

Multilayer Chip Bead

CIM Series- CIM10 (1608/ EIA 0603)



CIM Series display high impedance because it is composed of a multilayered internal conductor and has excellent attenuation characteristics for wide band frequency.

FEATURES

- The smallest beads suitable for surface mounting
- Perfect shape for automatic mounting, with no directionality.
- Excellent solderability and high heat resistance for either flow or reflow soldering
- Monolithic inorganic material construction for high reliability
- Closed magnetic circuit configuration avoids crosstalk and is suitable for high density PCBs.

APPLICATION

High frequency EMI prevention application to computers, printers, VCRs, TVs and portable telephones.

SPECIFICATION

- Operating temperature range -55 to $+125^{\circ}\text{C}$
- Storage temperature range -10 to $+40^{\circ}\text{C}$
- Relative humidity 30 to 70%

PRODUCT IDENTIFICATION

| | | | | | | |
|-----------|----------|-----------|----------|------------|----------|----------|
| CI | M | 10 | U | 121 | N | C |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |

(1) Chip Beads

(2) Multi-layer type

(3) Dimension

(4) Material Code

P,U: Broad impedance, especially suppresses noise in the 10~200MHz range

J: Suppresses noise in the 100~300MHz range

K: Suppresses noise in the 200MHz above

N: Suppresses noise in the 200~500MHz range

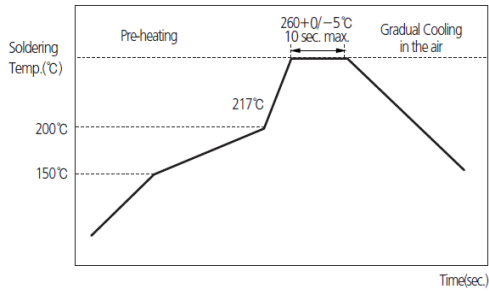
(5) Nominal impedance (300:30 Ω , 121:120 Ω)

(6) Thickness option(N:Standard, A:Thinner than standard, B:Thicker than standard)

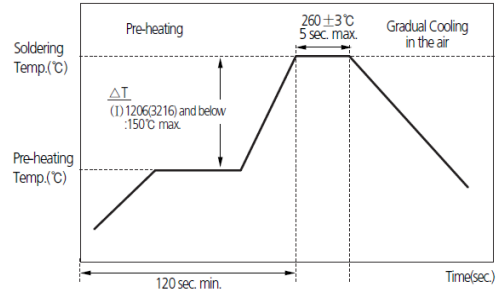
(7) Packaging(C:paper tape, E:embossed tape)

