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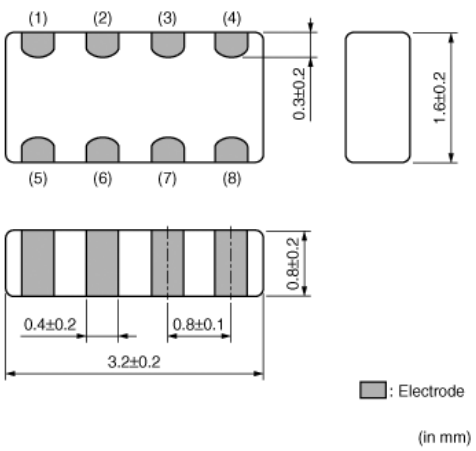
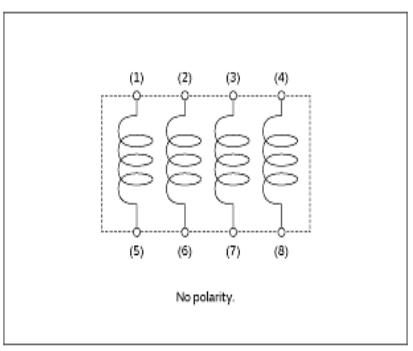
CBA3216 series consists of 4 circuits of ferrite Beads

FEATURES

- CBA3216 has 4 circuits in 3.2x1.6mm body with 0.8mm pitch.
- Provides attenuation across a broad frequency range.Two types of impedance are available which meet general signal line and high speed signal line.
- Original inner electrode structure enables extra low crosstalk.
- The nickel barrier structure of the external electrodes provides excellent solder Heat resistance. Both flow and reflow soldering methods can be employed.

Shape and Dimensions





PRODUCT IDENTIFICATION

CBA	3216	4	G	-	601	F
①	②	③	④		⑤	⑥

①

Product Code	
CBA	Multilayer Chip Beads

②

External Dimensions (L×W) (mm)	
3216 [1206]	3.2×1.6

③

Circuit Num.	
4	4 circuits

④

Type	
G	General signal line

⑤

Nominal Impedance	
Example	Nominal Value
300	30Ω
601	600Ω
102	1000Ω

⑥

Packing	
F	Tape&Reel Quantity: 5,000

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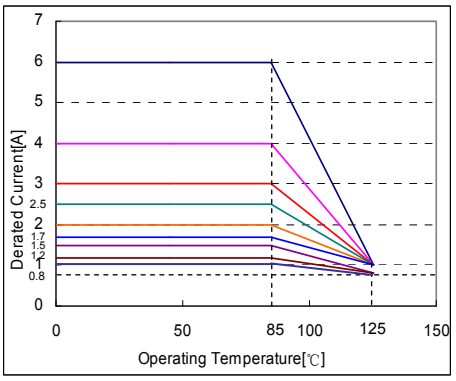
DETAIL ELECTRICAL CHARACTERISTICS

Rated Current

When operating temperatures exceed +85℃, derating of current is necessary for chip ferrite beads for which rated current is 1000mA and over. Please apply the derating curve shown in chart according to the operating temperature.



CBA3216 TYPE

Part Number	Impedance	Z Test Frequency	Max. DC Resistance	Max. Rated Current
Units	Ω	MHz	Ω	mA
Symbol	Z	Freq.	DCR	Ir
CBA32164G-300F	30	100	0.10	200
CBA32164G-600F	60	100	0.15	200
CBA32164G-121F	120	100	0.20	150
CBA32164G-221F	220	100	0.25	150
CBA32164G-301F	300	100	0.25	150
CBA32164G-601F	600	100	0.35	100
CBA32164G-102F	1000	100	0.45	50

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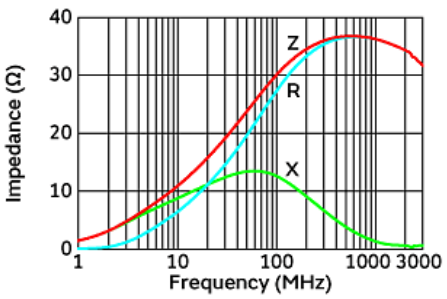
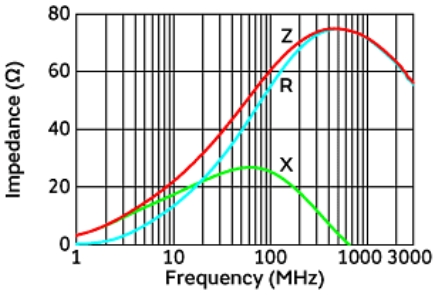
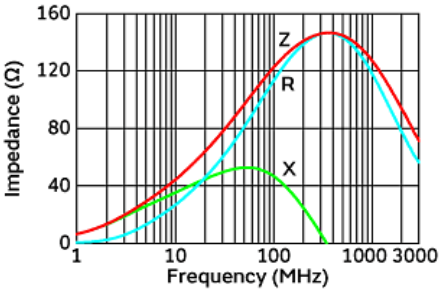
CBA32164G-300F



