

Chip Bead Array

CIA Series- CIA31 (3216 EIA1206)



CIA Series is an array of ferrite beads used for EMI suppression filters. This series is often used for high density Printed Circuit Boards to save the space and cost. It suppresses electro-magnetic wave noise by increased impedance, especially by increased resistance at noise frequency.

FEATURES

- Four lines in one chip
- Perfect shape for automatic mounting, with no directionality.
- Excellent solderability and high heat resistance for either flow or reflow soldering.
- Closed magnetic circuit configuration with no cross-talk which is suitable for high density PCBs.

APPLICATION

- EMI prevention in Notebook PC, LCD and car navigation
- Ideal for dealing with line noise from multiple signals such as in computer buses

SPECIFICATION

- Operating temperature range -25 to $+85^{\circ}\text{C}$
- Storage temperature range -10 to $+40^{\circ}\text{C}$

PRODUCT IDENTIFICATION

CI	A	31	U	300	N	E
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Chip Beads

(2) mono-layer type

(3) Dimension

(4) Material Code

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

J: Suppresses noise in the 100~300MHz range

N: Suppresses noise in the 200~500MHz range

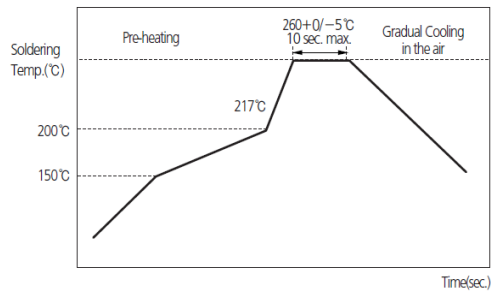
(5) Nominal impedance (300:30 Ω , 121:120 Ω)

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

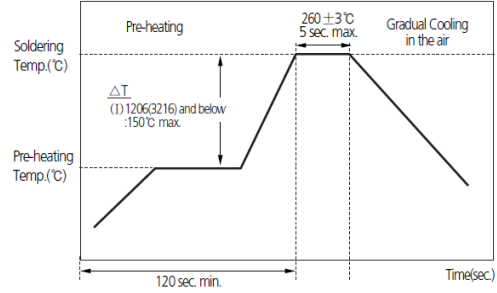
(7) Packaging(C:paper tape, E:embossed tape)

RECOMMENDED SOLDERING CONDITION

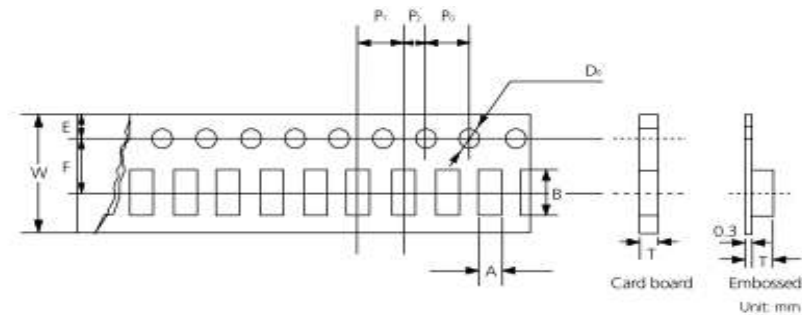
REFLOW SOLDERING



FLOW SOLDERING

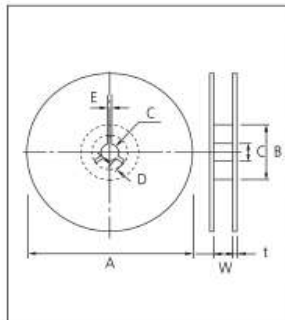


PACKAGING



Type	03	05	10	21			22		31			32	41	43	
Tape	Card	Card	Card	Embossed			Card	Embossed	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)	1.5
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	3.5 ±0.2
	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	3.6 ±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
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	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
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
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	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
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
D ₀	φ1.5 ±0.1	φ1.5 ±0.1	φ1.5 ±0.1	φ1.5 ±0.1	φ1.5 ±0.1	φ1.5 ±0.1	φ1.5 ±0.1	φ1.5 ±0.1	φ1.5 ±0.1	φ1.5 ±0.1	φ1.5 ±0.1	φ1.5 ±0.1	φ1.5 ±0.1	φ1.5 ±0.1	φ1.5 ±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

