

HCBB62X2




Metallized polypropylene film interference suppression capacitor
(Class X2,275Va.c./305Va.c./310Va.c./350Va.c.)



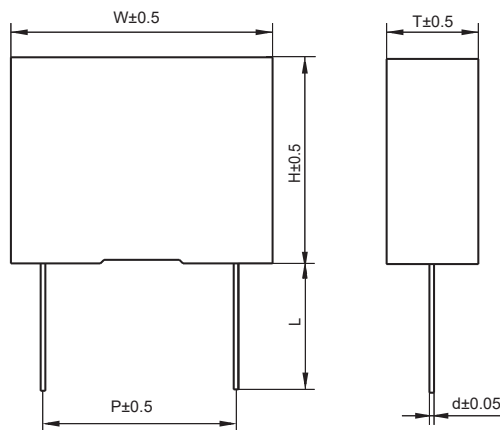
Features

- Used in across-the line, interference suppression circuit
- Metallized polypropylene structure, encapsulated in flame-resistant plastic case, sealed with epoxy resin
- Withstand overvoltage impact, excellent self-healing property
- Excellent flame resistant and moisture resistance abilities
- High voltage resistance and insulation resistance

Safety Approvals

	CQC	GB/T 6346.14	0.001μF-25μF;X2; ±10%(K),±20%(M); 275/305/310/330/350Va.c.; 40/110/56B; 40/100/56B; 40/100/21B; 40/85/21B;40/85/56B File No.: CQC21001289371
	ENEC-VDE	EN 60384-14 IEC 60384- 14	0.001μF-25μF,X2,±10%(K),±20%(M), 275/305/310/330/350Va.c.; 40/110/56B; 40/100/56B; 40/100/21B; 40/85/21B;40/85/56B File No.: 125834
	UL/CUL	UL 60384-14 CSA E60384 - 1:14 CSA E60384 - 14:14	0.001μF-25μF,X2,±10%(K),±20%(M), 250/275/305/310/330/350Va.c.; 40/110/56B; 40/100/56B; 40/100/21B; 40/85/21B;40/85/56B File No.: E311928,CCN:FOWX2/8

Outline Drawing



Specifications

Reference standard	GB/T 6346.14 (IEC 60384-14)		
Climatic category	40/110/56/B		
Operating temperature range	-40°C ~+110°C		
Rated voltage	275Va.c./305Va.c./310Va.c./350Va.c.		
Capacitance range	0.001μF~25.0μF		
Capacitance tolerance	±10%(K),±20%(M) (20°C,1kHz)		
Voltage proof	Between terminals	4.3U _R (5s)	
	Between terminals & case	2120Va.c. (1min)	
Insulation resistance	$\geq 15\ 000\text{M}\Omega, C_N \leq 0.33\mu\text{F}$ $\geq 5\ 000\text{s}, C_N > 0.33\mu\text{F}$		(20°C,100Vd.c.,1min)
Dissipation factor	0.001μF ≤ C _N ≤ 0.01μF	≤0.0020(1kHz,20°C)	≤0.0020(10kHz,20°C)
	0.01μF < C _N ≤ 0.47μF	≤0.0010(1kHz,20°C)	≤0.0020(10kHz,20°C)
	0.47μF < C _N ≤ 1.0μF	≤0.0020(1kHz,20°C)	≤0.0040(10kHz,20°C)
	1.0μF < C _N ≤ 10.0μF	≤0.0030(1kHz,20°C)	
	10.0μF < C _N ≤ 25.0μF	≤0.0040(1kHz,20°C)	

Ordering Information

1	2	3	4	5	6	7	8	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
H	C	B	B	6	2	X	2													(x	x	x)
Series code								AC rated voltage		Rated capacitance value			Capacitance tolerance		Pitch		Internal code		lead form and packaging code			Internal code		
								E2=250V P2=275V Q2=305V Q3=310V R2=350V		For example: 224=22×10 ⁴ pF =0.22μF			K=±10% M=±20%		3=7.5mm 4=10mm 6=15mm 9=22.5mm B=27.5mm F=37.5mm M=52.5mm		0 (normal type) M(string structure)		See table 1			To identify when the special requirements needed		

Table 1 Terminal code

Digit 18		Digit 19		Digit 20		Digit 21	
Code	explanation	Code	explanation	Code	explanation	Code	explanation
A	Ammo-pack	3	F=7.5	0	Straight lead	1	Between two consecutive mounting holes (P=12.7mm,H0=18mm(pitch=7.5))
		4	F=10.0			5	P=25.4mm,H0=18mm (pitch=10.0/15.0)
		6	F=15.0				
C	straight lead "C" in the figure above (bulk package)	00	standard lead length (18±1mm)		0	length tolerance ±0.5mm standard lead length	
		35	lead length=3.5mm ⁽¹⁾				

Notes: (1) If the length of lead is 4.5mm, then the code number is C450,etc.