RECOMMENDED SOLDERING CONDITION

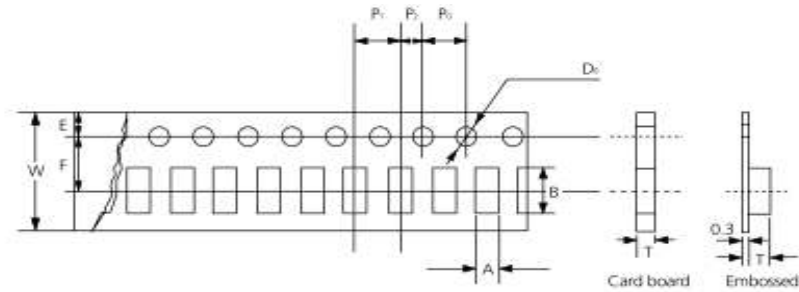
REFLOW SOLDERING



FLOW SOLDERING



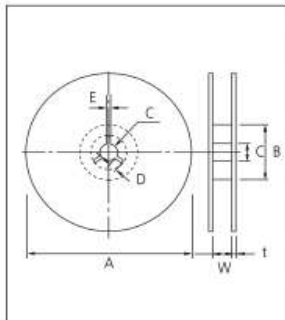
PACKAGING



Unit: mm

| Type | 03 | 05 | 10 | 21 | | | 22 | 31 | | 32 | 41 | 43 | | | | |
|-----------------------|-----------------|------------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|---------------|-----------|-----------|
| Tape | Card | Card | Card | Embossed | | | Card | Embossed | | Card | Embossed | Embossed | | | | |
| Chip Thickness | 0.3 | 0.5 | 0.8 | 0.85 | 1.0 | 1.25 | 0.85 | 1.2 | 0.6 | 0.8 | 1.1 | 0.85 | 1.3 | 1.6 (1.2) | 1.9 | 3.5 |
| Chip Cavity | A | 0.40 ±0.06 | 0.65 ±0.1 | 1.0 ±0.2 | 1.5 ±0.2 | 1.5 ±0.2 | 1.45 ±0.1 | 2.39 ±0.10 | 1.9 ±0.2 | 1.9 ±0.2 | 1.9 ±0.2 | 2.0 ±0.2 | 2.9 ±0.2 | 1.9 ±0.2 | 4.9 ±0.2 | 1.5 |
| | B | 0.70 ±0.06 | 1.15 ±0.1 | 1.8 ±0.2 | 2.3 ±0.2 | 2.3 ±0.2 | 2.4 ±0.2 | 2.79 ±0.10 | 3.6 ±0.2 | 3.6 ±0.2 | 3.6 ±0.2 | 3.6 ±0.2 | 4.9 ±0.2 | 4.9 ±0.2 | 4.9 ±0.2 | 4.9 ±0.2 |
| T max | 0.45 | 0.8 | 1.1 | 1.5 | 2.0 | 2.0 | 0.95 ±0.1 | 1.80 ±0.10 | 1.15 | 1.4 | 1.4 | 1.1 | 1.55 | 1.8 | 1.78 | 1.78 |
| W | 8 ±0.2 | 8 ±0.2 | 8 ±0.2 | 8 ±0.2 | 8 ±0.2 | 8 ±0.2 | 8.0 ±0.3 | 8.0 ±0.3 | 8 ±0.2 | 8 ±0.2 | 8 ±0.2 | 8 ±0.2 | 8 ±0.2 | 8 ±0.2 | 12 ±0.2 | 12 ±0.2 |
| F | 3.5 ±0.05 | 3.5 ±0.05 | 3.5 ±0.05 | 3.5 ±0.05 | 3.5 ±0.05 | 3.5 ±0.05 | 3.5 ±0.05 | 3.5 ±0.05 | 3.5 ±0.05 | 3.5 ±0.05 | 3.5 ±0.05 | 3.5 ±0.05 | 3.5 ±0.05 | 5.5 ±0.05 | 5.5 ±0.05 | 5.5 ±0.05 |
| E | 1.75 ±0.1 | 1.75 ±0.1 | 1.75 ±0.1 | 1.75 ±0.1 | 1.75 ±0.1 | 1.75 ±0.1 | 1.75 ±0.1 | 1.75 ±0.1 | 1.75 ±0.1 | 1.75 ±0.1 | 1.75 ±0.1 | 1.75 ±0.1 | 1.75 ±0.1 | 1.75 ±0.1 | 1.75 ±0.1 | 1.75 ±0.1 |
| P ₁ | 2 ±0.05 | 2 ±0.05 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 8.0 ±0.1 | 8.0 ±0.1 |
| P ₂ | 2 ±0.1 | 2 ±0.1 | 2 ±0.1 | 2 ±0.1 | 2 ±0.1 | 2 ±0.1 | 2.0 ±0.1 | 2.0 ±0.1 | 2 ±0.1 | 2 ±0.1 | 2 ±0.1 | 2 ±0.1 | 2 ±0.1 | 2 ±0.1 | 2 ±0.1 | 2 ±0.1 |
| P ₃ | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 | 4.0 ±0.1 |
| D _c | ∅1.5 ±0.1 | ∅1.5 ±0.1 | ∅1.5 ±0.1 | ∅1.5 ±0.1 | ∅1.5 ±0.1 | ∅1.5 ±0.1 | ∅1.5 ±0.1 | ∅1.5 ±0.1 | ∅1.5 ±0.1 | ∅1.5 ±0.1 | ∅1.5 ±0.1 | ∅1.5 ±0.1 | ∅1.5 ±0.1 | ∅1.5 ±0.1 | ∅1.5 ±0.1 | ∅1.5 ±0.1 |
| Quantity / Reel (PCS) | 10,000 (15,000) | 10,000 | 4,000 | 4,000 | 3,000 | 2,000 | 4,000 | 2,000 | 4,000 | 3,000 | 3,000 | 4,000 | 2,500 | 2,000 (5,000) | 1,000 | 1,000 |

