

代码编制规则 Part Number

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
F	C	S	2	F	A	R	5	0	5	K	C	I	F	2	7	0	0	B	G
电容器类型 Capacitor Type	产品外形 Product Shape	额定电压代码 Rated Voltage Code	系列代码 Series Code		容量代码 Capacitance Code	容量偏差 Capacitance Tolerance	引线类型 Pin Style		外壳尺寸代码* Dimension Code	引线间距 Pitch P1	引线间距 Pitch P2	引线直径 Lead diameter		高温高湿 High Temperature High Humidity Loading					
FC=Film Capacitor	Square=S	160=1G	CBB238H=AR		1=105	±5%=J	4Pin 5mm=A		32*33*18=IF	27.5=27	0=00	0.6=A							
		250=2F			2.2=225	±10%=K	2Pin 5mm=B			37.5=37	10.2=10	0.8=B							
		280=2J			4.7=475	Special=S	2Pin 长引线=C			52.5=52	20.3=20	1.0=C							
		350=3F					2pin 9.2mm=D					1.2=D							
		400=4A					2pin 8.2mm=E					0.5=E							
		450=4F					4pin 4mm=S												
							2pin 4.5mm=T												
							2pin 3.5mm=U												
				2pin 3.2mm=V															

Features

- Used in AC circuits as input or output filter
- PP film design, good temperature characteristics
- Stable capacity
- Low ESR, high RMS current handing capabilities
- Self-healing property
- Plastic box, filled with fire-retardant resin
- 2 or 4 tinned copper wires for PCB mounting

Applications

- Solar inverters,
- UPS power supply
- Motor Driver systems

特点

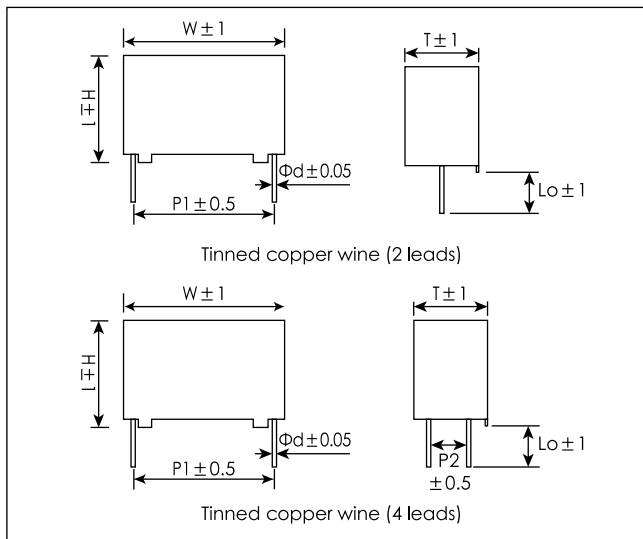
- AC电路输入输出滤波
- 采用聚丙烯薄膜，温度特性好
- 容值稳定，变化率小
- 等效串联电阻小，承受较大的有效值电流
- 有自愈性
- 塑壳封装，阻燃树脂灌封
- 镀锡铜线引出，适合PCB安装

应用场合

- 太阳能逆变器
- UPS电源
- 电机驱动

外形图 Dimensions

Unit: mm



标识 Marking

	——	1
CBB238H	——	2
5μF J 250V	——	3
J02F12	——	4

NO.	项目 Item
1	商标 Brand
2	产品系列 Products series
3	容量、偏差以及额定电压 Capacitance、Tolerance and Rated voltage
4	日期代码 Date code

