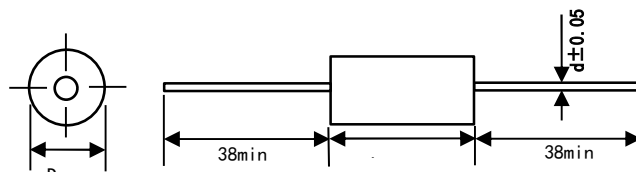


Version history

Current version	Date	Author	Change description

Metallized polypropylene film capacitor(Axial-type)

■ Outline Drawing



■ Features

- Metallized Polypropylene film, non-inductive type, axial
- Excellent self-healing property
- Wrapped with polyester adhesive tape and ends filled with Flame retardant epoxy resin

■ Typical application

- Temperature compensation circuits
- Time, oscillator circuits
- Power factor correction and coupling capacitor in SMPS applications

■ Specifications

Reference Standard	GB/T 10190(IEC 60384-16)							
Rated temperature	85℃							
Climatic Category	40/085/21							
Rated Voltage	100/160, 250V, 400V, 630V, 1 000V, 1 250V							
Capacitance Range	0.0010μF~15μF							
Capacitance Tolerance	±5%(J), ±10% (K), ±20% (M)							
Voltage Proof	1.6U _R (5s)							
Dissipation Factor	≤10×10 ⁻⁴ (20℃, 1kHz)							
Insulation Resistance	R≥100 000MΩ , C _N ≤0.33μF RC _N ≥30 000s, C _N >0.33μF (20℃,100V,1min)							
Maximum Pulse Rise Time(dV/dt) If the working voltage(U) is lower than the rated voltage(U _R),the capacitor can be worked at a higher dV/dt. In this case, the maximum allowed dV/dt is obtain by multiplying the right value with U _R /U.	U _R (V)	dV/dt(V/us)						
		L=12.0	L=14.5	L=20.0	L=27.5	L=33.0	L=41.5	L=56.5
	100/160	150	110	80	60	50	35	20
	250	300	220	150	110	90	60	30
	400	460	330	250	180	120	80	45
	630	600	440	300	220	150	100	60
	1 000	800	550	400	300	200	150	80
	1 250	1000	750	580	400	300	200	100

■ Part number system

The 15 digits part number is formed as follow

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

C	3	0												
---	---	---	--	--	--	--	--	--	--	--	--	--	--	--

Digit 1 to 3 Series code C30= CBB20

Digit 4 to 5 D.C. rated voltage

2A=100V 2C=160V 2E=250V 2G=400V 2J=630V 3A=1000V 3B=1250V

Digit 6 to 8 Rated capacitance value For example: 103=10×10³pF=0.01μF

Digit 9 Capacitance tolerance J=±5%, K=±10%, M=±20%

Digit 10 Pitch 0=Axial

Digit 11 Internal use

Digit 12 to 15 Lead length C000 means standard lead length(38mm min)

Dimensions (mm)