Outline Dimensions

275Va.c. #/310Va.c.													
C _N (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information	C _N (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information
0.0010	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3102-30****	0.018	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3183-30****
0.0012	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3122-30****	0.022	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3223-30****
0.0015	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3152-30****	0.027	10.0	11.0	5.0	7.5	0.6	HCBB62X2/Q3273-30****
0.0018	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3182-30****	0.033	10.0	11.0	5.0	7.5	0.6	HCBB62X2/Q3273-30****
0.0022	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3222-30****	0.039	10.0	11.0	5.0	7.5	0.6	HCBB62X2/Q3393-30****
0.0027	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3272-30****	0.047	10.0	12.0	6.0	7.5	0.6	HCBB62X2/Q3473-30****
0.0033	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3332-30****	0.047	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3472-40****
0.0039	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3392-30****	0.0056	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3562-40****
0.0047	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3472-30****	0.0068	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3682-40****
0.0056	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3562-30****	0.0082	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3822-40****
0.0068	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3682-30****	0.01	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3103-40****
0.0082	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3822-30****	0.012	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3123-40****
0.01	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3103-30****	0.015	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3153-40****
0.012	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3123-30****	0.018	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3183-40****
0.015	10.0	9.0	4.0	7.5	0.6	HCBB62X2/Q3153-30****	0.022	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3223-40****

Notes: (1) "*" means capacitance tolerance code, K=±10%, M=±20%; "****"=terminal code and packing code(see table 1)
 (2) When the rated voltage is 275Va.c.,the digit 11 ~ 12 is P2.

Outline Dimensions

275V.a.c. #/310V.a.c.													
C _N (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information	C _N (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information
0.027	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3273-40****	0.47	18.0	16.0	10.0	15.0	0.8	HCBB62X2/Q3474-60****
0.033	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3333-40****	0.56	18.0	19.0	11.0	15.0	0.8	HCBB62X2/Q3564-60****
0.039	13.0	9.0	4.0	10.0	0.6	HCBB62X2/Q3393-40****	0.68	18.0	19.0	11.0	15.0	0.8	HCBB62X2/Q3684-60****
