

MULTILAYER CHIP BEADS EMI SUPPRESSORS

FEATURES

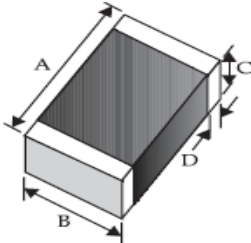
- Multilayer technology, offering Monolithic structure, excellent for high reliability
- 100% Magnetic Shielding, absolutely ZERO CROSS TALK
- Excellent solderability and very high heat resistance
- Several different sizes from 0402 to 1210
- Wide impedance levels from 7 ohms to 2700 ohms
- Variety of noise suppression levels from different frquencies
- RoHS compliant and 100% Lead and Halogen free
- Very low price

ELECTRICAL CHARACTERISTICS

Impedance tolerance	±25%
Test frequency	Standard items @ 100 MHz Special items @ either 30 MHz or 50 MHz
Test equipment	for Z HP-4921A with test fixture HP-16192A for DCR Digital Milliohm Meter for current HP-6632DC Power Supply with HP-16200A and HP-4291A
Rated current	Obtained when component exhibits temperature rise of 28°C max.

PHYSICAL CHARACTERISTICS

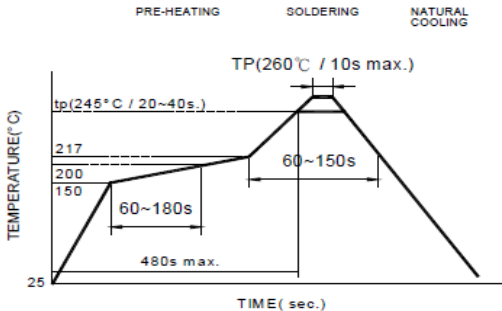
Operating temperature	-55°C to + 125°C
Soldering heat resistance	260°C ± 5°C for 10 ±1 sec.
Terminal construction	Electroplating with 3 layers: Silver, Nickel and Tin
Solderability	Lead free solder reflow profile, referred to J-STD-020C Reflow times: 3 times max.
Tape and reel specifications	8 mm or 12 mm embossed carrier tape with 178 mm reel for standard packaging, and with 330 mm reel for 10.000 pieces packaging
Quantity per reel	Special reel size 330 mm 10,000 Standard 0402 size 10,000 0603 size 4,000 0805 size 4,000 1206 size 3,000 1210 size 2,500



DIMENSIONS IN MILLIMETERS

Size	A	B	C	D
0402	1.00 ± 0.1	0.50 ± 0.1	0.50 ± 0.1	0.25 ± 0.1
0603	1.60 ± 0.15	0.80 ± 0.15	0.80 ± 0.15	0.30 ± 0.2
0805	2.00 ± 0.2	1.25 ± 0.2	0.85 ± 0.2	0.50 ± 0.3
1206	3.20 ± 0.2	1.60 ± 0.2	1.10 ± 0.2	0.50 ± 0.3
1210	3.20 ± 0.2	2.50 ± 0.2	1.30 ± 0.2	0.50 ± 0.3

REFLOW PROFILE



PART NUMBERING SYSTEM

CB G 0402- 470- 15
 (1) (2) (3) (4) (5)

(1) Indicates Chip Bead
 (2) Application levels

(3) Sizes
 (4) Impedance value examples

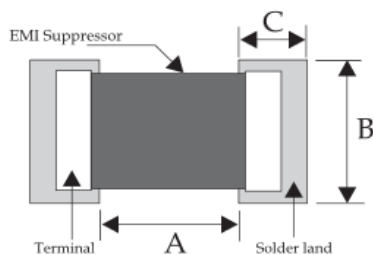
(5) Rated current examples

G for General applications
 H for High speed signal
 C for high Current
 Z for high Impedance
 P for Power supply line
 From 0402 to 1210
 07 = 7 ohms
 70 = 70 ohms
 700 = 700 ohms
 702 = 7000 ohms
 05 = 50 mA
 50 = 500 mA
 502 = 5000 mA

DETAILS OF EACH APPLICATION LEVELS

1. The General application level G type Chip bead generates impedance from relatively low frequencies. It is effective in noise suppression for a wide frequency range from 30 MHz to several hundred MHz.
2. The High speed signal H type Chip bead can minimize attenuation of the signal waveform due to its sharp impedance characteristics. Various impedance values are available to match a signal frequency.
3. The high Current C type Chip bead is very good for use in high current circuits up to 5000 milliamps DC due to its very low DC resistance.
4. The high Impedance value Z type Chip bead features high impedance values up to 2700 ohms.
5. The Power supply line P type Chip bead was developed for noise suppression in DC power lines for USB interface circuitry and hard disk drives. P type features low DC resistance with coupled high current capability.

