

AC Harmonic Filter Capacitor C72



Characteristics

- Aluminum round case package, perfused with epoxy resin
- Lead by tinned copper nut or copper screw, located plastic cover, easy installation
- High withstand voltage, self-healing
- High ripple current, high dv/dt withstand capability
- Large capacitance, small size

Application

- Widely used in power electronic equipment used for the AC filter
- Acting as AC filter, harmonic control and power factor Improvement in high power UPS, switching power Supply, frequency converter and other equipment

Technical Data

• Reference Standards	GB/T 17702 IEC 61071
• Operating Temperature Range	-40°C~+70°C Tmax+85°C
• Capacitance Range	20μF~500μF
	3×40μF~3×200μF
• Rated Voltage	250VAC/50Hz~1140VAC/50Hz
• Capacity Tolerance	±5%(J); ±10%(K)
• Test Voltage Between Electrodes	2.15UN (AC) 10S 20°C
• Test Voltage Between Electrode And Case	1000+2×UN (VAC) 50Hz 60S (min 3000VAC)
• Dissipation Factor	tgδ≤2×10 ⁻³ at 20°C, 100Hz
• Insulation Resistance	C•R≥10000S, at 100VDC, 20°C, 60S
• Maximum Altitude	2000m
	For altitudes between 2000m and 5000m, consideration should be given to the use of deductions (10% reduction in voltage and current per 1000m increase)
• Life Expectancy	100000hrs (Un θhotspot ≤ 55°C)

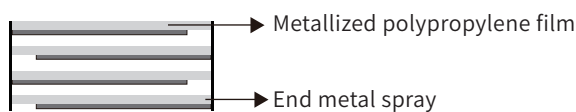
Overvoltage Operation

1.1×UN	One operation cycle allows 30% of the time the voltage is 1.1 times or less than 1.1 times.
1.15×UN	30 min/day
1.2×UN	5 min/day
1.3×UN	1min/day
1.5×UN	100ms each time, and no more than 1000 times during the lifetime

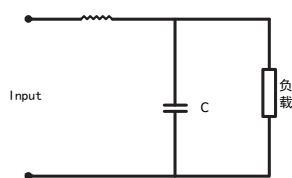
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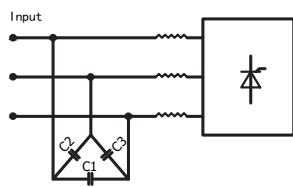
Construction Diagram



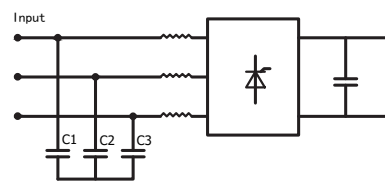
Typical Circuit



AC filter capacitor (C) --Single phase

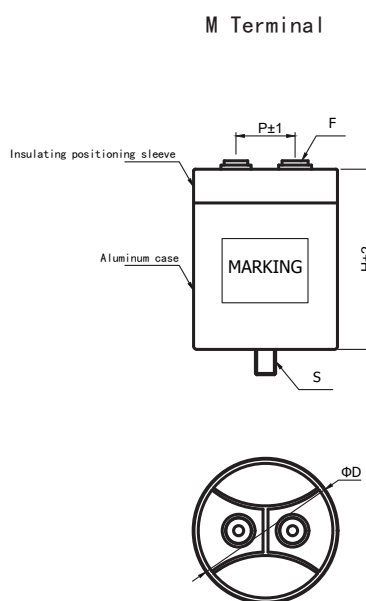
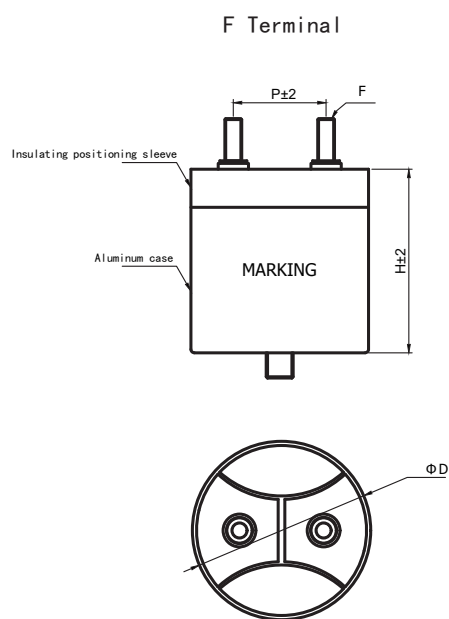