0.047	13.0	11.0	5.0	10.0	0.6	HCBB62X2/Q3473-40****	0.15	26.5	15.0	6.0	22.5	0.8	HCBB62X2/Q3154-90****
0.056	13.0	11.0	5.0	10.0	0.6	HCBB62X2/Q3563-40****	0.22	26.5	15.0	6.0	22.5	0.8	HCBB62X2/Q3224-90****
0.068	13.0	11.0	5.0	10.0	0.6	HCBB62X2/Q3683-40****	0.27	26.5	15.0	6.0	22.5	0.8	HCBB62X2/Q3274-90****
0.082	13.0	12.0	6.0	10.0	0.6	HCBB62X2/Q3823-40****	0.33	26.5	15.0	6.0	22.5	0.8	HCBB62X2/Q3334-90****
0.10	13.0	12.0	6.0	10.0	0.6	HCBB62X2/Q3104-40****	0.39	26.5	15.0	6.0	22.5	0.8	HCBB62X2/Q3394-90****
0.12	13.0	13.0	7.0	10.0	0.6	HCBB62X2/Q3124-40****	0.47	26.5	16.0	7.0	22.5	0.8	HCBB62X2/Q3394-90****
0.15	13.0	13.0	7.0	10.0	0.6	HCBB62X2/Q3154-40****	0.56	26.5	16.0	7.0	22.5	0.8	HCBB62X2/Q3564-90****
0.010	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3103-60****	0.68	26.5	17.0	8.5	22.5	0.8	HCBB62X2/Q3684-90****
0.012	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3123-60****	0.82	26.5	19.0	10.0	22.5	0.8	HCBB62X2/Q3824-90****
0.015	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3153-60****	1.0	26.5	19.0	10.0	22.5	0.8	HCBB62X2/Q3105-90****
0.018	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3183-60****	1.2	26.5	20.0	11.0	22.5	0.8	HCBB62X2/Q3125-90****
0.022	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3223-60****	1.5	26.5	22.0	12.0	22.5	0.8	HCBB62X2/Q3155-90****
0.027	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3273-60****	1.8	26.5	24.5	15.5	22.5	0.8	HCBB62X2/Q3185-90****
0.033	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3333-60****	2.2	26.5	24.5	15.5	22.5	0.8	HCBB62X2/Q3225-90****
0.039	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3393-60****	0.33	32.0	18.0	9.0	27.5	0.8	HCBB62X2/Q3334-B0****
0.047	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3473-60****	0.39	32.0	18.0	9.0	27.5	0.8	HCBB62X2/Q3394-B0****
0.056	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3563-60****	0.47	32.0	18.0	9.0	27.5	0.8	HCBB62X2/Q3474-B0****
0.068	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3683-60****	0.56	32.0	18.0	9.0	27.5	0.8	HCBB62X2/Q3564-B0****
0.082	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3823-60****	0.68	32.0	18.0	9.0	27.5	0.8	HCBB62X2/Q3684-B0****
0.10	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3104-60****	0.82	32.0	18.0	9.0	27.5	0.8	HCBB62X2/Q3824-B0****
0.12	18.0	11.0	5.0	15.0	0.6	HCBB62X2/Q3124-60****	1.0	32.0	18.0	9.0	27.5	0.8	HCBB62X2/Q3105-B0****
0.15	18.0	12.0	6.0	15.0	0.8	HCBB62X2/Q3154-60****	1.2	32.0	20.0	11.0	27.5	0.8	HCBB62X2/Q3125-B0****
0.18	18.0	12.0	6.0	15.0	0.8	HCBB62X2/Q3184-60****	1.5	32.0	20.0	11.0	27.5	0.8	HCBB62X2/Q3155-B0****
0.22	18.0	13.5	7.5	15.0	0.8	HCBB62X2/Q3224-60****	1.8	32.0	22.0	13.0	27.5	0.8	HCBB62X2/Q3185-B0****
0.27	18.0	13.5	7.5	15.0	0.8	HCBB62X2/Q3274-60****	2.2	32.0	25.0	13.0	27.5	0.8	HCBB62X2/Q3225-B0****
0.33	18.0	14.5	8.5	15.0	0.8	HCBB62X2/Q3334-60****	2.7	32.0	24.5	15.0	27.5	0.8	HCBB62X2/Q3275-B0****
0.39	18.0	14.5	8.5	15.0	0.8	HCBB62X2/Q3394-60****	3.3	32.0	28.0	17.0	27.5	0.8	HCBB62X2/Q3335-B0****

