HCBB62X2

Metallized Polypropylene Film Interference Suppression Capacitor
(Class X2, 310Va.c./275Va.c.)

Features

- Metallized polypropylene film
- Capable of withstanding over-voltage stress
- Excellent self-healing performance
- UL 94 V-0 compliant

Typical Applications

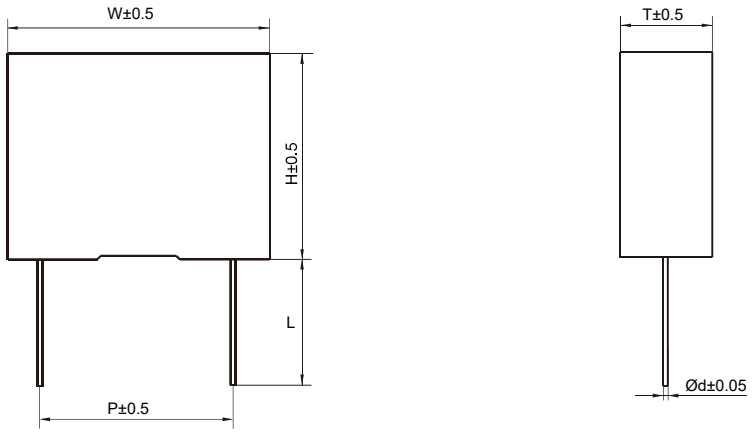
- For use in electromagnetic interference (EMI) suppression in across-the-line applications
- Not suitable for series connection with the mains

Safety Approvals

CQC	CQC	GB/T 6346.14	0.001 μF-25μF; 275Va.c./310Va.c.; 40/110/56B File No.: CQC21001289371
VDE EN 10	ENEC-VDE	EN 60384-14 IEC 60384- 14	0.001 μF-25μF; 275Va.c./310Va.c.; 40/110/56B File No.: 125834
c UL us	UL/cUL	UL 60384-14 CSA E60384 - 1:14 CSA E60384 - 14:14	0.001μF-25μF; 275Va.c./310Va.c.; 40/110/56B File No.: E311928

Notes: The above certificate No.is just a license No. Please refer to the certificates we supplied for detail information.

Outline Drawing



Notes: All product dimensions are in mm.
See the Outline Dimensions table for details.

Specifications

Reference standards		IEC 60384-14, GB/T 6346.14	
Rated voltage	U_R	310Va.c./275Va.c. (50Hz/60Hz)	
Permissible DC voltage	U_{DC}	650Vd.c. $T_{op}\leqslant 85^{\circ}C$ 1.33%/°C derating when $85^{\circ}C<T_{op}\leqslant 110^{\circ}C$	
Capacitance range	C_N	0.001μF~25μF	
Capacitance tolerance		±10%(K), ±20%(M)	
Dissipation factor	tanδ	0.001μF≤C_N<0.47μF	≤20×10^{-4}(10kHz)
		0.47μF≤C_N≤1.0μF	≤40×10^{-4}(10kHz)
		1.0μF<C_N≤10.0μF	≤30×10^{-4}(1kHz)
		10.0μF<C_N≤25.0μF	≤40×10^{-4}(1kHz)
Insulation resistance (20°C,100V,1min)	IR	$C_N\leqslant 0.33\mu F$	IR≥15000MΩ
		$C_N>0.33\mu F$	IR.C_N≥5000s
Climatic category/ Passive flammability category		40/110/56/B	
Operating temperature range	T_{OP}	-40°C~+110°C	
Voltage proof	$U_{t\text{-}t}$	Between terminals	4.3U_R(Vd.c.),2s
	$U_{t\text{-}c}$	Between terminals and case	2120Va.c., 1min

Pulse handling capability								
	Lead spacing	7.5mm	10mm	15mm	22.5mm	27.5mm	37.5mm	52.5mm
	dV/dt (V/μs)	600	500	350	200	150	300	50
	"dV/dt" represents the maximum permissible voltage change per unit of time for non-sinusoidal voltages, expressed in V/μs.							

