



Multilayer Ferrite Chip Beads(CA Type)

Features

- * This series composes 4 circuits in a 3.2X1.6 mm body with 0.8 mm pitch.
- * The electrical characteristics are similar to those of CA series.
- * High impedance cover wide frequency ranges.

Applications

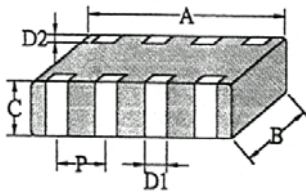
- * Noise suppression for the compact size digital equipment, such as I/O lines of PCs and notebook PCs, digital TVs and VCRs, and communications equipment.

Product Identifications

$\frac{\square CA}{(1) (2)}$
 $\frac{\square \square \square \square}{(3)}$
 $\frac{A4}{(4)}$
 $\frac{\square \square \square}{(5)}$
 $\frac{U}{(5)}$

- (1) Material Code
- (2) Product Symbol: Multilayer Chip Beads Array
- (3) Dimensions: Length (A) × Width (B)
- (4) Impedance
- (5) RoHS Part

Shapes and Dimensions / Recommended PC Board Pattern



Dimensions in mm

| TYPE | A | B | C | D1 | D2 | P |
|--------|---------|---------|---------|-----------|----------|---------|
| CA2010 | 2.0±0.2 | 1.0±0.2 | 0.5±0.1 | 0.25±0.15 | 0.2±0.15 | 0.5±0.1 |
| CA3216 | 3.2±0.2 | 1.6±0.2 | 0.8±0.2 | 0.4±0.2 | 0.3±0.2 | 0.8±0.1 |

Material Characteristics for CA Type

| Item | Unit | Standard Value | | | |
|--------------------------------------|--------------------|----------------|--------|--------|--------|
| Material Code | / | 12 | 16 | 20 | 27 |
| Initial Permeability (μ_{iac}) | / | 45 | 110 | 200 | 500 |
| Maximum Permeability (μ_m) | / | 125 | 250 | 450 | 900 |
| Saturation Flux Density at 10 Oe | Gauss | 2000 | 1700 | 1400 | 1500 |
| Curie Temperature | °C | >200 | >130 | >130 | >100 |
| Volume Resistivity | $\Omega \cdot m$ | 10^5 | 10^5 | 10^5 | 10^5 |
| Temperature Coefficient | $10^{-6}/^\circ C$ | 10 | 12 | 13 | 5 |
| Density | g/cm^3 | 4.8 | 4.8 | 4.8 | 4.8 |



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Electrical Characteristics

All Type

| Part Number | Impedance (Ω) $\pm 25\%$ At 100MHz | DC Resistance (Ω) MAX. | Rated Current (mA) MAX. |
|-------------------|--|------------------------------------|----------------------------|
| 16CA 2010A4 -300U | 30 | 0.30 | 500 |
| 16CA 2010A4 -600U | 60 | 0.40 | 200 |
| 16CA 2010A4 -121U | 120 | 0.50 | 200 |
| 16CA 2010A4 -221U | 220 | 0.70 | 100 |
| 16CA 2010A4 -301U | 300 | 0.80 | 100 |
| 16CA 2010A4 -451U | 450 | 0.90 | 100 |
| 16CA 2010A4 -601U | 600 | 1.00 | 100 |
| 16CA 2010A4 -102U | 1000 | 1.30 | 50 |
| 27CA 3216A4 -300U | 30 | 0.10 | 200 |
| 27CA 3216A4 -600U | 60 | 0.25 | 200 |
| 27CA 3216A4 -121U | 120 | 0.30 | 150 |
| 27CA 3216A4 -221U | 220 | 0.30 | 150 |
| 27CA 3216A4 -301U | 300 | 0.40 | 150 |
| 27CA 3216A4 -601U | 600 | 0.50 | 100 |
| 27CA 3216A4 -102U | 1000 | 0.70 | 50 |
| 20CA 3216A4 -300U | 30 | 0.10 | 200 |
| 20CA 3216A4 -600U | 60 | 0.25 | 200 |
| 20CA 3216A4 -121U | 120 | 0.30 | 150 |
| 20CA 3216A4 -221U | 220 | 0.30 | 150 |
| 20CA 3216A4 -301U | 300 | 0.40 | 150 |

Electrical Characteristics

All Type

| Part Number | Impedance (Ω) $\pm 25\%$ At 100MHz | DC Resistance (Ω) MAX. | Rated Current (mA) MAX. |
|-------------------|--|------------------------------------|----------------------------|
| 20CA 3216A4 -601U | 600 | 0.50 | 100 |
| 20CA 3216A4 -102U | 1000 | 0.70 | 50 |
| 16CA 3216A4 -300U | 30 | 0.25 | 200 |
| 16CA 3216A4 -600U | 60 | 0.25 | 200 |
| 16CA 3216A4 -121U | 120 | 0.40 | 150 |
| 16CA 3216A4 -221U | 220 | 0.45 | 150 |
| 16CA 3216A4 -301U | 300 | 0.50 | 150 |
| 16CA 3216A4 -471U | 470 | 0.55 | 100 |
| 16CA 3216A4 -601U | 600 | 0.65 | 100 |
| 16CA 3216A4 -102U | 1000 | 0.70 | 50 |