100V(60Vac)/160Vdc(90Vac)*					250Vdc(160Vac)					400Vdc(200Vac)				
C _N (μF)	D max	L max	d	Part number	C _N (μF)	D max	L max	d	Part number	C _N (μF)	D max	L max	d	Part number
0.022	5.0	12.0	0.6	C302A223-00C000	0.010	5.0	12.0	0.6	C302E103-00C000	0.0068	5.0	12.0	0.6	C302G682-00C000
0.027	5.0	12.0	0.6	C302A273-00C000	0.012	5.0	12.0	0.6	C302E123-00C000	0.0082	5.0	12.0	0.6	C302G822-00C000
0.033	5.0	12.0	0.6	C302A333-00C000	0.015	5.0	12.0	0.6	C302E153-00C000	0.010	5.0	12.0	0.6	C302G103-00C000
0.039	5.0	12.0	0.6	C302A393-00C000	0.018	5.0	12.0	0.6	C302E183-00C000	0.012	5.0	12.0	0.6	C302G123-00C000
0.047	5.0	12.0	0.6	C302A473-00C000	0.022	5.0	12.0	0.6	C302E223-00C000	0.015	5.0	12.0	0.6	C302G153-00C000
0.056	5.0	12.0	0.6	C302A563-00C000	0.027	5.0	12.0	0.6	C302E273-00C000	0.018	5.5	12.0	0.6	C302G183-00C000
0.068	5.5	12.0	0.6	C302A683-00C000	0.033	5.5	12.0	0.6	C302E333-00C000	0.022	5.5	12.0	0.6	C302G223-00C000
0.082	5.0	14.5	0.6	C302A823-00C000	0.039	5.0	14.5	0.6	C302E393-00C000	0.027	5.0	14.5	0.6	C302G273-00C000
0.10	5.5	14.5	0.6	C302A104-00C000	0.047	5.5	14.5	0.6	C302E473-00C000	0.033	5.5	14.5	0.6	C302G333-00C000
0.12	6.0	14.5	0.6	C302A124-00C000	0.056	5.5	14.5	0.6	C302E563-00C000	0.039	6.0	14.5	0.6	C302G393-00C000
0.15	6.5	14.5	0.6	C302A154-00C000	0.068	6.0	14.5	0.6	C302E683-00C000	0.047	6.5	14.5	0.6	C302G473-00C000
0.18	7.0	14.5	0.8	C302A184-00C000	0.082	6.5	14.5	0.6	C302E823-00C000	0.056	6.5	14.5	0.6	C302G563-00C000
0.22	7.5	14.5	0.8	C302A224-00C000	0.10	7.0	14.5	0.8	C302E104-00C000	0.068	7.0	14.5	0.8	C302G683-00C000
0.27	8.5	14.5	0.8	C302A274-00C000	0.12	7.5	14.5	0.8	C302E124-00C000	0.082	7.5	14.5	0.8	C302G823-00C000
0.33	7.0	20.0	0.8	C302A334-00C000	0.15	8.0	14.5	0.8	C302E154-00C000	0.10	7.0	20.0	0.8	C302G104-00C000
0.39	7.5	20.0	0.8	C302A394-00C000	0.18	8.5	14.5	0.8	C302E184-00C000	0.12	7.5	20.0	0.8	C302G124-00C000
0.47	8.0	20.0	0.8	C302A474-00C000	0.22	7.5	20.0	0.8	C302E224-00C000	0.15	8.0	20.0	0.8	C302G154-00C000
0.56	9.0	20.0	0.8	C302A564-00C000	0.27	8.0	20.0	0.8	C302E274-00C000	0.18	8.5	20.0	0.8	C302G184-00C000
0.68	8.0	27.5	0.8	C302A684-00C000	0.33	9.0	20.0	0.8	C302E334-00C000	0.22	9.0	20.0	0.8	C302G224-00C000
0.82	8.5	27.5	0.8	C302A824-00C000	0.39	9.5	20.0	0.8	C302E394-00C000	0.27	10.0	20.0	0.8	C302G274-00C000
1.0	9.5	27.5	0.8	C302A105-00C000	0.47	8.5	27.5	0.8	C302E474-00C000	0.33	9.0	27.5	0.8	C302G334-00C000
1.2	10.0	27.5	0.8	C302A125-00C000	0.56	9.0	27.5	0.8	C302E564-00C000	0.39	9.5	27.5	0.8	C302G394-00C000
1.5	11.5	27.5	0.8	C302A155-00C000	0.68	10.0	27.5	0.8	C302E684-00C000	0.47	10.0	27.5	0.8	C302G474-00C000
1.8	12.0	27.5	0.8	C302A185-00C000	0.82	10.5	27.5	0.8	C302E824-00C000	0.56	10.5	27.5	0.8	C302G564-00C000
2.2	12.0	33.0	0.8	C302A225-00C000	1.0	12.0	27.5	0.8	C302E105-00C000	0.68	12.0	27.5	0.8	C302G684-00C000
2.7	13.0	33.0	0.8	C302A275-00C000	1.2	12.5	27.5	0.8	C302E125-00C000	0.82	13.0	27.5	0.8	C302G824-00C000
3.3	14.0	33.0	0.8	C302A335-00C000	1.5	12.5	33.0	0.8	C302E155-00C000	1.0	12.5	33.0	0.8	C302G105-00C000
3.9	15.0	33.0	0.8	C302A395-00C000	1.8	13.5	33.0	0.8	C302E185-00C000	1.2	13.5	33.0	0.8	C302G125-00C000
4.7	16.5	33.0	1.0	C302A475-00C000	2.2	14.5	33.0	0.8	C302E225-00C000	1.5	15.0	33.0	0.8	C302G155-00C000
5.6	17.5	33.0	1.0	C302A565-00C000	2.7	16.0	33.0	1.0	C302E275-00C000	1.8	16.0	33.0	1.0	C302G185-00C000
6.8	17.5	41.5	1.0	C302A685-00C000	3.3	17.5	33.0	1.0	C302E335-00C000	2.2	17.5	33.0	1.0	C302G225-00C000
8.2	19.0	41.5	1.0	C302A825-00C000	3.9	18.5	33.0	1.0	C302E395-00C000	2.7	19.0	33.0	1.0	C302G275-00C000
10.0	20.5	41.5	1.0	C302A106-00C000	4.7	18.0	41.5	1.0	C302E475-00C000	3.3	18.5	41.5	1.0	C302G335-00C000
12.0	19.0	56.5	1.0	C302A126-00C000	5.6	19.5	41.5	1.0	C302E565-00C000	3.9	20.0	41.5	1.0	C302G395-00C000
15.0	21.0	56.5	1.0	C302A156-00C000	6.8	21.5	41.5	1.0	C302E685-00C000	4.7	21.5	41.5	1.0	C302G475-00C000
					8.2	23.0	41.5	1.0	C302E825-00C000	5.6	23.5	41.5	1.0	C302G565-00C000
					10.0	21.5	56.5	1.0	C302E106-00C000	6.8	21.5	56.5	1.0	C302G685-00C000
					12.0	23.5	56.5	1.0	C302E126-00C000	8.2	23.5	56.5	1.0	C302G825-00C000
					15.0	25.5	56.5	1.0	C302E156-00C000	10.0	25.5	56.5	1.0	C302G106-00C000