LAND PATTERN RECOMMENDED



Size	A (mm)	B (mm)	C (mm)
0402	0.50	0.65	0.25
0603	0.80	1.00	0.30
0805	1.00	1.50	0.50
1206	2.20	1.80	0.50
1210	2.20	2.60	0.50

ELECTRICAL SPECIFICATIONS

Application Type	Part Number	Prior Part Number	Z (Ω) @ 100 MHz ± 25%	DCR Max (Ω)	Rated Current Max (mA)	Remarks	
GENERAL	CBG0402-30-30		30	0.20	300		
	CBG0402-60-30		60	0.25	300		
	CBG0402-120-10		120	0.30	100		
	CBG0402-150-10		150	0.30	100		
	CBG0402-220-10		220	0.40	100		
	CBG0402-300-10		300	0.50	100		
	CBG0402-470-10		470	0.65	100		
	CBG0402-600-08		600	0.80	80		
	CBG0603-30-70	ACB-0603		30	0.20	700	
	CBG0603-60-70			60	0.20	700	
	CBG0603-68-20	BCB-0603		68	0.20	200	
	CBG0603-80-20	DCB-0603		80	0.30	200	
	CBG0603-120-60	ICB-0603 & 0603A		120	0.25	600	
	CBG0603-150-60			150	0.25	600	
	CBG0603-220-55	KCB-0603 & 0603A		220	0.30	550	
	CBG0603-300-50	JCB-0603		300	0.35	500	
	CBG0603-400-20	HCB-0603		400	1.00	200	
	CBG0603-470-35			470	0.45	350	
	CBG0603-600-35	LCB-0603 & 0603A		600	0.50	350	
	CBG0805-07-60	ACB-0805A		7	0.10	600	
	CBG0805-09-60	ACB-0805		9	0.10	600	
	CBG0805-11-90			11	0.10	900	
	CBG0805-12-60	BCB-0805		12	0.10	600	
	CBG0805-17-60			17	0.10	600	
	CBG0805-26-60			26	0.10	600	
	CBG0805-30-60			30	0.10	600	
	CBG0805-40-60	DCB-0805		40	0.10	600	
	CBG0805-60-90	ICB-0805		60	0.10	900	
	CBG0805-90-20	ECB-0805		90	0.50	200	
	CBG0805-120-80	KCB-0805		120	0.20	800	
	CBG0805-150-80			150	0.20	800	
	CBG0805-180-30	NCB-0805		180	0.50	300	
	CBG0805-220-75			220	0.30	750	
	CBG0805-300-70	JCB-0805		300	0.30	700	
	CBG0805-400-20	MCB-0805		400	0.65	200	
	CBG0805-470-70			470	0.35	700	
	CBG0805-600-50	LCB-0805-S & 0805-03		600	0.40	500	
	CBG1206-26-50	ACB-1206		26	0.20	500	
	CBG1206-31-50	BCB-1206 & 1206-S		31	0.20	500	
	CBG1206-42-50			42	0.20	500	
	CBG1206-50-50	ECB-1206		50	0.20	500	
	CBG1206-70-50	DCB-1206		70	0.20	500	
CBG1206-90-50	ICB-1206		90	0.20	500		
CBG1206-120-90			120	0.15	900		
CBG1206-150-90	JCB-1206		150	0.15	900		
CBG1206-220-70			220	0.35	700		
CBG1206-300-70	HCB-1206		300	0.35	700		
CBG1206-470-40			470	0.35	400		
CBG1206-600-40	KCB-1206		600	0.40	400		
CBG1210-65-40	BCB-1210		65	0.20	400		