性能特性 Specifications

项目 Item	特性 Characteristics
引用标准 Reference Standard	GB/T 17702 (IEC 61071)
气候类别 Climatic Category	40/105/56
工作温度范围 Operating Temperature Range	-40~+105°C +85°C~+105°C: decreasing factor 1.5% per°C for U_{rms}
存储温度范围 Storage Temperature Range	-40~+105°C
额定电压 U_R Rated Voltage	160~450V _{AC}
电容量范围 Capacitance Range	0.22~50 μF
电容量偏差 Capacitance Tolerance	±5%(J), ±10%(K)
端子与端子间耐压 U_{Ti} Voltage Between Terminals	2.15 U_N (V _{DC}), 10s (20°C)
端子与铝壳间耐压 U_{TC} Voltage Between Terminals and Case	3000 V _{AC} , 10 s (20°C, 50 Hz)
介质损耗角正切 Dielectric Dissipation Factor	0.0002
绝缘电阻 Insulation Resistance	≥10000MΩ • μF (20°C, 100V _{DC} , 1min)
预期寿命 Life Expectancy	100000 hours (U_R , $\theta_{holspot}$ =70°C)
失效率 Failure Rate	100 FIT
高温高湿测试 High Temperature High Humidity Loading	Temperature: 85°C±2°C; Humidity: 85% ±2% Loading Voltage: Rate Voltage (50Hz/60Hz); Duration: 1000 hours Capacitance change(ΔC/C): ≤10%

规格标准 Standard Ratings

U _{rms} =160V _{ac} , U _N =225V _{ac} , U _{NDC} =400V _{dc}												
C _R	P/N	R _{th}	I _{max}	I _{Peak}	dv/dt	R _s	L _s	W	H	T	P1	P2
(μF)	-	(K/W)	70°C(A)	(A)	(V/us)	(mΩ)	(nH)	(mm)	(mm)	(mm)	(mm)	(mm)
1	FCS1GAN105**I42700*G	19.8	5	32	32	30.3	24	32	20	11	27.5	\
2.2	FCS1GAN225**I42700*G	20.0	7	70.4	32	15.3	24	32	20	11	27.5	\
3.3	FCS1GAN335**I72700*G	27.1	7	105.6	32	11.3	24	32	22	13	27.5	\
5	FCS1GAN505**IC2700*G	34.8	7	160	32	8.8	26	32	28	14	27.5	\
10	FCS1GAN106**IF2700*G	45.0	7	320	32	6.8	26	32	33	18	27.5	\
10	FCS1GAN106**F13710*G	14.5	12	220	22	7.2	30	42.5	37	28	37.5	10.2
20	FCS1GAN206**F13710*G	15.1	12	440	22	6.9	30	42.5	37	28	37.5	10.2
30	FCS1GAN306**FF3720*G	14.1	12	660	22	7.4	30	42.5	45	30	37.5	20.3
40	FCS1GAN406**HH5220*G	13.7	12	640	16	7.6	35	57.5	45	30	52.5	20.3
50	FCS1GAN506**HL5220*G	13.9	12	800	16	7.5	35	57.5	50	35	52.5	20.3
U _{rms} =250V _{ac} , U _N =350V _{ac} , U _{NDC} =475V _{dc}												
C _R	P/N	R _{th}	I _{max}	I _{Peak}	dv/dt	R _s	L _s	W	H	T	P1	P2
(μF)	-	(K/W)	70°C(A)	(A)	(V/us)	(mΩ)	(nH)	(mm)	(mm)	(mm)	(mm)	(mm)
1.5	FCS2FAN155**I42700*	23.4	8	60	40	10.0	24	32	20	11	27.5	\
2	FCS2FAN205**I72700*	22.6	9	80	40	8.2	24	32	22	13	27.5	\