• Reel dimensions



Unit: mm

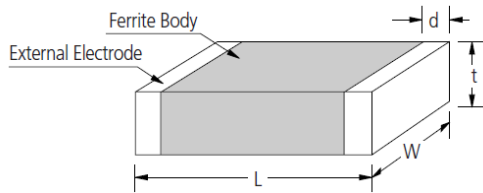
| Symbol | Tape Width | A | B | C | D |
|----------|------------|-----------|----------|---------|-------|
| 7" Reel | 8mm | ∅180+0/-3 | ∅60+1/-0 | ∅13±0.3 | 4±0.2 |
| | 12mm | ∅180+0/-3 | ∅60+1/-0 | ∅13±0.3 | 4±0.2 |
| 10" Reel | 8mm | ∅258+0/-3 | ∅80+1/-0 | ∅13±0.3 | 4±0.2 |
| | 12mm | ∅258+0/-3 | ∅80+1/-0 | ∅13±0.3 | 4±0.2 |
| 13" Reel | 8mm | ∅330±2.0 | ∅80±1.0 | ∅13±0.3 | 4±0.2 |
| | 12mm | ∅330±2.0 | ∅80±1.0 | ∅13±0.3 | 4±0.2 |

| Symbol | Tape Width | E | W | t |
|----------|------------|---------|--------|---------|
| 7" Reel | 8mm | 2.0±0.5 | 9±0.5 | 1.2±0.2 |
| | 12mm | 2.0±0.5 | 13±0.5 | 1.2±0.2 |
| 10" Reel | 8mm | 2.0±0.5 | 9±0.5 | 1.8±0.2 |
| | 12mm | 2.0±0.5 | 13±0.5 | 1.8±0.2 |
| 13" Reel | 8mm | 2.0±0.5 | 9±0.5 | 2.2±0.2 |
| | 12mm | 2.0±0.5 | 13±0.5 | 2.2±0.2 |

Multilayer Chip Bead

1. Model : CIM1608 Type

2. Dimension



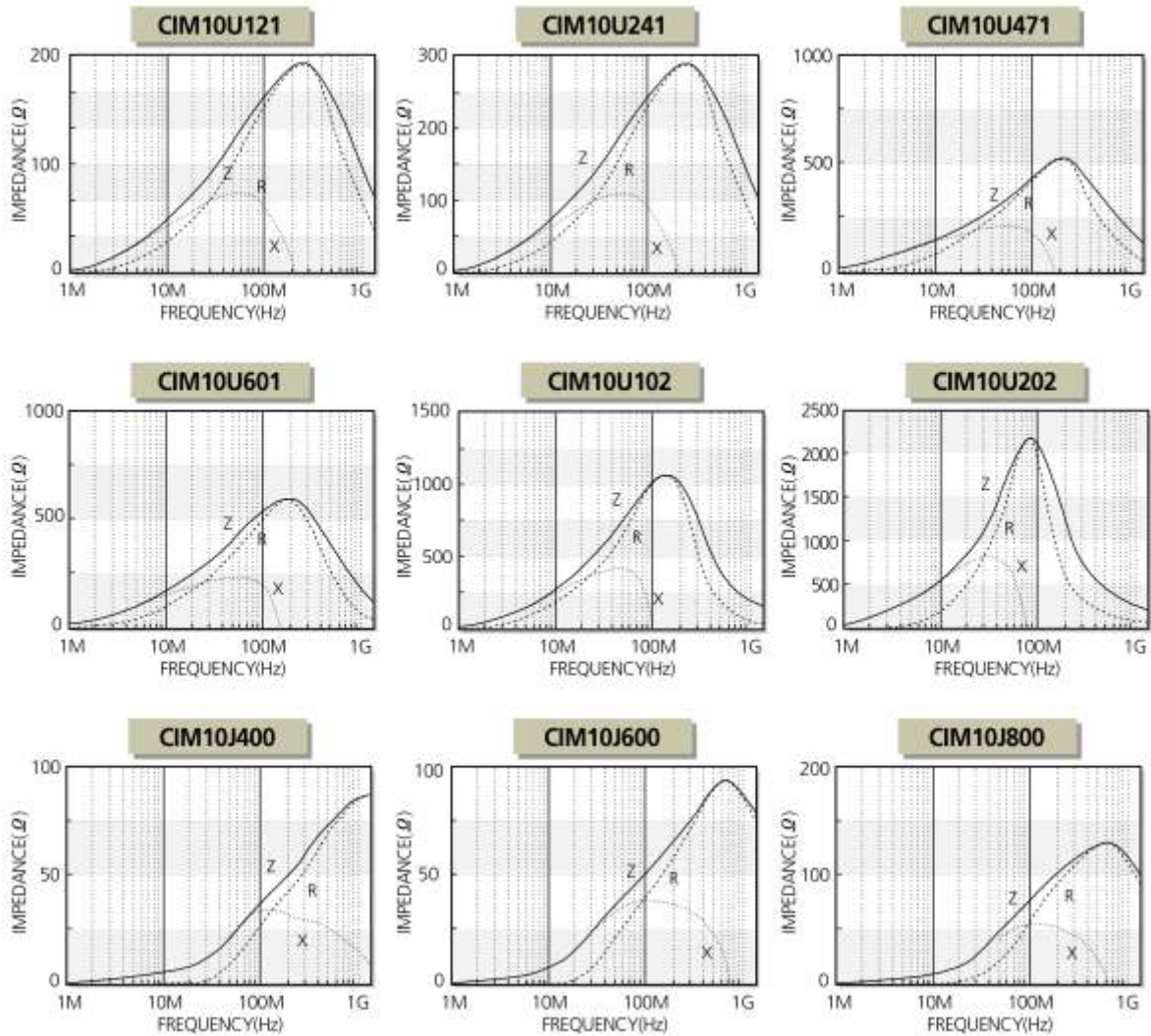
| Type | Dimension [mm] | | | |
|------|----------------|----------|----------|---------|
| | L | W | t | d |
| 10 | 1.6±0.15 | 0.8±0.15 | 0.8±0.15 | 0.3±0.2 |