• Reel dimensions



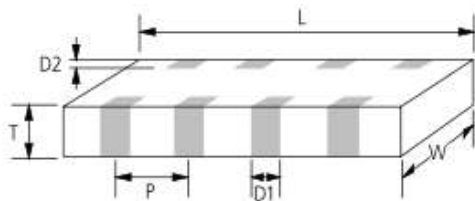
					Unit: mm
Symbol	Tape Width	A	B	C	D
7" Reel	8mm	Ø180+0/-3	Ø60+1/-0	Ø13±0.3	4±0.2
	12mm	Ø180+0/-3	Ø60+1/-0	Ø13±0.3	4±0.2
10" Reel	8mm	Ø258+0/-3	Ø80+1/-0	Ø13±0.3	4±0.2
	12mm	Ø258+0/-3	Ø80+1/-0	Ø13±0.3	4±0.2
13" Reel	8mm	Ø330±2.0	Ø80±1.0	Ø13±0.3	4±0.2
	12mm	Ø330±2.0	Ø80±1.0	Ø13±0.3	4±0.2

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

Chip Bead Array

1. Model : CIA3216 Type

2. Dimension



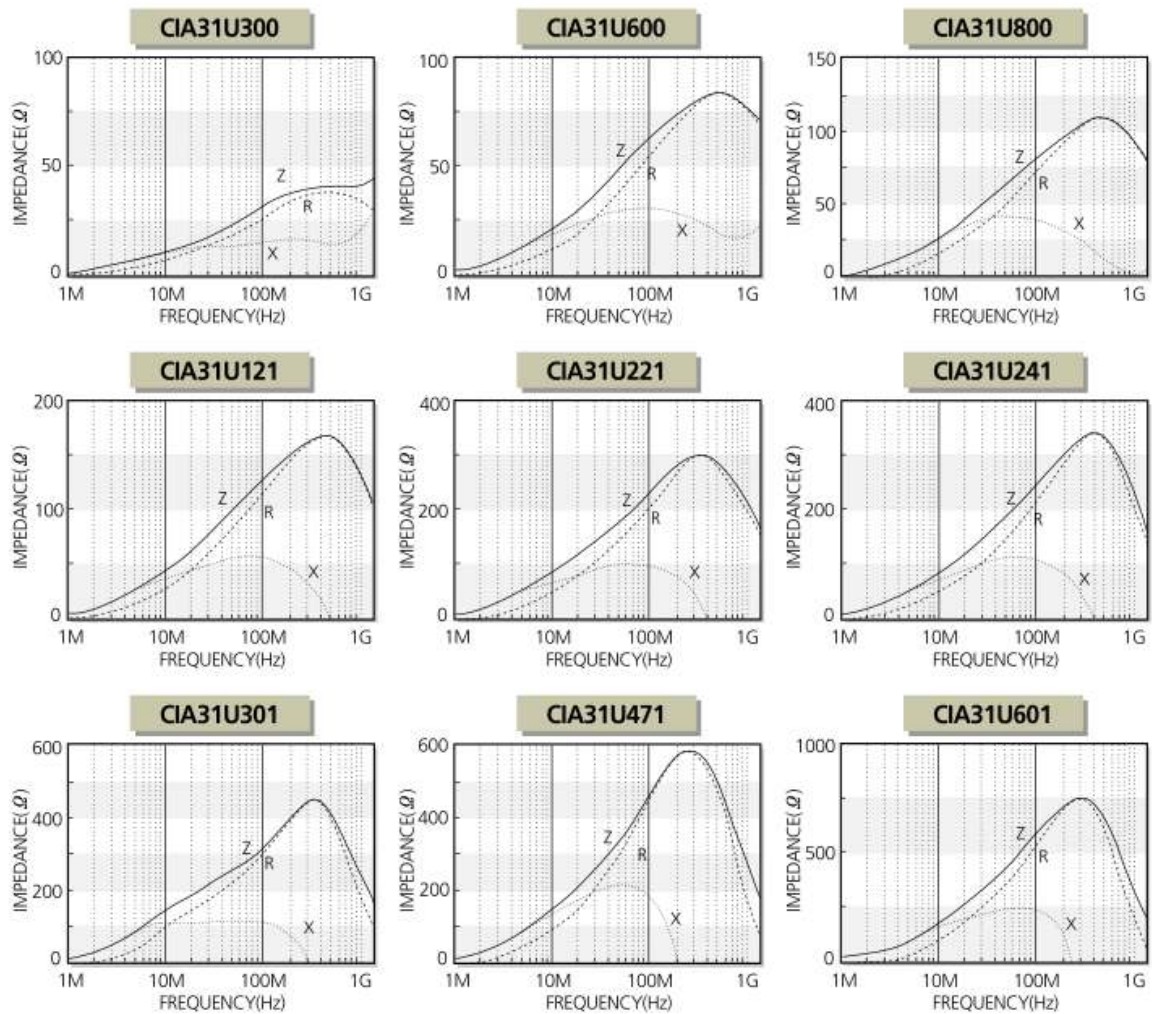
Type	Dimension [mm]					
	L	W	T	D1	D2	D3
31	3.2±0.2	1.6±0.2	0.8±0.2	0.4±0.2	0.3±0.15	0.8±0.1