Notes: (1) "*" means capacitance tolerance code, K=±10%, M=±20%; "****"=terminal code and packing code(see table 1)
 (2) When the rated voltage is 275V.a.c.,the digit 11 ~ 12 is P2.

Outline Dimensions

275Va.c. #/310Va.c.													
C _N (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information	C _N (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information
3.9	32.0	33.0	18.0	27.5	0.8	HCBB62X2/Q3395-B0****	5.6	42.0	33.5	18.5	37.5	1.0	HCBB62X2/Q3565-F0****
4.7	32.0	37.0	22.0	27.5	0.8	HCBB62X2/Q3475-B0****	6.8	42.0	33.5	18.5	37.5	1.0	HCBB62X2/Q3685-F0****
1.5	42.0	22.0	11.0	37.5	1.0	HCBB62X2/Q3155-F0****	8.2	42.0	37.0	22.0	37.5	1.0	HCBB62X2/Q3825-F0****
1.8	42.0	22.0	11.0	37.5	1.0	HCBB62X2/Q3185-F0****	10.0	42.0	41.0	26.0	37.5	1.0	HCBB62X2/Q3106-F0****
2.2	42.0	24.0	13.0	37.5	1.0	HCBB62X2/Q3225-F0****	12.0	42.0	43.0	28.0	37.5	1.0	HCBB62X2/Q3126-F0****
2.7	42.0	24.0	13.0	37.5	1.0	HCBB62X2/Q3275-F0****	15.0	42.0	45.0	30.0	37.5	1.0	HCBB62X2/Q3156-F0****
3.3	42.0	28.0	14.0	37.5	1.0	HCBB62X2/Q3335-F0****	20.0	57.5	45.0	30.0	52.5	1.2	HCBB62X2/Q3206-M0****
3.9	42.0	30.0	16.0	37.5	1.0	HCBB62X2/Q3395-F0****	25.0	57.5	50.0	35.0	52.5	1.2	HCBB62X2/Q3256-M0****
4.7	42.0	30.0	16.0	37.5	1.0	HCBB62X2/Q3475-F0****							
350Va.c.													
C _N (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information	C _N (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information
0.010	13.0	9.0	4.0	10.0	0.6	HCBB62X2/R2103-4M****	0.047	18.0	11.0	5.0	15.0	0.6	HCBB62X2/R2473-6M****
0.012	13.0	9.0	4.0	10.0	0.6	HCBB62X2/R2123-4M****	0.056	18.0	11.0	5.0	15.0	0.6	HCBB62X2/R2563-6M****
0.015	13.0	9.0	4.0	10.0	0.6	HCBB62X2/R2153-4M****	0.068	18.0	12.0	6.0	15.0	0.6	HCBB62X2/R2683-6M****
0.018	13.0	9.0	4.0	10.0	0.6	HCBB62X2/R2183-4M****	0.082	18.0	12.0	6.0	15.0	0.6	HCBB62X2/R2823-6M****
0.022	13.0	9.0	4.0	10.0	0.6	HCBB62X2/R2223-4M****	0.10	18.0	12.0	6.0	15.0	0.6	HCBB62X2/R2104-6M****
0.027	13.0	11.0	5.0	10.0	0.6	HCBB62X2/R2273-4M****	0.12	18.0	13.5	7.5	15.0	0.6	HCBB62X2/R2124-6M****
0.033	13.0	11.0	5.0	10.0	0.6	HCBB62X2/R2333-4M****	0.15	18.0	13.5	7.5	15.0	0.6	HCBB62X2/R2154-6M****
0.039	13.0	11.0	5.0	10.0	0.6	HCBB62X2/R2393-4M****	0.18	18.0	14.5	8.5	15.0	0.8	HCBB62X2/R2184-6M****
0.047	13.0	12.0	6.0	10.0	0.6	HCBB62X2/R2473-4M****	0.22	18.0	14.5	8.5	15.0	0.8	HCBB62X2/R2224-6M****
0.056	13.0	12.0	6.0	10.0	0.6	HCBB62X2/R2563-4M****	0.27	18.0	16.0	10.0	15.0	0.8	HCBB62X2/R2274-6M****
0.010	18.0	11.0	5.0	15.0	0.6	HCBB62X2/R2103-6M****	0.33	18.0	19.0	11.0	15.0	0.8	HCBB62X2/R2334-6M****
0.012	18.0	11.0	5.0	15.0	0.6	HCBB62X2/R2123-6M****	0.10	26.5	15.0	6.0	22.5	0.8	HCBB62X2/R2104-9M****
0.015	18.0	11.0	5.0	15.0	0.6	HCBB62X2/R2153-6M****	0.12	26.5	15.0	6.0	22.5	0.8	HCBB62X2/R2124-9M****
0.018	18.0	11.0	5.0	15.0	0.6	HCBB62X2/R2183-6M****	0.15	26.5	15.0	6.0	22.5	0.8	HCBB62X2/R2154-9M****
0.022	18.0	11.0	5.0	15.0	0.6	HCBB62X2/R2223-6M****	0.18	26.5	15.0	6.0	22.5	0.8	HCBB62X2/R2184-9M****
0.027	18.0	11.0	5.0	15.0	0.6	HCBB62X2/R2273-6M****	0.22	26.5	15.0	6.0	22.5	0.8	HCBB62X2/R2224-9M****
0.033	18.0	11.0	5.0	15.0	0.6	HCBB62X2/R2333-6M****	0.27	26.5	15.0	6.0	22.5	0.8	HCBB62X2/R2274-9M****
0.039	18.0	11.0	5.0	15.0	0.6	HCBB62X2/R2393-6M****	0.33	26.5	16.0	7.0	22.5	0.8	HCBB62X2/R2334-9M****

Notes: (1) “*” means capacitance tolerance code, K=±10%, M=±20%; “****”=terminal code and packing code(see table 1)
 (2) When the rated voltage is 275Va.c.,the digit 11 ~ 12 is P2.