Ordering Information

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
H	C	B	B	6	2	X	2	/	Q	3	1	0	4	K	6	0	0	0	C	0	0	0

Series code

Rated voltage

P2=275Va.c.
Q3=310Va.c.

Rated capacitance

For example:
104=10×10^4pF
=0.01μF

Capacitance tolerance

K=±10%
M=±20%

Pitch

3=7.5mm
4=10mm
6=15mm
9=22.5mm
B=27.5mm
F=37.5mm
M=52.5mm

Internal code

Lead form and packaging code

See table 1

Table 1: Lead Form and Packaging Code

Digit 20		Digit 21		Digit 22		Digit 23	
Code	Explanation	Code	Explanation	Code	Explanation	Code	Explanation
A	Ammo-pack[1)]	3	F=7.5mm	0	Straight	1	Taping lead space: P_3=12.7mm,H=18.0mm(Pitch=7.5mm)
		4	F=10mm				
		6	F=15mm			5	P_3=25.4mm,H=18.0mm (Pitch=10.0 or 15.0mm)
		7	F=22.5mm	1	Crimped		
		8	F=27.5mm			7	P_3=38mm,H=18.0mm (Pitch=22.5mm or 27.5mm)
C	Straight Lead (bulk)[2)]	00	Standard lead length(18mm ~ 28mm)			0	Standard lead length
		35	Lead length3.5mm[3)]				Lead length tolerance±0.5mm

Notes: 1) For more details on Ammo-pack, please refer to the Overview of the Universal Capacitors.
2) Other lead form and packaging options are available upon customer request.
3) If the lead length is 4.5 mm, the code is C450, etc.

Outline Dimensions

Unit: mm

310Va.c./275Va.c.													
C_N(μF)	W	H	T	P	d	Ordering Information	C_N(μF)	W	H	T	P	d	Ordering Information
0.0010	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3102+3000****	0.082	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3823+6000****
0.0012	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3122+3000****	0.10	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3104+6000****
0.0015	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3152+3000****	0.12	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3124+6000****
0.0018	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3182+3000****	0.15	18.0	12.0	6.0	15.0	0.8	HCBB62X2/Q3154+6000****
0.0022	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3222+3000****	0.18	18.0	12.0	6.0	15.0	0.8	HCBB62X2/Q3184+6000****
0.0027	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3272+3000****	0.22	18.0	13.5	7.5	15.0	0.8	HCBB62X2/Q3224+6000****
0.0033	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3332+3000****	0.27	18.0	13.5	7.5	15.0	0.8	HCBB62X2/Q3274+6000****
0.0039	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3392+3000****	0.33	18.0	14.5	8.5	15.0	0.8	HCBB62X2/Q3334+6000****
0.0047	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3472+3000****	0.39	18.0	14.5	8.5	15.0	0.8	HCBB62X2/Q3394+6000****
0.0056	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3562+3000****	0.47	18.0	16.0	10.0	15.0	0.8	HCBB62X2/Q3474+6000****
0.0068	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3682+3000****	0.56	18.0	19.2	11.2	15.0	0.8	HCBB62X2/Q3564+6000****
0.0082	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3822+3000****	0.68	18.0	19.2	11.2	15.0	0.8	HCBB62X2/Q3684+6000****
0.010	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3103+3000****	0.15	26.5	15.0	6.0	22.5	0.8	HCBB62X2/Q3154+9000****
0.012	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3123+3000****	0.22	26.5	15.0	6.0	22.5	0.8	HCBB62X2/Q3224+9000****
0.015	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3153+3000****	0.27	26.5	15.0	6.0	22.5	0.8	HCBB62X2/Q3274+9000****
0.018	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3183+3000****	0.33	26.5	15.0	6.0	22.5	0.8	HCBB62X2/Q3334+9000****
0.022	10.5	9.0	4.0	7.5	0.6	HCBB62X2/Q3223+3000****	0.39	26.5	15.0	6.0	22.5	0.8	HCBB62X2/Q3394+9000****
0.027	10.5	11.0	5.0	7.5	0.6	HCBB62X2/Q3273+3000****	0.47	26.5	16.5	7.0	22.5	0.8	HCBB62X2/Q3474+9000****

Notes: 1) "+" means capacitance tolerance, K=±10%, M=±20% ;
2)"****" means lead form and packaging code (See table 1) ;
3)When the rated AC voltage is 275Va.c., the 10th to 11th digits shall be P2.