ELECTRICAL SPECIFICATIONS

Application Type	Part Number	Prior Part Number	Z (Ω) @100 MHz $\pm 25\%$	DCR max (Ω)	Rated Current Max (mA)	Remarks	
High Speed	CBH0402-60-10		60	0.30	100		
	CBH0402-120-08		120	0.45	80		
	CBH0402-220-05		220	0.60	50		
	CBH0402-300-05		300	0.75	50		
	CBH0603-10-70		10	0.20	700		
	CBH0603-30-60		30	0.25	600		
	CBH0603-60-60		60	0.30	600		
	CBH0603-120-30		120	0.40	300		
	CBH0603-150-30		150	0.40	300		
	CBH0603-220-25		220	0.60	250		
	CBH0603-300-20		300	0.80	200		
	CBH0603-470-20		470	0.85	200		
	CBH0603-600-15		600	1.20	150		
	CBH0603-102-08		1000	1.50	80		
	CBH0805-30-70		30	0.20	700		
	CBH0805-60-70		60	0.20	700		
	CBH0805-120-60		120	0.25	600		
	CBH0805-150-60		150	0.25	600		
	CBH0805-220-40		220	0.30	400		
	CBH0805-300-40		300	0.35	400		
	CBH0805-470-40		470	0.40	400		
	CBH0805-600-30		600	0.45	300		
	CBH0805-102-20		1000	0.50	200		
	CBH1206-19-50		19	0.20	500		
	CBH1206-120-70		120	0.25	700		
	CBH1206-150-70		150	0.25	700		
	CBH1206-220-60		220	0.30	600		
	CBH1206-300-60		300	0.35	600		
	CBH1206-470-55		470	0.40	550		
	CBH1206-600-50		600	0.50	500		
	CBH1206-800-40		800	0.50	400		
	CBH1206-102-30		1000	0.55	300		
	High Current	CBC0603-30-302		30	0.04	3000	
		CBC0603-80-302		80	0.04	3000	
		CBC0603-120-202		120	0.10	2000	
		CBC0603-150-202		150	0.10	2000	
		CBC0603-220-202		220	0.10	2000	
		CBC0603-300-102		300	0.20	1000	
		CBC0603-470-102		470	0.20	1000	
		CBC0603-600-102	LCB-0603-1.0A	600	0.20	1000	
CBC0805-12-152		BCB-0805-1.5A	12	0.05	1500		
CBC0805-30-302		ICB-0805-3.0A	30	0.04	3000		
CBC0805-60-302		DCB-0805-3.0A	60	0.04	3000		
CBC0805-80-302			80	0.04	3000		
CBC0805-120-202			120	0.10	2000		

ELECTRICAL SPECIFICATIONS

Application Type	Part Number	Prior Part Number	Z (Ω) @100 MHz $\pm 25\%$	DCR max (Ω)	Rated Current Max (mA)	Remarks		
High Current	CBC0805-150-202	JCB-0805-2.0A	150	0.10	2000			
	CBC0805-220-202		220	0.10	2000			
	CBC0805-300-102		300	0.20	1000			
	CBC0805-470-102	LCB-0805-2.0A	470	0.20	1000			
	CBC0805-600-202		600	0.10	2000			
	CBC1206-30-302		BCB-1206-1.5A ECB-1206-3.0A DCB-1206-3.0A ICB-1206-3.0A	30	0.04		3000	
	CBC1206-32-152	32		0.10	1500			
	CBC1206-50-302	50		0.04	3000			
	CBC1206-80-302	80		0.04	3000			
	CBC1206-100-302	100		0.03	3000			
	CBC1206-120-202	120		0.10	2000			
	CBC1206-150-202	150		0.10	2000			
	CBC1206-300-102	300		0.20	1000			
	CBC1206-470-102	470		0.20	1000			
	CBC1206-500-302	500		0.04	3000			
	CBC1206-600-102	KCB-1206-1.0A KCB-1206-2.0A	600	0.20	1000			
	CBC1206-600-202		600	0.10	2000			
	High Impedance	CBZ0603-800-25	MCB-0603	800	0.80		250	Notes * Nom height is 1.15
		CBZ0603-102-20	NCB-0603	1000	0.70		200	
CBZ0603-152-20		PCB-0603	1500	1.00	200			
CBZ0603-202-15		YCB-0603	2000	1.20	150			
CBZ0603-222-10		ZCB-0603	2200	1.50	100			
CBZ0805-800-45		HCB-0805 PCB-0805	800	0.40	450			
CBZ0805-102-40			1000	0.45	400			
CBZ0805-152-35			1500	0.50	350			
CBZ0805-202-25			2000	0.60	250			
CBZ0805-232-20		YCB-0805	2300	0.80	200			
CBZ0805-252-20*		ZCB-0805	2500	1.00	200			
CBZ0805-272-15			2700	1.10	150			
CBZ1206-800-30		LCB-1206	800	0.60	300			
CBZ1206-102-30			1000	0.60	300			
Power Line	CBP0805-30-502		30	0.01	5000			
	CBP0805-100-402		100	0.02	4000			
	CBP0805-220-302		220	0.04	3000			
	CBP0805-330-252		330	0.05	2500			
	CBP0805-470-202		470	0.08	2000			
	CBP0805-600-152		600	0.10	1500			