Note: 1. “-” =capacitance tolerance code, M=±20%,K=±10%,J=±5%
2. “#” when the rated voltage is 160Vdc,the digit 4~5 is 2C.

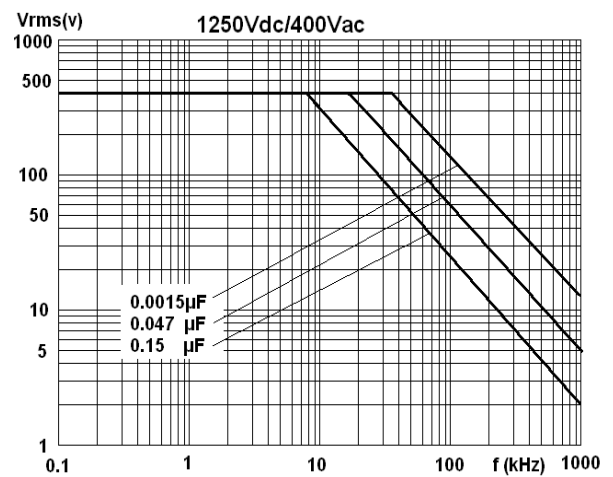
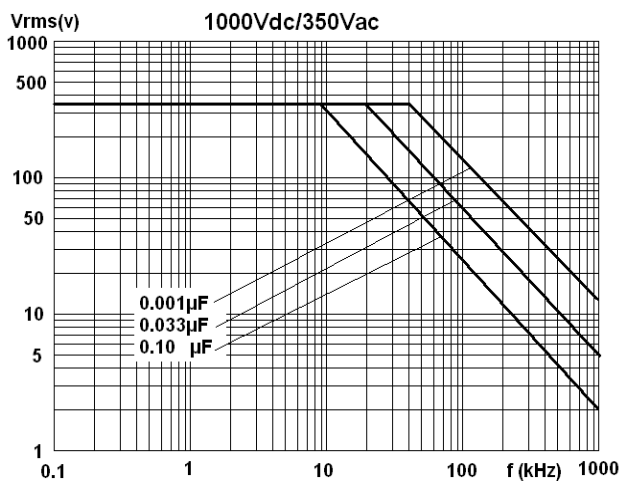
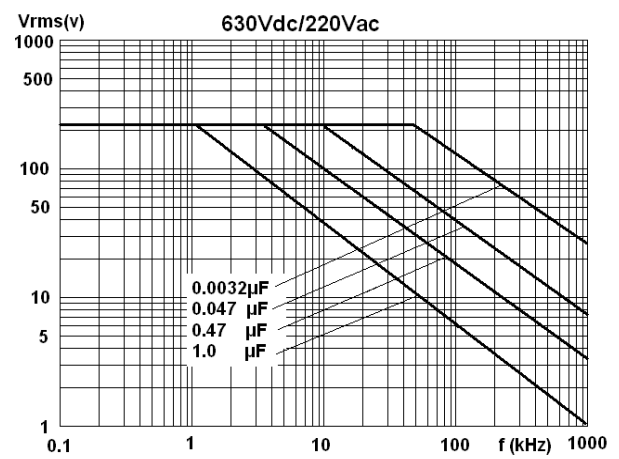
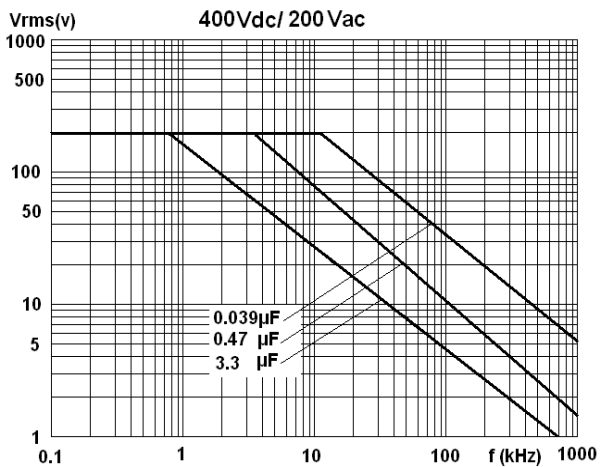
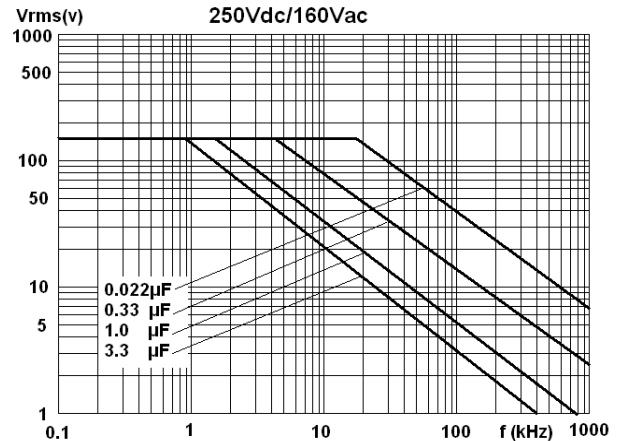
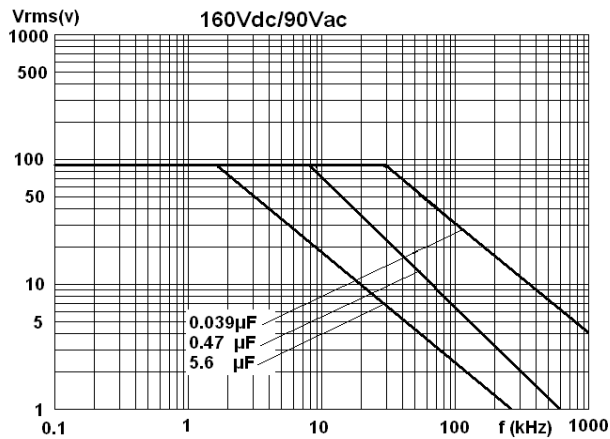
Dimensions (mm)