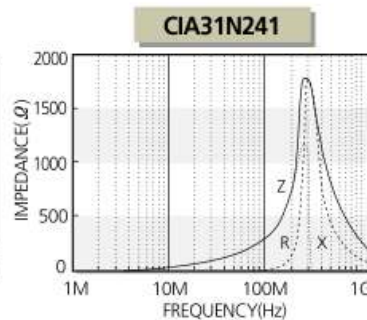
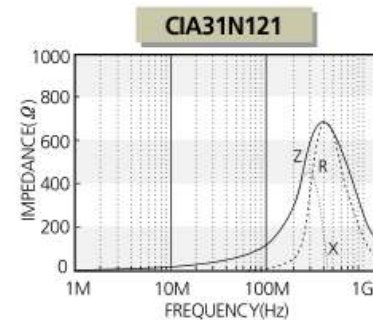
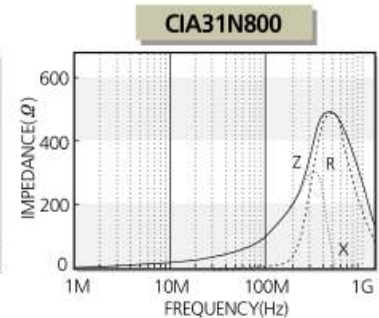
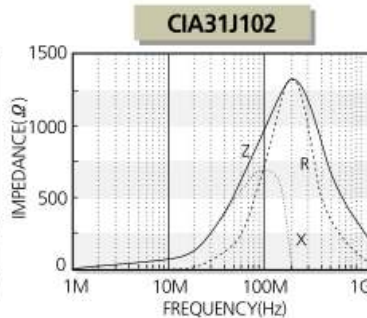
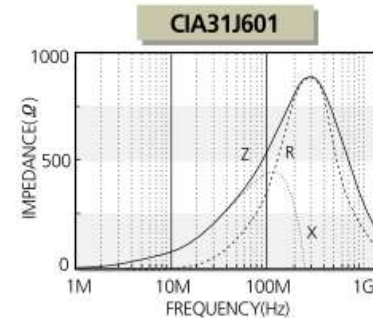
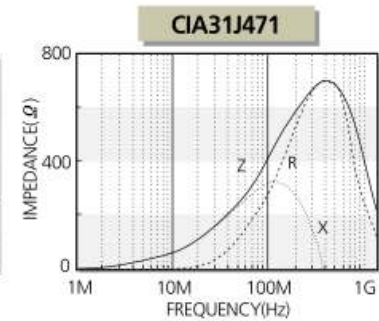
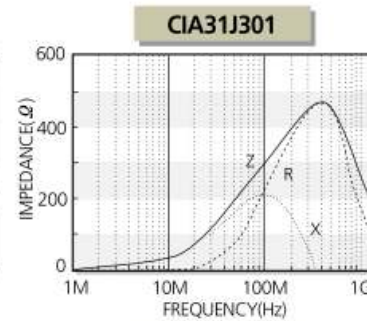
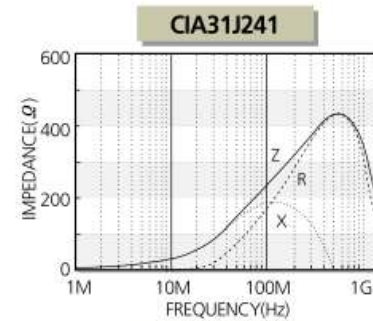
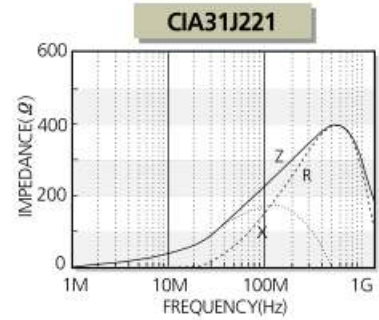
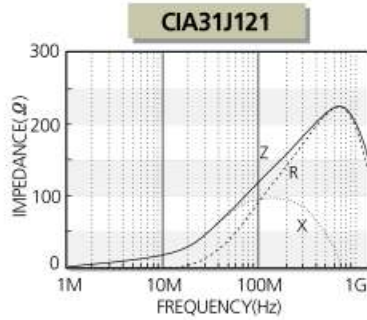
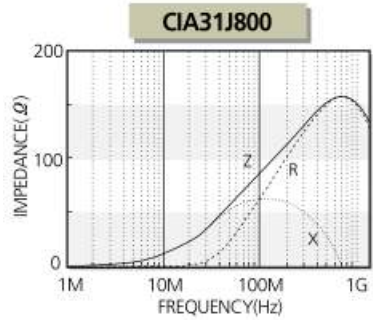
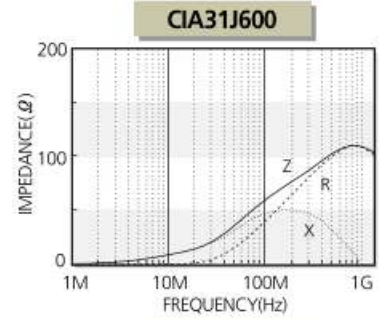
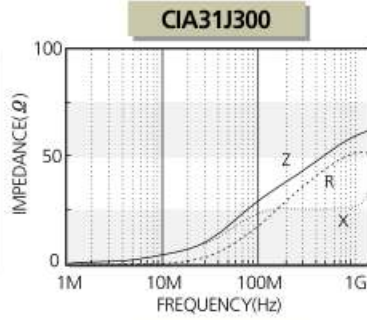
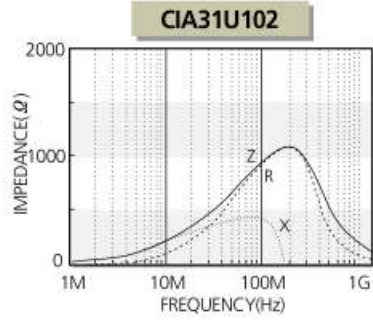
3. Description

