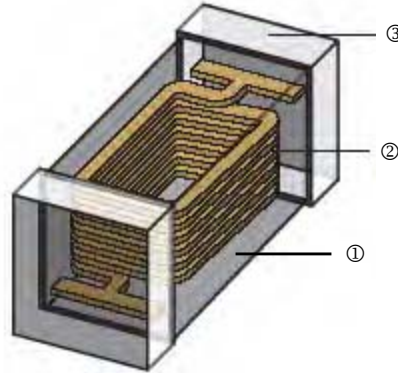


Multilayer Chip Bead – CB Series

Construction



① Ferrite Substance (NiO-CuO-ZnO-Ferrite)	② Silver Electrode	③ Electrode (Ag/Cu/Ni/Sn)
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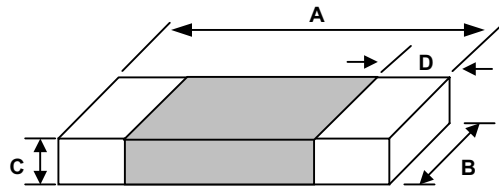
Features

- Effective EMI protection
- Low DC resistance
- High soldering heat resistance
- Multiple size availability

Applications

- Computers and Peripheral Equipment
- VCRS, Television, Pagers
- Cellular Phones
- Digital Communication Equipment
- Various Electronics Equipments
- Circuit Where a Stable Ground is Unavailable

Dimensions



Unit: mm

Type	Size (Inch)	A	B	C	D	Weight (g) (1000pcs)
CB02	0402	1.0±0.10	0.50±0.10	0.5±0.10	0.1~0.35	2.6
CB03	0603	1.6±0.20	0.80±0.15	0.8±0.15	0.1~0.6	6.2
CB05	0805	2.0±0.20	1.25±0.20	0.9±0.20	0.2~0.8	10
CB04	1204	3.2±0.20	1.60±0.20	1.1±0.20	0.2~1.0	30
CB06	1206	3.2±0.20	1.60±0.20	1.6±0.20	0.2~1.0	42
CB10	1210	3.2±0.20	2.50±0.20	1.3±0.20	0.2~1.0	54
CB08	1808	4.5±0.25	1.60±0.20	1.6±0.20	0.2~1.0	60
CB12	1812	4.5±0.25	3.20±0.20	1.5±0.20	0.2~1.0	62

Part Numbering

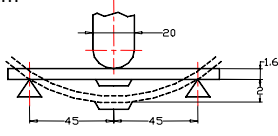

CB	03	Y	T	Y	N	601
Product Type	Dimensions	Impedance Tolerance	Packaging Code	Design Code	Current	Impedance
	02: 0402 03: 0603 05: 0805 04: 1204 06: 1206 10: 1210 08: 1808 12: 1812	Y: ±25%	T: Taping Reel	Y: ui:200 Q:ui:75(High Speed Signals)	H: High current N: General current	090: 9Ω 110: 11Ω 451: 450Ω 152: 1500Ω

■ Environmental Characteristics

Electrical Performance Test

Item	Specification	Test Methods
Impedance	Refer to standard electrical spec.	HP4291B
DCR		Agilent 34401A

Mechanical Performance Test

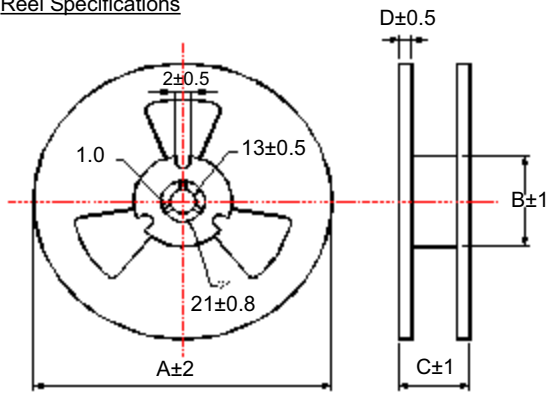
Item	Specification	Test Methods
Flexure Strength	The forces applied on the right conditions must not damage the terminal electrode and the ferrite	Test device shall be soldered on the substrate Substrate Dimension: 100x40x1.6mm Deflection: 2.0mm Keeping Time: 30sec ※For 0402, substrate dimension is 100x40x0.8mm 
Vibration		Test device shall be soldered on the substrate Oscillation Frequency : 10 to 55 to 10Hz for 1min Amplitude : 1.5mm Time : 2hrs for each axis (X,Y&Z), total 6hrs
Resistance to Soldering Heat	Appearance: No damage More than 75% of the terminal electrode should be covered with solder Impedance: within $\pm 30\%$ of initial value	Pre-heating: 150°C, 1min Solder Temperature: 260 \pm 5°C Immersion Time: 10 \pm 1sec
Solderability	The electrodes shall be at least 90% covered with new solder coating	Pre-heating: 150°C, 1min Solder Temperature: 245 \pm 5°C Immersion Time: 4 \pm 1sec
Terminal Strength Test	0402 series : ≥ 0.2 kg 0603series : ≥ 0.5 kg 0805 series : ≥ 1.0 kg other series : ≥ 2.0 kg	Test device shall be soldered on the substrate 
Temperature Cycle	Appearance: No damage Impedance: within $\pm 30\%$ of initial value	One cycle: One cycle/step1: -55 \pm 3°C for 30min step2: 25 \pm 2°C for 3.0min step3: 125 \pm 3°C for 30min step4: 25 \pm 2°C for 3.0min Total: 100cycles Measured after exposure in the room condition for 24hrs
Humidity Resistance		Temperature: 40 \pm 2°C Relative Humidity: 90 ~ 95% time: 1000hrs Measured after exposure in the room condition for 24hrs
High Temperature Resistance		Temperature: 125 \pm 3°C Relative Humidity : 0% Applied Current: Rated Current time: 1000hrs Measured after exposure in the room condition for 24hrs
Low Temperature Resistance		Temperature: -55 \pm 3°C TR elative Humidity : 0% time: 1000hrs Measured after exposure in the room condition for 24hrs