3.3	FCS2FAN335**IC2700*	29.9	9	132	40	6.2	26	32	28	14	27.5	\
5	FCS2FAN505**IF2700*	35.6	9	200	40	5.2	26	32	33	18	27.5	\
6.8	FCS2FAN685**I13710*	15.6	14	272	40	4.9	28	32	37	22	37.5	10.2
10	FCS2FAN106**F23710*	13.7	14	300	30	5.6	30	42.5	40	20	37.5	10.2
15	FCS2FAN156**F13710*	14.7	14	450	30	5.2	30	42.5	37	28	37.5	10.2
20	FCS2FAN206**FF3720*	15.9	14	600	30	4.8	30	42.5	45	30	37.5	20.3
25	FCS2FAN256**HH5220*	13.4	14	625	25	5.7	35	57.5	45	30	52.5	20.3
30	FCS2FAN306**HH5220*	14.4	14	750	25	5.3	35	57.5	45	30	52.5	20.3
35	FCS2FAN356**HL5220*	13.9	14	875	25	5.5	35	57.5	50	35	52.5	20.3
40	FCS2FAN406**HL5220*	14.7	14	1000	25	5.2	35	57.5	50	35	52.5	20.3
U _{rms} =275V _{ac} , U _N =385V _{ac} , U _{NDC} =520V _{dc}												
C _R	P/N	R _{th}	I _{max}	I _{Peak}	dv/dt	R _s	L _s	W	H	T	P1	P2
(μF)	-	(K/W)	70°C(A)	(A)	(V/us)	(mΩ)	(nH)	(mm)	(mm)	(mm)	(mm)	(mm)
3.3	FCS2HAN335**IF2700*	29.9	9	132	40	6.2	26	32	33	18	27.5	\
6.8	FCS2HAN685**I13710*	39.4	9	272	40	4.7	28	32	37	22	27.5	\
10	FCS2HAN106**F23710*	13	14	300	30	5.9	30	42.5	40	20	37.5	10.2
15	FCS2HAN156**FF3720*	15	14	450	30	5.1	30	42.5	45	30	37.5	20.3
20	FCS2HAN206**HH3720*	12.8	14	500	25	6.0	35	57.5	45	30	52.5	20.3
30	FCS2HAN306**HL5220*	14.4	14	750	25	5.3	35	57.5	50	35	52.5	20.3
U _{rms} =350V _{ac} , U _N =480V _{ac} , U _{NDC} =600V _{dc}												
C _R	P/N	R _{th}	I _{max}	I _{Peak}	dv/dt	R _s	L _s	W	H	T	P1	P2
(μF)	-	(K/W)	70°C(A)	(A)	(V/us)	(mΩ)	(nH)	(mm)	(mm)	(mm)	(mm)	(mm)
1	FCS3FAN105**I72700*	17	9	45	45	10.9	24	32	22	13	27.5	\
2	FCS3FAN205**IF2700*	25.4	9	90	45	7.3	26	32	33	18	27.5	\
2.2	FCS3FAN225**IF2700*	26.8	9	99	45	6.9	26	32	33	18	27.5	\
3.3	FCS3FAN335**I13710*	32.5	9	148.5	45	5.7	28	32	37	22	27.5	\
4.7	FCS3FAN475**F23710*	11.1	14	159.8	34	6.9	30	42.5	40	20	37.5	10.2
5	FCS3FAN505**F23710*	11.3	14	170	34	6.8	30	42.5	40	20	37.5	10.2
6.8	FCS3FAN685**F13710*	12.3	14	231.2	34	6.2	30	42.5	37	28	37.5	10.2
10	FCS3FAN106**FF3720*	14.4	14	340	34	5.3	30	42.5	45	30	37.5	20.3
12	FCS3FAN126**HH5220*	11.3	14	336	28	6.8	35	57.5	45	30	52.5	20.3
20	FCS3FAN206**HL5220*	13	14	560	28	5.9	35	57.5	50	35	52.5	20.3