Part no.	Thickness (mm)	Impedance (Ω)±25%@100MHz	DC Resistance (Ω) Max.	Rated Current (mA) Max.
CIA31U300	0.8±0.2	30	0.10	200
CIA31U600	0.8±0.2	60	0.15	150
CIA31U800	0.8±0.2	80	0.20	150
CIA31U121	0.8±0.2	120	0.20	150
CIA31U221	0.8±0.2	220	0.40	150
CIA31U241	0.8±0.2	240	0.40	150
CIA31U301	0.8±0.2	300	0.40	150
CIA31U471	0.8±0.2	470	0.50	150
CIA31U601	0.8±0.2	600	0.70	11
CIA31U102	0.8±0.2	1000	0.80	50
CIA31J300	0.8±0.2	30	0.10	200
CIA31J600	0.8±0.2	60	0.15	150
CIA31J800	0.8±0.2	80	0.20	150
CIA31J121	0.8±0.2	120	0.20	150
CIA31J221	0.8±0.2	220	0.40	150

CIA31J241	0.8±0.2	240	0.40	150
CIA31J301	0.8±0.2	300	0.40	150
CIA31J471	0.8±0.2	470	0.50	150
CIA31J601	0.8±0.2	600	0.70	100
CIA31J102	0.8±0.2	1000	0.80	50
CIA31N800	0.8±0.2	80	0.35	200
CIA31N121	0.8±0.2	120	0.55	200
CIA31N241	0.8±0.2	240	0.85	150

4. Characteristics data





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