Outline Dimensions

Unit: mm

310Va.c./275Va.c.													
C_N(μF)	W	H	T	P	d	Ordering Information	C_N(μF)	W	H	T	P	d	Ordering Information
0.033	10.5	11.0	5.0	7.5	0.6	HCBB62X2/Q3333+3000****	0.56	26.5	16.5	7.0	22.5	0.8	HCBB62X2/Q3564+9000****
0.039	10.5	11.0	5.0	7.5	0.6	HCBB62X2/Q3393+3000****	0.68	26.5	17.0	8.5	22.5	0.8	HCBB62X2/Q3684+9000****
0.047	10.5	12.0	6.0	7.5	0.6	HCBB62X2/Q3473+3000****	0.82	26.5	19.0	10.0	22.5	0.8	HCBB62X2/Q3824+9000****
0.0047	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3472+4000****	1.0	26.5	19.0	10.0	22.5	0.8	HCBB62X2/Q3105+9000****
0.0056	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3562+4000****	1.2	26.5	20.0	11.0	22.5	0.8	HCBB62X2/Q3125+9000****
0.0068	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3682+4000****	1.5	26.5	22.0	12.0	22.5	0.8	HCBB62X2/Q3155+9000****
0.0082	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3822+4000****	1.8	26.5	24.5	15.5	22.5	0.8	HCBB62X2/Q3185+9000****
0.010	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3103+4000****	2.2	26.5	24.5	15.5	22.5	0.8	HCBB62X2/Q3225+9000****
0.012	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3123+4000****	0.33	32.0	18.0	9.0	27.5	0.8	HCBB62X2/Q3334+B000****
0.015	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3153+4000****	0.39	32.0	18.0	9.0	27.5	0.8	HCBB62X2/Q3394+B000****
0.018	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3183+4000****	0.47	32.0	18.0	9.0	27.5	0.8	HCBB62X2/Q3474+B000****
0.022	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3223+4000****	0.56	32.0	18.0	9.0	27.5	0.8	HCBB62X2/Q3564+B000****
0.027	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3273+4000****	0.68	32.0	18.0	9.0	27.5	0.8	HCBB62X2/Q3684+B000****
0.033	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3333+4000****	0.82	32.0	18.0	9.0	27.5	0.8	HCBB62X2/Q3824+B000****
0.039	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3393+4000****	1.0	32.0	18.0	9.0	27.5	0.8	HCBB62X2/Q3105+B000****
0.047	13.0	11.0	5.0	10.0	0.6	HCBB62X2/Q3473+4000****	1.2	32.0	20.0	11.0	27.5	0.8	HCBB62X2/Q3125+B000****
0.056	13.0	11.0	5.0	10.0	0.6	HCBB62X2/Q3563+4000****	1.5	32.0	20.0	11.0	27.5	0.8	HCBB62X2/Q3155+B000****
0.068	13.0	11.0	5.0	10.0	0.6	HCBB62X2/Q3683+4000****	1.8	32.0	22.0	13.0	27.5	0.8	HCBB62X2/Q3185+B000****
0.082	13.0	12.0	6.0	10.0	0.6	HCBB62X2/Q3823+4000****	2.2	32.0	25.0	13.0	27.5	0.8	HCBB62X2/Q3225+B000****
0.10	13.0	12.0	6.0	10.0	0.6	HCBB62X2/Q3104+4000****	2.7	32.0	28.0	14.0	27.5	0.8	HCBB62X2/Q3275+B000****
0.12	13.0	13.0	7.0	10.0	0.6	HCBB62X2/Q3124+4000****	3.3	32.0	28.0	18.0	27.5	0.8	HCBB62X2/Q3335+B000****
0.15	13.0	13.0	7.0	10.0	0.6	HCBB62X2/Q3154+4000****	3.9	32.0	33.0	18.0	27.5	0.8	HCBB62X2/Q3395+B000****
0.01	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3103+6000****	4.7	32.0	37.0	22.0	27.5	0.8	HCBB62X2/Q3475+B000****
0.012	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3123+6000****	1.5	42.0	22.0	11.0	37.5	1.0	HCBB62X2/Q3155+F000****
0.015	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3153+6000****	1.8	42.0	22.0	11.0	37.5	1.0	HCBB62X2/Q3185+F000****
0.018	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3183+6000****	2.2	41.0	24.0	13.0	37.5	1.0	HCBB62X2/Q3225+F000****
0.022	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3223+6000****	2.7	41.0	24.0	13.0	37.5	1.0	HCBB62X2/Q3275+F000****
0.027	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3273+6000****	3.3	42.0	28.0	14.0	37.5	1.0	HCBB62X2/Q3335+F000****
0.033	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3333+6000****	3.9	42.0	30.0	16.0	37.5	1.0	HCBB62X2/Q3395+F000****
0.039	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3393+6000****	4.7	42.0	30.0	16.0	37.5	1.0	HCBB62X2/Q3475+F000****