FILM

规格标准 Standard Ratings

U _{rms} =400V _{ac} , U _N =560V _{ac} , U _{NDC} =700V _{dc}												
C _R	P/N	R _{th}	I _{max}	I _{Peak}	dv/dt	R _S	L _S	W	H	T	P1	P2
(μF)	-	(K/W)	70°C(A)	(A)	(V/us)	(mΩ)	(nH)	(mm)	(mm)	(mm)	(mm)	(mm)
1	FCS4AAN105**IC2700*	18	9	50	50	10.3	26	32	28	14	27.5	\
1.5	FCS4AAN155**IF2700*	22.9	9	75	50	8.1	26	32	33	18	27.5	\
2.2	FCS4AAN225**IF2700*	28.9	9	110	50	6.4	26	32	33	18	27.5	\
3	FCS4AAN305**II3710*	32.5	9	150	50	5.7	28	32	37	22	27.5	\
5	FCS4AAN505**F13710*	12.3	14	200	40	6.2	30	42.5	37	28	37.5	10.2
10	FCS4AAN106**HH5220*	11.1	14	350	35	6.9	35	57.5	45	30	52.5	20.3
15	FCS4AAN156**HL5220*	12.5	14	525	35	6.1	35	57.5	50	35	52.5	20.3

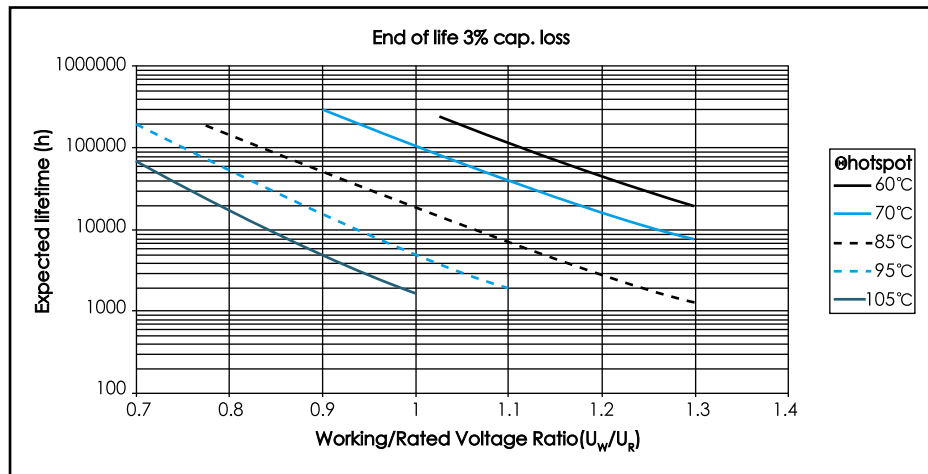
U _{rms} =450V _{ac} , U _N =630V _{ac} , U _{NDC} =750V _{dc}												
C _R	P/N	R _{th}	I _{max}	I _{Peak}	dv/dt	R _S	L _S	W	H	T	P1	P2
(μF)	-	(K/W)	70°C(A)	(A)	(V/us)	(mΩ)	(nH)	(mm)	(mm)	(mm)	(mm)	(mm)
0.47	FCS4FAN474**I72700*	14.9	8	25.85	55	15.7	24	32	22	13	27.5	\
1	FCS4FAN105**IF2700*	25.5	8	55	55	9.2	26	32	33	18	27.5	\
1.5	FCS4FAN155**II3710*	32.1	8	82.5	55	7.3	28	32	37	22	27.5	\
3.3	FCS4FAN335**F13710*	10.3	14	148.5	45	7.4	30	42.5	37	28	37.5	10.2
4.7	FCS4FAN475**FF3720*	12.3	14	211.5	45	6.2	30	42.5	45	30	37.5	20.3
6.8	FCS4FAN685**HH5220*	10.2	14	258.4	38	7.5	35	57.5	45	30	52.5	20.3
10	FCS4FAN106**HL5220*	11.6	14	380	38	6.6	35	57.5	50	35	52.5	20.3

* R_{th} 为产品热点到环境的热阻（自然冷却）

* The thermal Resistance from hotspot to ambient environment (Natural cooling)

可根据客户要求定制。Customer products are available on request.

预期寿命曲线 Expected lifetime curve



警告 Cautions and warnings

■ Don't exceed the upper category temperature.

电容器的使用不能超过上限温度。

■ For longtime storage, maximum relative humidity 80%, no dew allowed on the capacitor.

电容器的长期存储，其最大相对湿度是80%，且在上面不允许沾有水。

■ Do not use or store capacitor in corrosive atmosphere, in the dusty environments regular maintenance and cleaning especially of the terminals is required to avoid conductive path between terminal / or terminal and ground.

电容器不能在或存储在腐蚀性环境。在多灰尘的环境里，要求定期维护和清洁，特别是电极端子，以避免相与相间或相与地之间有导电通路。

■ Don't apply any mechanical stress to the capacitor terminals, and avoid any compressive, tensile or flexural stress.

不要将任何机械应力施加到电容器的端子上，且要避免任何压缩，拉伸或弯曲应力。

■ Avoid overload of the capacitors.

电容器不能超负荷使用。

■ Do not have unlimited service life expectancy, the max service life expectancy may vary depending on the application the capacitor is used in.

电容器的寿命是有限的，最大工作寿命因使用条件的不同而不同。