630Vdc(220Vac) [@]					1 000Vdc(350Vac)					1 250Vdc(400Vac)				
C _N (μF)	D max	L max	d	Part number	C _N (μF)	D max	L max	d	Part number	C _N (μF)	D max	L max	d	Part number
0.0010	5.0	12.0	0.6	C302J102-00C000	0.0010	5.0	12.0	0.6	C303A102-00C000	0.0010	5.0	12.0	0.6	C303B102-00C000
0.0012	5.0	12.0	0.6	C302J122-00C000	0.0012	5.0	12.0	0.6	C303A122-00C000	0.0012	5.5	12.0	0.6	C303B122-00C000
0.0015	5.0	12.0	0.6	C302J152-00C000	0.0015	5.0	12.0	0.6	C303A152-00C000	0.0015	5.5	12.0	0.6	C303B152-00C000
0.0018	5.0	12.0	0.6	C302J182-00C000	0.0018	5.5	12.0	0.6	C303A182-00C000	0.0018	6.0	12.0	0.6	C303B182-00C000
0.0022	5.0	12.0	0.6	C302J222-00C000	0.0022	6.0	12.0	0.6	C303A222-00C000	0.0022	6.5	12.0	0.6	C303B222-00C000
0.0027	5.0	12.0	0.6	C302J272-00C000	0.0027	6.0	12.0	0.6	C303A272-00C000	0.0027	5.5	14.5	0.6	C303B272-00C000
0.0033	5.0	12.0	0.6	C302J332-00C000	0.0033	6.5	12.0	0.6	C303A332-00C000	0.0033	6.0	14.5	0.6	C303B332-00C000
0.0039	5.0	12.0	0.6	C302J392-00C000	0.0039	5.5	14.5	0.6	C303A392-00C000	0.0039	6.0	14.5	0.6	C303B392-00C000
0.0047	5.0	12.0	0.6	C302J472-00C000	0.0047	5.5	14.5	0.6	C303A472-00C000	0.0047	6.5	14.5	0.6	C303B472-00C000
0.0056	5.0	12.0	0.6	C302J562-00C000	0.0056	6.5	14.5	0.6	C303A562-00C000	0.0056	7.0	14.5	0.8	C303B562-00C000
0.0068	5.5	12.0	0.6	C302J682-00C000	0.0068	6.5	14.5	0.6	C303A682-00C000	0.0068	7.5	14.5	0.8	C303B682-00C000
0.0082	5.0	14.5	0.6	C302J822-00C000	0.0082	7.0	14.5	0.8	C303A822-00C000	0.0082	8.0	14.5	0.8	C303B822-00C000
0.010	5.5	14.5	0.6	C302J103-00C000	0.010	7.5	14.5	0.8	C303A103-00C000	0.010	8.5	14.5	0.8	C303B103-00C000
0.012	5.5	14.5	0.6	C302J123-00C000	0.012	8.0	14.5	0.8	C303A123-00C000	0.012	7.0	20.0	0.8	C303B123-00C000
0.015	6.0	14.5	0.6	C302J153-00C000	0.015	8.5	14.5	0.8	C303A153-00C000	0.015	7.5	20.0	0.8	C303B153-00C000
0.018	6.5	14.5	0.6	C302J183-00C000	0.018	7.5	20.0	0.8	C303A183-00C000	0.018	8.0	20.0	0.8	C303B183-00C000
0.022	7.0	14.5	0.8	C302J223-00C000	0.022	8.0	20.0	0.8	C303A223-00C000	0.022	8.5	20.0	0.8	C303B223-00C000
0.027	7.5	14.5	0.8	C302J273-00C000	0.027	8.5	20.0	0.8	C303A273-00C000	0.027	9.5	20.0	0.8	C303B273-00C000
0.033	7.0	20.0	0.8	C302J333-00C000	0.033	9.0	20.0	0.8	C303A333-00C000	0.033	10.5	20.0	0.8	C303B333-00C000