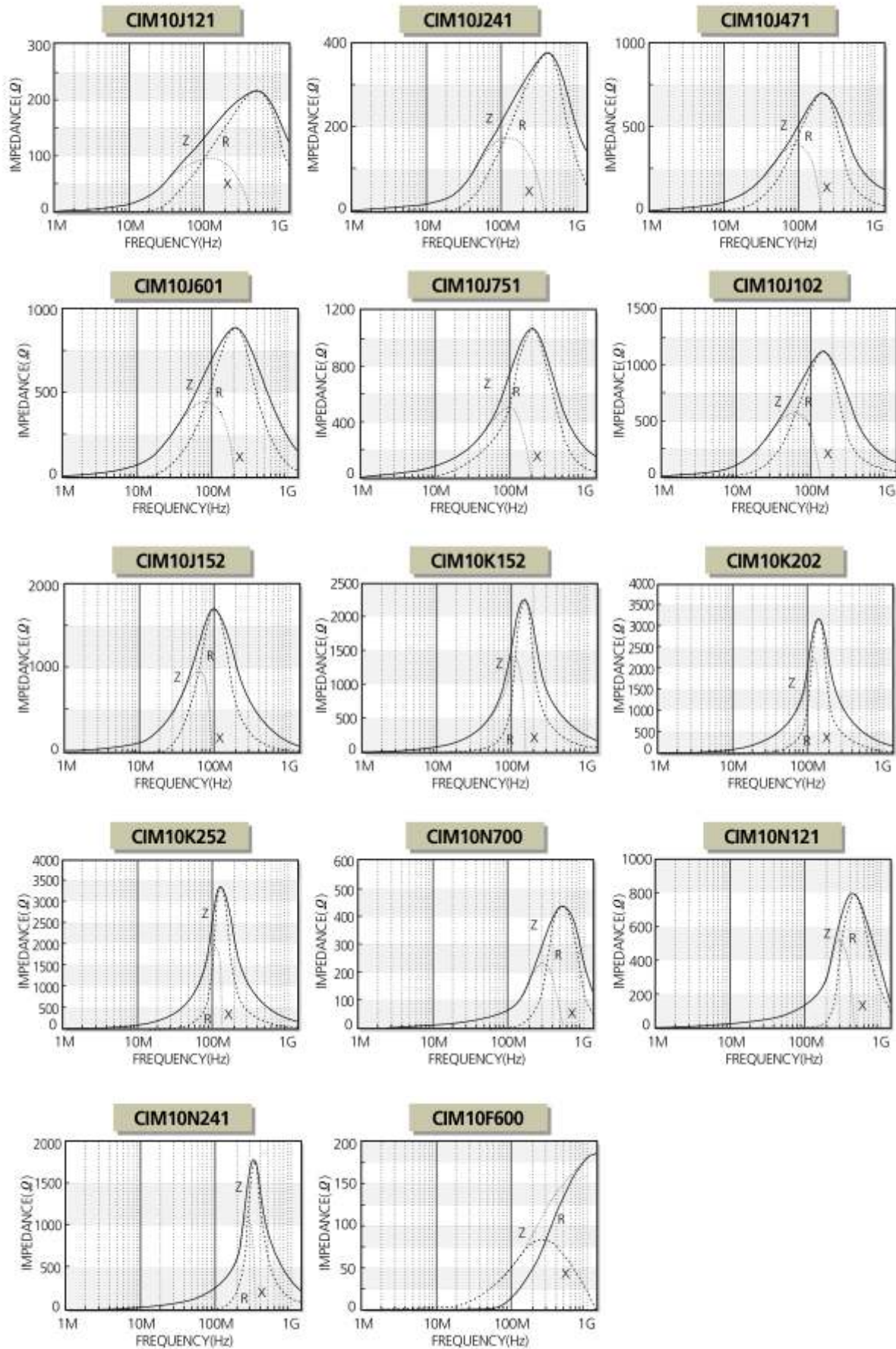
3. Description

| Part no. | Thickness (mm) | Impedance (Ω)±25%@100MHz | DC Resistance (Ω) Max. | Rated Current (mA) Max. |
|------------|----------------|-----------------------------------|---------------------------------|-------------------------|
| CIM10U121 | 0.8±0.15 | 120 | 0.15 | 500 |
| CIM10U241 | 0.8±0.15 | 240 | 0.30 | 400 |
| CIM10U471 | 0.8±0.15 | 470 | 0.35 | 300 |
| CIM10U601 | 0.8±0.15 | 600 | 0.45 | 300 |
| CIM10U102 | 0.8±0.15 | 1000 | 0.60 | 250 |
| CIM10U202 | 0.8±0.15 | 2000(at 70MHz) | 1.20 | 200 |
| CIM10J400 | 0.8±0.15 | 40 | 0.12 | 600 |
| CIM10J600 | 0.8±0.15 | 60 | 0.12 | 600 |
| CIM10J800 | 0.8±0.15 | 80 | 0.20 | 550 |
| CIM101J121 | 0.8±0.15 | 120 | 0.20 | 500 |
| CIM10J151 | 0.8±0.15 | 150 | 0.20 | 400 |