Notes: 1) “+” means capacitance tolerance, K=±10%, M=±20% ;
2)“****” means lead form and packaging code (See table 1) ;
3)When the rated AC voltage is 275Va.c., the 10th to 11th digits shall be P2.

Outline Dimensions

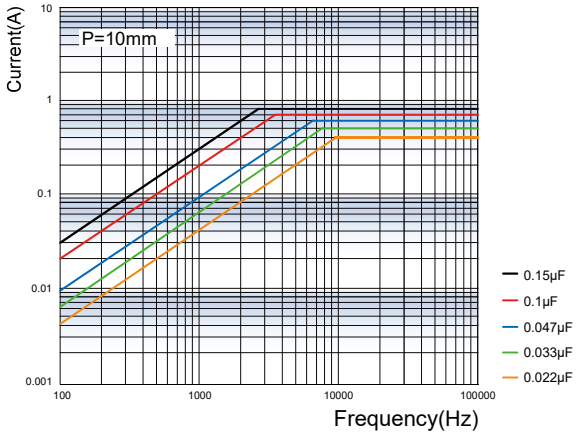
Unit: mm

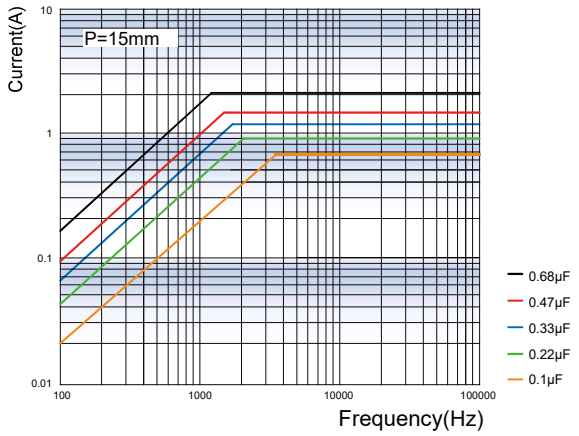
310Va.c./275Va.c.													
C_N(μF)	W	H	T	P	d	Ordering Information	C_N(μF)	W	H	T	P	d	Ordering Information
0.047	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3473+6000****	5.6	42.0	33.0	18.0	37.5	1.0	HCBB62X2/Q3565+F000****
0.056	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3563+6000****	6.8	42.0	40.0	20.0	37.5	1.0	HCBB62X2/Q3685+F000****
0.068	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3683+6000****	8.2	42.0	37.0	22.0	37.5	1.0	HCBB62X2/Q3825+F000****
10.0	42.0	41.0	26.0	37.5	1.0	HCBB62X2/Q3106+F000****	20.0	57.5	45.0	30.0	52.5	1.2	HCBB62X2/Q3206+M000****
12.0	42.0	43.0	28.0	37.5	1.0	HCBB62X2/Q3126+F000****	25.0	57.5	50.0	35.0	52.5	1.2	HCBB62X2/Q3256+M000****
15.0	42.0	45.0	30.0	37.5	1.0	HCBB62X2/Q3156+F000****							