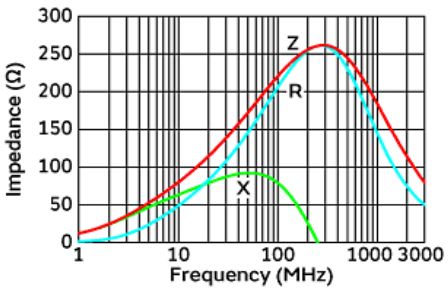
CBA32164G-600F



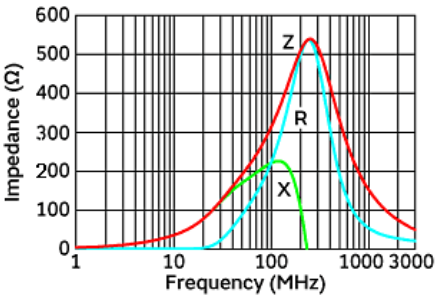
CBA32164G-121F



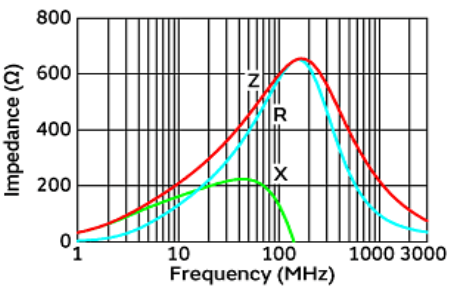
CBA32164G-221F



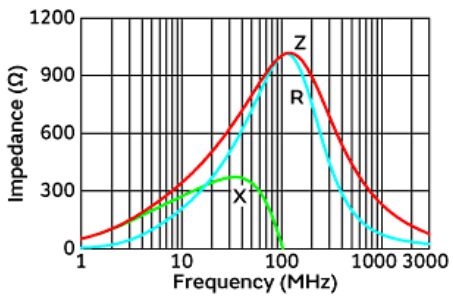
CBA32164G-301F



CBA32164G-601F



CBA32164G-102F



Measuring Equipment

Test Items	Device Model	Manufacturers
Impedance	4991A	Keysight Technoiogies
DC Resistance	4338A	Keysight Technoiogies

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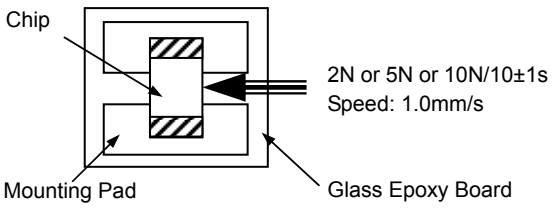
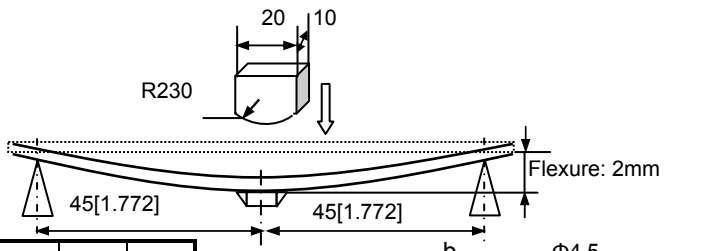
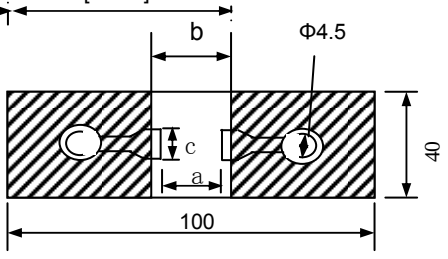
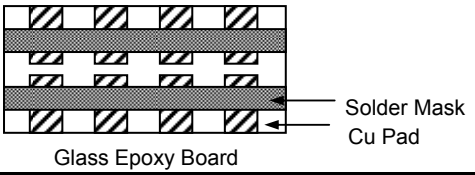
RELIABILITY AND TEST CONDITIONS

<table>
<tr><th>Items</th><th>Requirements</th><th>Test Methods and Remarks</th></tr>
<tr><td>1. Operating Temperature Range</td><td colspan="2">-40℃ to +85 ℃</td></tr>
<tr><td>2. Storage Temperature Range</td><td colspan="2">-40℃ to +85 ℃</td></tr>
<tr><td>3. Terminal Strength</td><td>No removal or split of the termination or other defects shall occur.</td><td>① Solder the chip to the testing jig (glass epoxy board shown as the following figure) using eutectic solder. Then apply a force in the direction of the arrow.
② 2N force for 0603 series.
③ 5N force for 1005 and 1608 series.
④ 10N force for 2010, 2012, 3216,4516 and 4030 series.
⑤ Keep time: 10±1s
  </td></tr>
<tr><td rowspan="2">4. Resistance to Flexure</td><td>No visible mechanical damage.</td><td>① Solder the chip to the test jig (glass epoxy board) using a eutectic solder. Then apply a force in the direction shown as the following figure.
② Flexure: 2mm
③ Pressurizing Speed: 0.5mm/sec
④ Keep time: ≥30 sec</td></tr>
<tr><td colspan="2"> 
Unit: mm [inch]
 