AC filter capacitor (C1=C2=C3)
--Three phase triangle connection



AC filter capacitor (C1=C2=C3)
--Three phase star connection

Product Shape



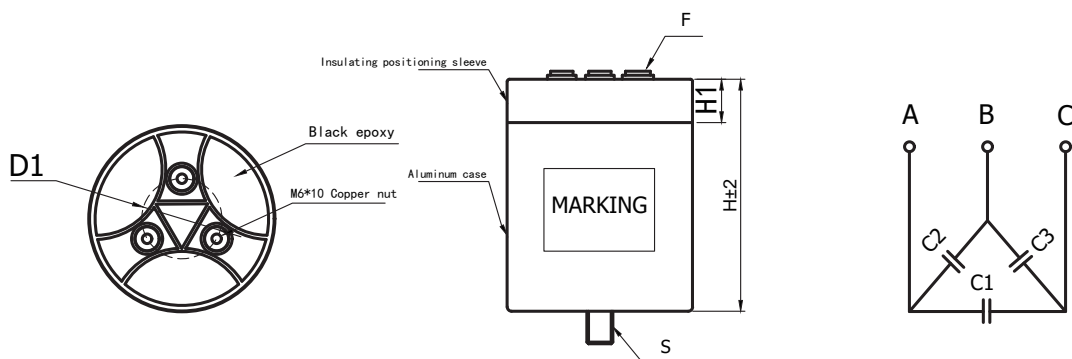
Outline Drawing of the Single-phase AC capacitors (The contour map)

D(mm)	P(mm)	H1(mm)	S(mm)	F(mm)	M(mm)
76	32	20	M12×16	M6×10	M8×20
86	32	20	M12×16	M6×10	M8×20
96	45	20	M12×16	M6×10	M8×20
106	50	35	M12×16	M6×10	M8×20
116	50	40	M12×16	M6×10	M8×20
136	50	30	M16×25	M6×10	M8×20

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AC Harmonic Filter Capacitor

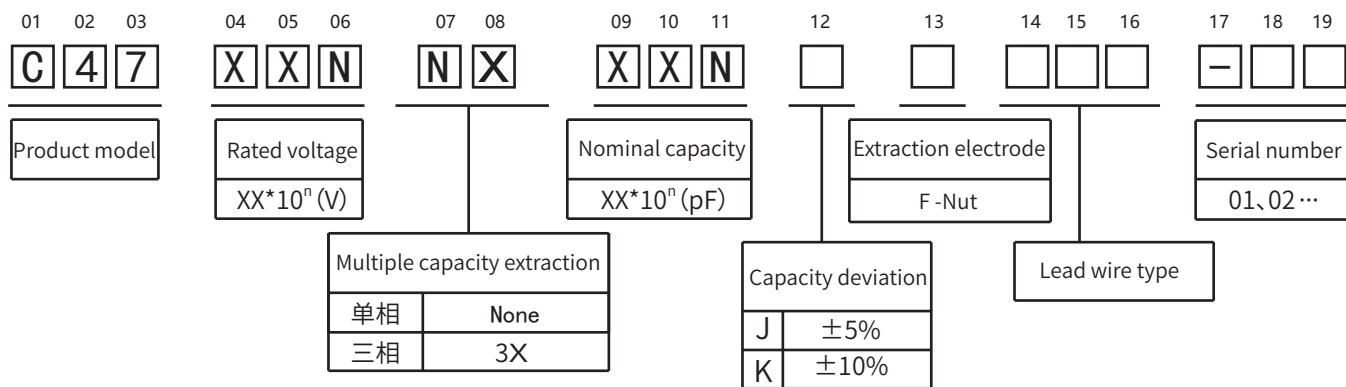
Product Shape



The contour map

D(mm)	H1(mm)	S(mm)	F(mm)	M(mm)	D1(mm)
116	40	M12×16	M6×10	M8×20	50
136	30	M16×25	M6×10	M8×20	60