0.039	7.5	20.0	0.8	C302J393-00C000	0.039	10.0	20.0	0.8	C303A393-00C000	0.039	9.0	27.5	0.8	C303B393-00C000
0.047	8.0	20.0	0.8	C302J473-00C000	0.047	10.5	20.0	0.8	C303A473-00C000	0.047	9.5	27.5	0.8	C303B473-00C000
0.056	8.5	20.0	0.8	C302J563-00C000	0.056	9.0	27.5	0.8	C303A563-00C000	0.056	10.0	27.5	0.8	C303B563-00C000
0.068	9.0	20.0	0.8	C302J683-00C000	0.068	9.5	27.5	0.8	C303A683-00C000	0.068	11.0	27.5	0.8	C303B683-00C000
0.082	9.5	20.0	0.8	C302J823-00C000	0.082	10.5	27.5	0.8	C303A823-00C000	0.082	12.0	27.5	0.8	C303B823-00C000
0.10	8.5	27.5	0.8	C302J104-00C000	0.10	11.5	27.5	0.8	C303A104-00C000	0.10	13.0	27.5	0.8	C303B104-00C000
0.12	9.0	27.5	0.8	C302J124-00C000	0.12	12.0	27.5	0.8	C303A124-00C000	0.12	12.5	33.0	0.8	C303B124-00C000
0.15	10.0	27.5	0.8	C302J154-00C000	0.15	12.0	33.0	0.8	C303A154-00C000	0.15	13.5	33.0	0.8	C303B154-00C000
0.18	10.5	27.5	0.8	C302J184-00C000	0.18	13.0	33.0	0.8	C303A184-00C000	0.18	14.5	33.0	0.8	C303B184-00C000
0.22	12.0	27.5	0.8	C302J224-00C000	0.22	14.0	33.0	0.8	C303A224-00C000	0.22	16.0	33.0	1.0	C303B224-00C000
0.27	13.0	27.5	0.8	C302J274-00C000	0.27	15.0	33.0	0.8	C303A274-00C000	0.27	17.0	33.0	1.0	C303B274-00C000
0.33	12.5	33.0	0.8	C302J334-00C000	0.33	16.5	33.0	1.0	C303A334-00C000	0.33	17.0	41.5	1.0	C303B334-00C000
0.39	13.5	33.0	0.8	C302J394-00C000	0.39	18.0	33.0	1.0	C303A394-00C000	0.39	18.0	41.5	1.0	C303B394-00C000
0.47	14.5	33.0	0.8	C302J474-00C000	0.47	17.5	41.5	1.0	C303A474-00C000	0.47	19.5	41.5	1.0	C303B474-00C000
0.56	15.5	33.0	0.8	C302J564-00C000	0.56	19.0	41.5	1.0	C303A564-00C000	0.56	21.0	41.5	1.0	C303B564-00C000
0.68	17.0	33.0	1.0	C302J684-00C000	0.68	20.5	41.5	1.0	C303A684-00C000	0.68	20.0	56.5	1.0	C303B684-00C000
0.82	18.0	33.0	1.0	C302J824-00C000	0.82	22.0	41.5	1.0	C303A824-00C000	0.82	21.5	56.5	1.0	C303B824-00C000
1.0	17.5	41.5	1.0	C302J105-00C000	1.0	20.5	56.5	1.0	C303A105-00C000	1.0	23.0	56.5	1.0	C303B105-00C000
1.2	19.0	41.5	1.0	C302J125-00C000	1.2	22.0	56.5	1.0	C303A125-00C000	1.2	25.0	56.5	1.0	C303B125-00C000
1.5	21.0	41.5	1.0	C302J155-00C000	1.5	24.5	56.5	1.0	C303A155-00C000	1.5	27.5	56.5	1.0	C303B155-00C000
1.8	22.5	41.5	1.0	C302J185-00C000										
2.2	24.5	41.5	1.0	C302J225-00C000										
2.7	23.0	56.5	1.0	C302J275-00C000										
3.3	25.0	56.5	1.0	C302J335-00C000										

