22×20 0.45	 Case size : ΦD×L(mm) Maximum allowable ripple current at 105°C/120Hz(A.r.m.s)						
68	22×20 0.52							
82	22×25 0.59							
100	22×30 0.65	25×25 0.65						
120	22×30 0.77	25×25 0.77						
150	22×35 0.86	25×30 0.86	30×25 0.86					
180	22×40 0.93	25×35 0.94	30×25 0.94			25×45 0.99	30×35 0.99	
220		25×35 1.25	30×30 1.25	35×25 1.25		25×50 1.21	30×40 1.21	
270		25×45 1.29	30×35 1.29	35×30 1.29			30×50 1.38	35×45 1.38
330			30×40 1.48	35×35 1.48			30×55 1.55	35×50 1.55
390								35×55 1.60

※铝电解电容器由于在纹波电流叠加时自我发热、温度上升而老化，中心温度每升温5℃寿命减少一半。要想保持长寿命请在使用过程中降低纹波电流。
 The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

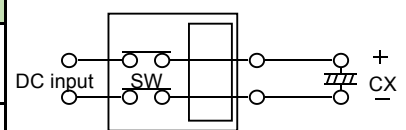
◆ DC Overvoltage Test Conditions

The vent will operate and the capacitor shall be come an open circuit without burning materials when the following test DC voltage is applied.

◆ Test DC voltage

Rated Voltage	Nominal Capacitance	Current Limit	Test Voltage
200Vdc	<330	4A	330/375 Vdc
	330μF ≤ Cap. < 470μF	5A	
	≥ 470μF	7A	
250Vdc	<330	4A	350/450 Vdc
	330μF ≤ Cap. < 470μF	5A	
	≥ 470μF	7A	
400Vdc	<100	2A	500/600 Vdc
	100μF ≤ Cap. < 220μF	4A	
	≥ 220μF	7A	
450Vdc	<100	2A	550/675 Vdc
	100μF ≤ Cap. < 220μF	4A	
	≥ 220μF	7A	

◆ Test Circuit



Constant DC voltage / Current power supply