■ Operating Temperature: -55°C ~ 125°C

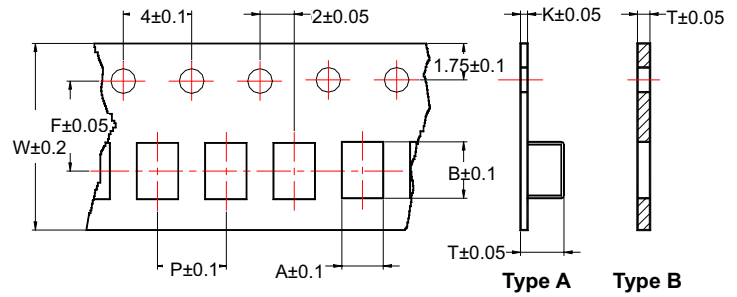
■ Storage Temperature: 25 \pm 3°C ; Humidity < 80%RH

■ Packaging

Reel Specifications

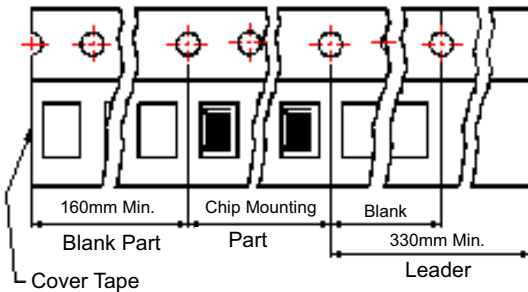


Tape Specifications

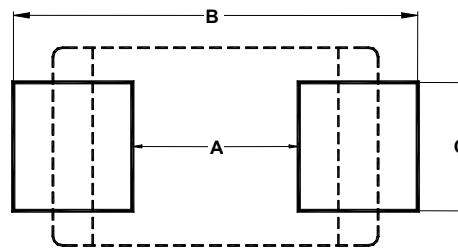


Tape Material

Carrier tape: Polystyrene for 321609
Cover type: Polystyrene



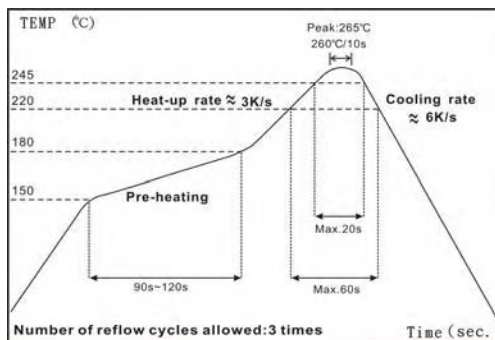
Recommended Pattern



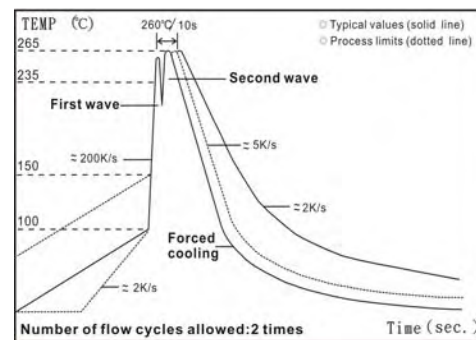
* Don't apply narrower pattern than listed above to CB□□YTYH.
Narrow pattern might cause excessive heat or open circuit.

Type	Tape Dimensions								Reel Dimensions				Recommended Pattern			Quantity /Reel
	A	B	T	W	P	F	K	Tape Type	A	B	C	D	A	B	C	
CB02	0.65	1.15	0.7	8.0	2.0	3.5	-	B	178	60	10	2	0.4	1.2 ~ 1.4	0.4	10,000
CB03	1.10	1.85	0.95	8.0	4.0	3.5	-	B	178	60	10	2	0.8	2.4 ~ 3.4	0.6	4,000
CB05	1.58	2.42	0.95	8.0	4.0	3.5	-	B	178	60	10	2	1.2	3.0 ~ 4.0	1.0	4,000
CB03	1.05	1.95	1.05	8.0	4.0	3.5	0.23	A	178	60	10	2	0.8	2.4 ~ 3.4	0.6	4,000
CB05	1.42	2.25	1.04	8.0	4.0	3.5	0.22	A	178	60	10	2	1.2	3.0 ~ 4.0	1.0	4,000
CB04	1.88	3.50	1.27	8.0	4.0	3.5	0.2	A	178	60	10	2	2.0	4.2 ~ 5.2	1.2	3,000
CB06	1.88	3.64	1.90	8.0	4.0	3.5	0.2	A	178	60	10	2	2.0	4.2 ~ 5.2	1.2	2,000
CB10	2.77	3.42	1.65	8.0	4.0	3.5	0.2	A	178	60	10	2	2.0	5.5 ~ 6.5	1.8	2,000
CB08	1.88	4.95	1.90	12	4.0	5.5	0.3	A	178	60	14	2	3.0	5.5 ~ 6.5	1.2	2,000
CB12	3.66	4.95	1.85	12	8.0	5.5	0.3	A	178	60	14	2	3.0	5.5 ~ 6.5	2.4	1,000

■ Soldering Condition



IR Reflow Soldering



Wave Soldering (Flow Soldering)

- (1) Time of IR reflow soldering at maximum temperature point 260°C : 10s
- (2) Time of wave soldering at maximum temperature point 260°C : 10s
- (3) Time of soldering iron at maximum temperature point 410°C : 5s