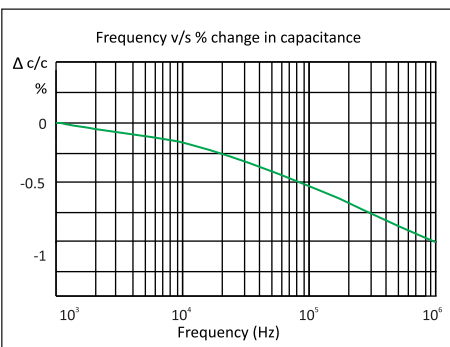
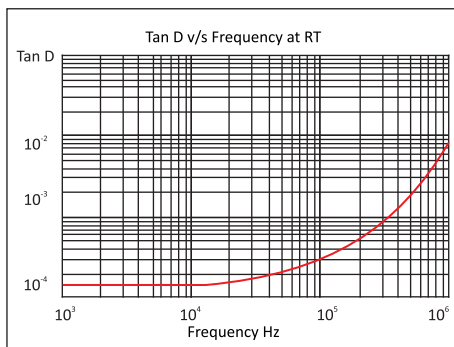
Product Coding



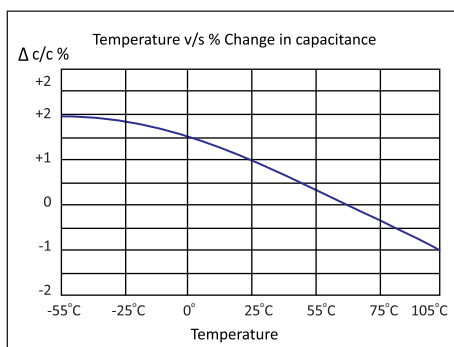
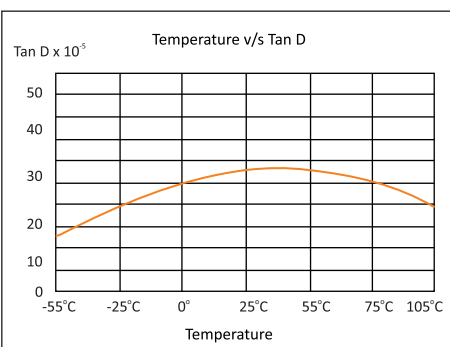
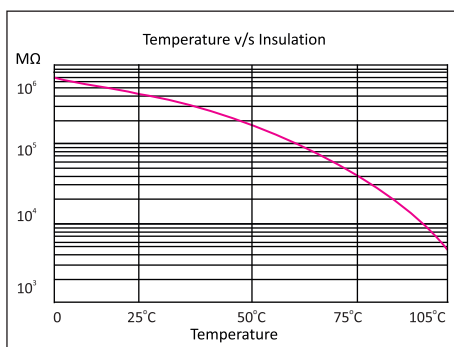
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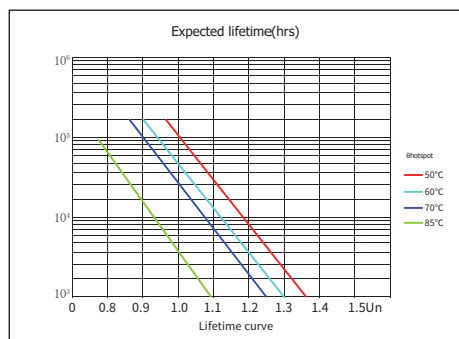
Temperature Characteristics



Frequency Characteristics



Life Expectancy



Part Number	CAP μF	Dimension (mm)			dV/dt (V/μS)	I _p (KA)	I _s (KA)	I _{rms} @ 50°C (A)	R _{th} (K/W)	ESL (nH)	ESR @1KHz (mΩ)
		D	H	P							
U _N =250VAC U _S =800VDC											
C72251507JMM10-01	500	86	195	32	25	12.5	37.5	60	1.4	60	1.8
U _N =300VAC U _S =1000VDC											
C72301157JMM8-01	150	76	185	32	30	4.5	13.5	45	2.0	50	3.8
C72301257JMM8-01	250	86	185	32	40	10.0	30.0	60	1.6	60	3.2
U _N =330VAC U _S =1200VDC											
C72331806J••••••	80	76	80	32	80	6.4	19.2	30	4.2	40	4.0
C72331127J••••••	120	86	80	32	70	8.4	25.2	40	3.3	40	2.8
C72331157J••••••	150	96	80	45	70	10.5	31.5	50	1.7	45	3.5
C72331177J••••••	170	76	130	32	60	10.2	30.6	60	1.3	50	3.2
C72331237J••••••	230	86	130	32	60	13.8	41.4	70	1.3	50	2.4
C72331307J••••••	300	96	130	45	50	15.0	45.0	75	1.0	50	2.8
C72331427J••••••	420	116	130	50	50	21.0	63.0	80	1.2	60	1.9
U _N =450VAC U _S =1520VDC											
C72451306JFM6-01	30	76	85	32	90	2.7	8.1	20	4.5	40	5.0
C72451506J••••••	50	76	80	32	90	4.5	13.5	30	4.2	40	4.0
C72451656J••••••	65	86	80	32	80	5.2	15.6	40	3.3	50	2.8
C72451806J••••••	80	96	80	45	80	6.4	19.2	50	1.7	45	3.5
C72451107J••••••	100	76	130	32	70	7.0	21.0	60	1.3	50	3.2
C72451137J••••••	130	86	130	32	60	7.8	23.4	70	1.3	45	2.4
C72451167J••••••	160	96	130	45	50	8.0	24.0	75	1.0	50	2.8
C72451257J••••••	250	116	130	50	50	12.5	37.5	80	1.2	60	1.9
U _N =690VAC U _S =2100VDC											
C72691406J••••••	40	76	130	32	100	4.0	12.0	30	6.0	50	2.8
C72691506J••••••	50	76	150	32	90	4.5	13.5	35	5.1	45	2.4
C72691606J••••••	60	86	130	32	80	4.8	14.4	40	4.3	45	2.2
C72691656J••••••	65	86	150	32	80	5.2	15.6	45	4.1	50	1.8
C72691756J••••••	75	96	130	45	80	6.0	18.0	50	4.0	50	1.5
C72691806J••••••	80	96	150	45	75	6.0	18.0	60	3.5	55	1.2
C72691117J••••••	110	116	130	50	70	7.7	23.1	65	4.4	60	0.8
C72691127J••••••	120	116	150	50	50	6.0	18.0	75	4.4	65	0.6

