MULTILAYER CHIP BEADS
EMI SUPPRESSORS

FEATURES

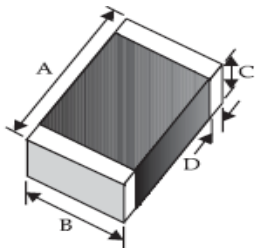
Multilayer technology, offering Monolithic structure, excellent for high reliability
100% Magnetic Shielding, absolutely ZERO CROSS TALK
Excellent solderability and very high heat resistance
Several different sizes from 0402 to 1210
Wide impedance levels from 7 ohms to 2700 ohms
Variety of noise suppression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

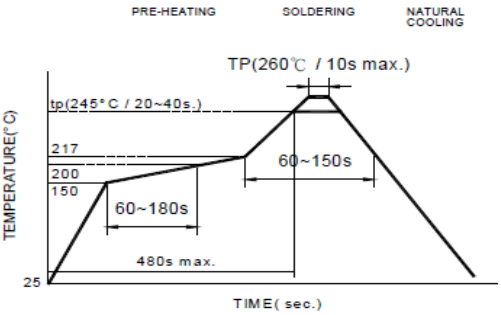
Operating temperature	-55°C to + 125°C		
Soldering heat resistance	260°C ± 5°C for 10 ±1 sec.		
Terminal construction	Electroplating with 3 layers: Silver, Nickel and Tin		
Solderability	Lead free solder reflow profile, referred to J-STD-020C		
	Reflow times: 3 times max.		
Tape and reel specifications	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) Indicates Chip Bead	
(1) (2) (3) (4) (5)	(2) Application levels	G for General applications
		H for High speed signal
		C for high Current
		Z for high Impedance
		P for Power supply line
	(3) Sizes	From 0402 to 1210
	(4) Impedance value examples	07 = 7 ohms
		70 = 70 ohms
		700 = 700 ohms
		702 = 7000 ohms
	(5) Rated current examples	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.

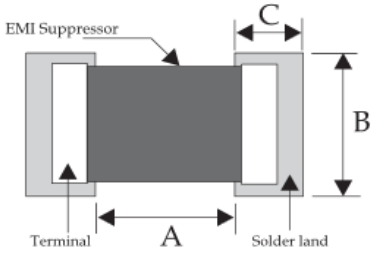
2. The High speed signal H type Chip bead can minimize attenuation of the signal waveform due to its sharp impedance characteristics. Various impedance values are available to match a signal frequency.

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 ±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 ±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		470	0.20	1000	
	CBC0805-600-202	LCB-0805-2.0A	600	0.10	2000	
	CBC1206-30-302		30	0.04	3000	
	CBC1206-32-152	BCB-1206-1.5A	32	0.10	1500	
	CBC1206-50-302	ECB-1206-3.0A	50	0.04	3000	
	CBC1206-80-302	DCB-1206-3.0A	80	0.04	3000	
	CBC1206-100-302	ICB-1206-3.0A	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-1206-2.0A	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		800	0.40	450	
	CBZ0805-102-40	HCB-0805	1000	0.45	400	
	CBZ0805-152-35	PCB-0805	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	