Note: 1. “-” =capacitance tolerance code, M=±20%,K=±10%,J=±5%

2. “@” Not suitable for across-the-line applications. Pls refer to the Interference Suppression Capacitors.

MAX. VOLTAGE($V_{r.m.s}$) VERSUS FREQUENCY



Note: sinusoidal wave-form, environment temperature $\leq 85^{\circ}C$, internal temperature rise $\Delta T=10^{\circ}C$.

■ Test Method And Performance

No.	Item		Performance	Test method(IEC 60384-16)
1	Solderability		Good quality of tinning	Solder temperature: 245°C ±5°C Immersion time: 2.0s±0.5s
2	Initial measurement		Capacitance Tgδ: 1kHz, C>1.0μF 10kHz, C≤1.0μF	
	Terminal strength		There shall be no visible damage	Tension: 10N(0.6≤φd≤0.8) 20N(φd=1.0) Bend: 5N(0.6≤φd≤0.8) 10N(φd=1.0) The terminals shall be bent 2 times in each direction.
	Resistance to solder heat		There shall be no visible damage	Solder temperature:260°C±5°C Immersion time: 10s±1s
	Final measurement		Δ C/C ≤ ± 3 % (relative to the initial value) Increase of tgδ: ≤0.004 (C≤1.0μF, 10kHz) ≤0.004 (C>1.0μF, 1kHz)	
3	Initial measurement		Capacitance Tgδ: 1kHz, C>1.0μF 10kHz, C≤1.0μF	
	Rapid change of temperature		There shall be no evidence of deterioration.	θ _A =-40°C, θ _B =+85°C 5 cycles Duration: t=30min
	Vibration		There shall be no evidence of deterioration.	Amplitude 0.75mm or acceleration 98m/s ² (whichever is the smaller severity), f: 10Hz to 500Hz.Three directions, 2h for each direction, total 6h.
	Bump		There shall be no evidence of deterioration.	4 000 times, Acceleration: 390m/s ² ,Pulse duration, 6ms
	Final measurement		Δ C/C ≤ ± 3 % (relative to the initial value) Increase of tgδ: ≤0.004 (10kHz,C≤1.0μF) ≤0.004 (1kHz, C>1.0μF) IR: ≥ 50% of the rated value	
4	climate sequence	Initial measurement	Capacitance Tgδ: 1kHz, C>1.0μF 10kHz, C≤1.0μF	
		Dry heat		+85°C, 16h
		Damp heat,Cyclic		Test Db, Severity: b, the first cycle
		Cold		-40°C, 2h
		Low air pressure	There shall be no permanent breakdown,flashover or other harmful deformation, when applying U _R at the last 1 minute.	15°C~35°C, 8.5kPa, 1h
		Damp heat, Cyclic other	Applying U _R for 1 minute after 15 minutes the test finished .	Test Db, Severity b, the other cycles,