Outline Dimensions

350Va.c.													
C _N (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information	C _N (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information
0.39	26.5	17.0	8.5	22.5	0.8	HCBB62X2/R2394-9M****	4.7	32.0	37.0	22.0	27.5	0.8	HCBB62X2/R2475-BM****
0.47	26.5	17.0	8.5	22.5	0.8	HCBB62X2/R2474-9M****	0.33	42.0	22.0	11.0	37.5	1.0	HCBB62X2/R2334-FM****
0.56	26.5	19.0	10.0	22.5	0.8	HCBB62X2/R2564-9M****	0.39	42.0	22.0	11.0	37.5	1.0	HCBB62X2/R2394-FM****
0.68	26.5	19.0	10.0	22.5	0.8	HCBB62X2/R2684-9M****	0.47	42.0	22.0	11.0	37.5	1.0	HCBB62X2/R2474-FM****
0.82	26.5	20.0	11.0	22.5	0.8	HCBB62X2/R2824-9M****	0.56	42.0	22.0	11.0	37.5	1.0	HCBB62X2/R2564-FM****
1.0	26.5	22.0	12.0	22.5	0.8	HCBB62X2/R2105-9M****	0.68	42.0	22.0	11.0	37.5	1.0	HCBB62X2/R2684-FM****
1.2	26.5	23.0	13.5	22.5	0.8	HCBB62X2/R2125-9M****	0.82	42.0	22.0	11.0	37.5	1.0	HCBB62X2/R2824-FM****
1.5	26.5	24.5	15.5	22.5	0.8	HCBB62X2/R2155-9M****	1.0	42.0	22.0	11.0	37.5	1.0	HCBB62X2/R2105-FM****
0.22	32.0	18.0	9.0	27.5	0.8	HCBB62X2/R2224-BM****	1.2	42.0	22.0	11.0	37.5	1.0	HCBB62X2/R2125-FM****
0.27	32.0	18.0	9.0	27.5	0.8	HCBB62X2/R2274-BM****	1.5	42.0	24.0	13.0	37.5	1.0	HCBB62X2/R2155-FM****
0.33	32.0	18.0	9.0	27.5	0.8	HCBB62X2/R2334-BM****	1.8	42.0	24.0	13.0	37.5	1.0	HCBB62X2/R2185-FM****
0.39	32.0	18.0	9.0	27.5	0.8	HCBB62X2/R2394-BM****	2.2	42.0	26.0	15.0	37.5	1.0	HCBB62X2/R2225-FM****
0.47	32.0	18.0	9.0	27.5	0.8	HCBB62X2/R2474-BM****	2.7	42.0	28.0	14.0	37.5	1.0	HCBB62X2/R2275-FM****
0.56	32.0	18.0	9.0	27.5	0.8	HCBB62X2/R2564-BM****	3.3	42.0	30.0	16.0	37.5	1.0	HCBB62X2/R2335-FM****
0.68	32.0	18.0	9.0	27.5	0.8	HCBB62X2/R2684-BM****	3.9	42.0	32.0	17.0	37.5	1.0	HCBB62X2/R2395-FM****
0.82	32.0	20.0	11.0	27.5	0.8	HCBB62X2/R2824-BM****	4.7	42.0	34.0	20.0	37.5	1.0	HCBB62X2/R2475-FM****
1.0	32.0	20.0	11.0	27.5	0.8	HCBB62X2/R2105-BM****	5.6	42.0	37.0	22.0	37.5	1.0	HCBB62X2/R2565-FM****
1.2	32.0	22.0	13.0	27.5	0.8	HCBB62X2/R2125-BM****	6.8M	42.0	37.0	22.0	37.5	1.0	HCBB62X2/R2685MFM****
1.5	32.0	25.0	13.0	27.5	0.8	HCBB62X2/R2155-BM****	6.8K	42.0	37.0	26.0	37.5	1.0	HCBB62X2/R2685KFM****
1.8	32.0	24.5	15.0	27.5	0.8	HCBB62X2/R2185-BM****	8.2	42.0	41.0	26.0	37.5	1.0	HCBB62X2/R2825-FM****
2.2	32.0	30.0	16.0	27.5	0.8	HCBB62X2/R2225-BM****	10.0	42.0	45.0	30.0	37.5	1.0	HCBB62X2/R2106-FM****
2.7	32.0	33.0	18.0	27.5	0.8	HCBB62X2/R2275-BM****	15.0	57.5	45.0	30.0	52.5	1.2	HCBB62X2/R2156-MM****
3.3	32.0	33.0	18.0	27.5	0.8	HCBB62X2/R2335-BM****	18.0	57.5	45.0	35.0	52.5	1.2	HCBB62X2/R2186-MM****
3.9	32.0	37.0	22.0	27.5	0.8	HCBB62X2/R2395-BM****	20.0	57.5	50.0	35.0	52.5	1.2	HCBB62X2/R2206-MM****

Notes: (1) “*” means capacitance tolerance code, K=±10%, M=±20%; “****”=terminal code and packing code(see table 1)