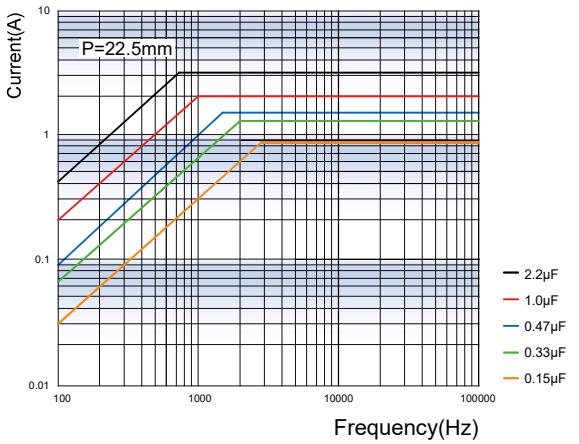
Notes: 1) "+" means capacitance tolerance, K=±10%, M=±20% ;
2)"****" means lead form and packaging code (See table 1) ;
3)When the rated AC voltage is 275Va.c., the 10th to 11th digits shall be P2.

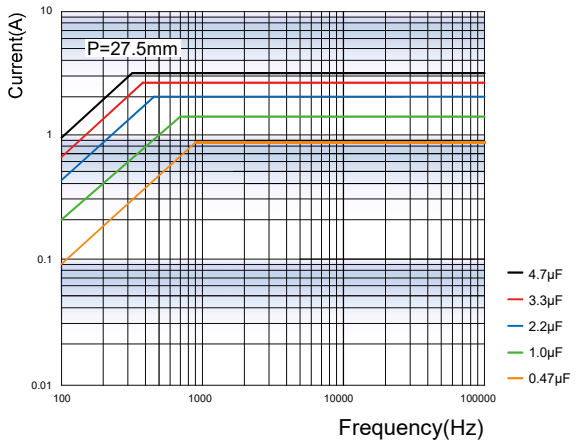
Characteristic Curve (Typical)

Permissible AC current I_{RMS} versus frequency f (for sonusoidal waveforms Top≤85℃)



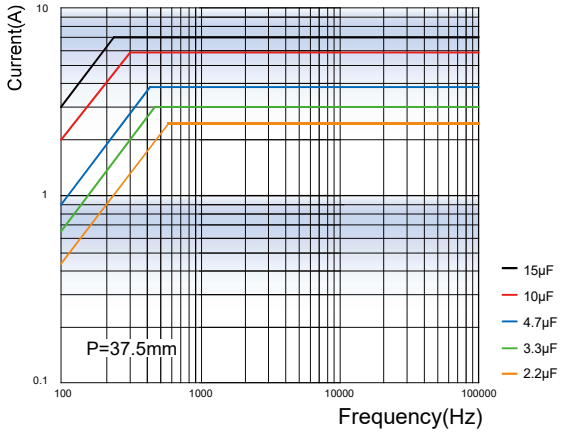


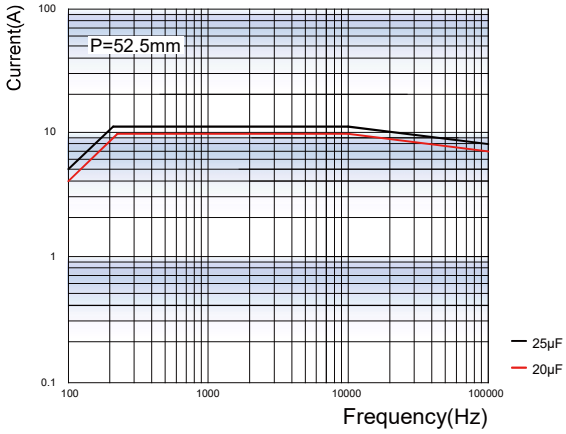




Characteristic Curve (Typical)

Permissible AC current I_{RMS} versus frequency f (for sonusoidal waveforms Top≤85℃)





Impedance Z versus frequency f