The above table / graphics are for reference only, subject to the actual product (unit: mm)

Part Number	CAP μF	Dimension (mm)			dV/dt (V/μs)	I _p (KA)	I _s (KA)	I _{rms} @ 50 °C (A)	R _{th} (K/W)	ESL (nH)	ESR @1KHz (mΩ)
		D	H	P							
U _N =850VAC U _s 2850VDC											
C72851256J●●●●●●	25	76	130	32	110	2.8	8.4	35	8.2	50	1.5
C72851306J●●●●●●	30	76	150	32	100	3.0	9.0	40	7.8	60	1.2
C72851326J●●●●●●	32	86	130	32	100	3.2	9.6	50	5.2	45	1.15
C72851406J●●●●●●	40	96	130	45	90	3.6	10.8	50	6.0	50	1.0
C72851456J●●●●●●	45	86	150	32	90	4.1	12.2	50	5.7	50	1.05
C72851606J●●●●●●	60	96	150	45	85	5.1	15.3	60	4.6	60	0.9
C72851606J●●●●●●	60	116	130	50	80	4.8	14.4	65	4.2	60	0.85
C72851906J●●●●●●	90	116	150	50	75	6.8	20.3	75	3.3	65	0.8
U _N =450VAC U _s =1520VDC											
C724513×117J●●●●●●	3×110	116	100	43.5	60	6.6	19.8	3×50	4.5	100	3×0.78
C724513×147J●●●●●●	3×145	116	110	43.5	50	7.3	21.8	3×60	3.8	110	3×0.72
C724513×177J●●●●●●	3×175	116	120	43.5	50	8.8	26.3	3×75	3.5	120	3×0.67
C724513×207J●●●●●●	3×200	136	230	52.0	40	8.0	24.0	3×85	2.1	125	3×0.6
U _N =500VAC U _s =1520VDC											
C725013×107J●●●●●●	3×100	116	180	43.5	80	8.0	24.0	3×45	4.5	100	3×0.78
C725013×127J●●●●●●	3×120	116	230	43.5	70	8.4	25.2	3×50	3.8	120	3×0.72
C725013×127J●●●●●●	3×125	136	180	52	40	5.0	15.0	3×70	3.5	110	3×0.67
C725013×137J●●●●●●	3×135	136	230	52	50	6.8	20.3	3×80	2.1	130	3×0.6
U _N =690VAC U _s =2100VDC											
C726913×496J●●●●●●	3×49	116	230	43.5	70	3.4	10.2	3×56	2.1	120	3×0.55
C726913×556J●●●●●●	3×55.7	136	230	52.0	90	5.0	15.0	3×60	2.1	130	3×0.4
U _N =850VAC U _s 2850VDC											
C728513×416J●●●●●●	3×41.5	116	230	43.5	80	3.3	9.0	3×56	2.1	120	3×0.55
C728513×556J●●●●●●	3×55.7	136	230	52.0	70	4.0	12.0	3×75	1.8	130	3×0.45

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