| CIM10J241 | 0.8±0.15 | 240 | 0.30 | 400 |
| CIM10J471 | 0.8±0.15 | 470 | 0.35 | 300 |
| CIM10J601 | 0.8±0.15 | 600 | 0.45 | 300 |
| CIM10J751 | 0.8±0.15 | 750 | 0.55 | 300 |

| | | | | |
|-----------|----------|------|------|-----|
| CIM10J102 | 0.8±0.15 | 1000 | 0.70 | 250 |
| CIM10J152 | 0.8±0.15 | 1500 | 1.00 | 250 |
| CIM10K152 | 0.8±0.15 | 1500 | 0.80 | 250 |
| CIM10K202 | 0.8±0.15 | 2000 | 1.00 | 200 |
| CIM10K252 | 0.8±0.15 | 2500 | 1.20 | 200 |
| CIM10N700 | 0.8±0.15 | 70 | 0.30 | 500 |
| CIM10N121 | 0.8±0.15 | 120 | 0.45 | 400 |
| CIM10N241 | 0.8±0.15 | 240 | 0.60 | 300 |
| CIM10F600 | 0.8±0.15 | 60 | 0.70 | 200 |

4. Characteristics data





■ NOTICE :All specifications are subject to change without previous notice. Please contact with product representatives or engineers to check specifications.