No.	Item		Performance	Test method(IEC 60384-16)
4	climate sequence (continue)	Final measurement	There shall be no visible damage, legible marking $\Delta C/C \leq \pm 5\%$ (relative to the initial value) Increase of $\tan\delta$: ≤ 0.005 ($C \leq 1.0\mu F, 10kHz$) ≤ 0.005 ($C > 1.0\mu F, 1kHz$) I.R.: $\geq 50\%$ of the rated value	
5	Damp heat steady state		There shall be no visible damage, legible marking $\Delta C/C \leq \pm 5\%$ (relative to the initial value) Increase of $\tan\delta$: ≤ 0.002 (1kHz) I.R.: $\geq 50\%$ of the rated value IR: $\geq 50\%$ of the rated value	Temperature: $40^\circ C \pm 2^\circ C$ Humidity: $93 \pm 2\%$ RH Duration: 21days
6	Endurance		There shall be no visible damage, legible marking $\Delta C/C \leq \pm 5\%$ (relative to the initial value) Increase of $\tan\delta$: ≤ 0.004 ($C \leq 1.0\mu F, 10kHz$) ≤ 0.004 ($C > 1.0\mu F, 1kHz$) I.R.: $\geq 50\%$ of the rated value IR: $\geq 50\%$ of the rated value	Temperature: $+85^\circ C$ Voltage: $1.25 \times U_R$ Duration: 1 000h
7	Temperature characteristic		Measuring capacitance at test point b, d, f: Characteristic at lower category temperature $-40^\circ C$: $0 \leq (C_b - C_d)/C_d \leq +3\%$ Characteristic at upper category temperature $+110^\circ C$: $-3.25\% \leq (C_f - C_d)/C_d \leq 0$	Static method: The Capacitors should be kept at the following temperature in turn: a(20 ± 2) $^\circ C$, b(-40 ± 3) $^\circ C$, d(20 ± 2) $^\circ C$, f(85 ± 2) $^\circ C$, g(20 ± 2) $^\circ C$
8	Charging and discharging		$\Delta C/C \leq \pm 5\%$ (relative to the initial value) increase of $\tan\delta$: ≤ 0.005 (10kHz) I.R.: $\geq 50\%$ of the rated value IR: $\geq 50\%$ of the rated value	Times: 10 000 Duration of charging: 0.5s Duration of discharging: 0.5s Charging voltage: rated voltage Charging resistance: $220/C_N(\Omega)$ Discharging resistance: $R = 10/C_N(\Omega)$ or 20Ω (whichever is the greater) C_N : rated capacitance (μF)

■ Marking (For example)

 CBB20
 334K 250

Marking Introduction:

	Brand	CBB20	Type
250	Rated voltage	334	Rated capacitance
K	Tolerance	—	—

■ Soldering suggestions

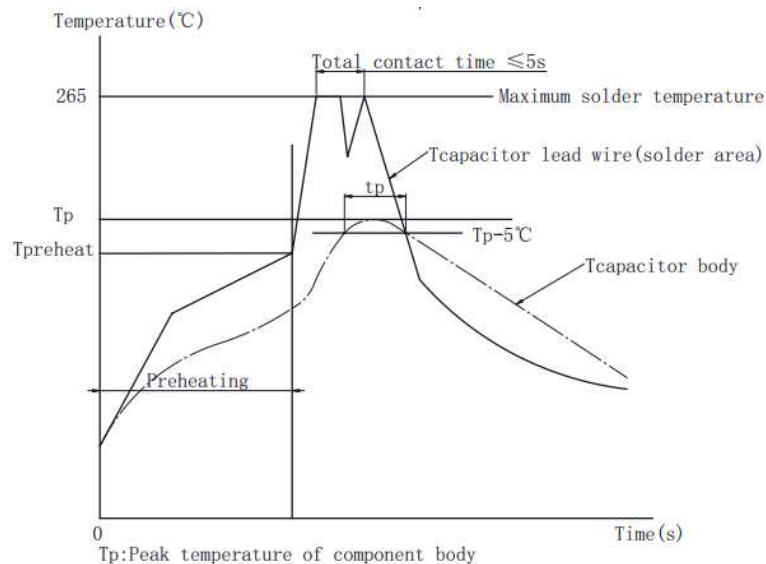
▲ Manual soldering

Max. temperature: 350°C, time: 3s

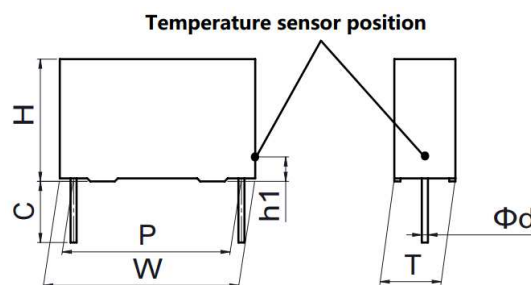
▲ Wave soldering

There are many factors affecting the heating of film capacitor during the wave soldering process, such as: preheating temperature, preheating time, soldering temperature, soldering time, other heat sources influence and so on.

The typical soldering profile is as below:



▲ Because overheating could damage the capacitor, we recommend paying attention to the maximum capacitor temperature and heating time, use temperature sensor to detect the maximum capacitor body temperature.

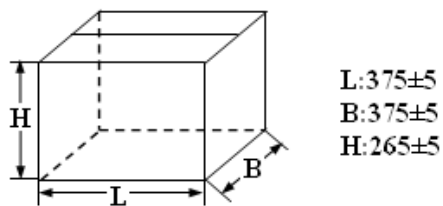


Note: If re-working or dipping twice is necessary, it should be done after the capacitor returns to the normal temperature.

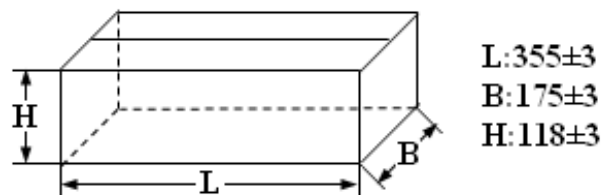
Temperature sensor position (Tcapacitor body)	The capacitor body surface of lead side, capacitor height position from PCB: h1=2~3mm		
Maximum capacitor body temperature Tp(°C)	OPP film P≤15mm	OPP film P>15mm	PET film
	115	120	125
Maximum capacitor lead wire temperature (°C)	265	265	265
Maximum capacitor body heating time tp=Tp-5°C	30s		

Packing box sizes(mm)(example)

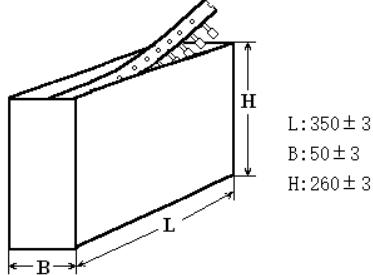
1. Out packing box for bulk



2. Inner packing box for bulk



3. Box sizes for Ammo-pack



Storage conditions

▲ It must be noted that the solderability of the terminals may be deteriorated when stored in an atmosphere filled with moisture, dust, or a reactive oxidizing gas.(hydrogen chloride, hydrogen sulfide, sulfuric acid,etc.)

▲ It shouldn' t be located in particularly high temperature and high humidity, it must submit to the following conditions(unchanging primal package):

Temperature: -40°C to 35°C

Humidity: Average per year $\leq 70\% \text{RH}$;

For 30 full days randomly distributed throughout the year $\leq 80\% \text{RH}$

Storage time for tinned lead wire: (from the date marked on the capacitor' s body or the label glued to the package) :

Bulk(packed with plastic bag): ≤ 24 months ;

Taping and line up: ≤ 12 months