<table>
<tr><th>Type</th><th>a</th><th>b</th><th>c</th></tr>
<tr><td>0603[0201]</td><td>0.25</td><td>0.8</td><td>0.3</td></tr>
<tr><td>1005[0402]</td><td>0.4</td><td>1.5</td><td>0.5</td></tr>
<tr><td>1608[0603]</td><td>1.0</td><td>3.0</td><td>1.2</td></tr>
<tr><td>2012[0805]</td><td>1.2</td><td>4.0</td><td>1.65</td></tr>
<tr><td>3216[1206]</td><td>2.2</td><td>5.0</td><td>2.0</td></tr>
<tr><td>4030[1612]</td><td>1.9</td><td>6.1</td><td>3.2</td></tr>
<tr><td>4516[1806]</td><td>2.8</td><td>8.5</td><td>2.0</td></tr>
</table></td></tr>
<tr><td>5. Vibration</td><td>① No visible mechanical damage.
② Impedance change: Within ±20%.</td><td>① Solder the chip to the testing jig (glass epoxy board shown as the following figure) using eutectic solder.
② The chip shall be subjected to a simple harmonic motion having total amplitude of 1.5 mm, the frequency being varied uniformly between the approximate limits of 10 and 55 Hz.
③ The frequency range from 10 to 55 Hz and return to 10 Hz shall be traversed in approximately 1 minute. This motion shall be applied for a period of 2 hours in each 3 mutually perpendicular directions (total of 6 hours).
  </td></tr>
</table>

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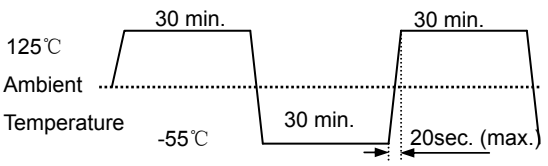
Items	Requirements	Test Methods and Remarks
6. Dropping	① No visible mechanical damage. ② Impedance change: Within ±20%.	① Drop chip bead 10 times on a concrete floor from a height of 100 cm.
7. Temperature	① Impedance change should be within ±20% of initial value measuring at 20℃.	① Temperature range: -40℃ to +85 ℃ Reference temperature: +20℃
8. Solderability	① No visible mechanical damage. ② Wetting shall be exceeded 75% coverage for 0603 series, and 95% coverage for the other.	① Solder temperature: 240±2℃ ② Duration: 3 sec ③ Solder: Sn/3.0Ag/0.5Cu ④ Flux: 25% Resin and 75% ethanol in weight
9. Resistance to Soldering Heat	① No visible mechanical damage. ② Wetting shall be exceeded 75% coverage for 0603 series, and 95% coverage for the other ③ Impedance change: Within ±20%.	① Solder temperature: 260±3℃ ② Duration: 5 sec ③ Solder: Sn/3.0Ag/0.5Cu ④ Flux: 25% Resin and 75% ethanol in weight ⑤ The chip shall be stabilized at normal condition for 1~2 hours before measuring.
10. Thermal Shock	① No visible mechanical damage. ② Impedance change: Within ±20%.	① Temperature and time: -40℃ for 30±3 min →85 ℃ for 30±3min ② Transforming interval: Max. 20 sec ③ Tested cycle: 100 cycles ④ The chip shall be stabilized at normal condition for 1~2 hours before measuring. 
11. Resistance to Low Temperature	① No visible mechanical damage. ② Impedance change: Within ±20%.	① Temperature: -40±2℃ ② Duration: 500^{+24} hours ③ The chip shall be stabilized at normal condition for 1~2 hours before measuring.
12. Damp Heat (Steady States)	① No visible mechanical damage. ② Impedance change: Within ±20%.	① Temperature: 60±2℃ ② Humidity: 90% to 95% RH ③ Duration: 500^{+24} hours ④ The chip shall be stabilized at normal condition for 1~2 hours before measuring.
13. Loading Under Damp Heat	① No visible mechanical damage. ② Impedance change: Within ±20%.	① Temperature: 60±2℃ ② Humidity: 90% to 95% RH ③ Duration: 500^{+24} hours ④ Applied current: Rated current ⑤ The chip shall be stabilized at normal condition for 1~2 hours before measuring.
14. Loading at High Temperature (Life Test)	① No visible mechanical damage. ② Impedance change: Within ±20%.	① Temperature: 85±2℃ ② Duration: 500^{+24} hours ③ Applied current: Rated current. ④ The chip shall be stabilized at normal condition for 1~2 hours before measuring.