

CHIP BEADS ARRAY

Array Series

❖ Features

- Good reliability (Monolithic structure)
- Magnetically shielded
- Fast mounting speed
- RoHS compliant

❖ Applications

- CD-ROM, DVD, MD Lines
- Digital TVs and VTRs

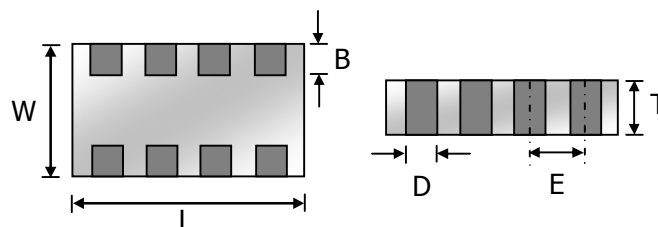
❖ General Code



- Series Code
CBA : Chip Ferrite Beads Array
- Dimension Code
The first two digits : length (mm)
The last two digits : width (mm)
- Application Code
G : Signal Line
P : High Current Line
U : Ultra High Current Line
- Material Code
A: General Frequency
K,J: Medium Frequency
M: High Frequency
V: Very High Frequency
- Impedance Value Code
The first two digits represents significant
The last digit is the number of zeros following
ex) 121 = 120 (Ω)
- Number of circuit
N4 : 4 array
- Packaging Code
E : Reel embossed tape packaging

❖ Dimensions

(unit : mm)

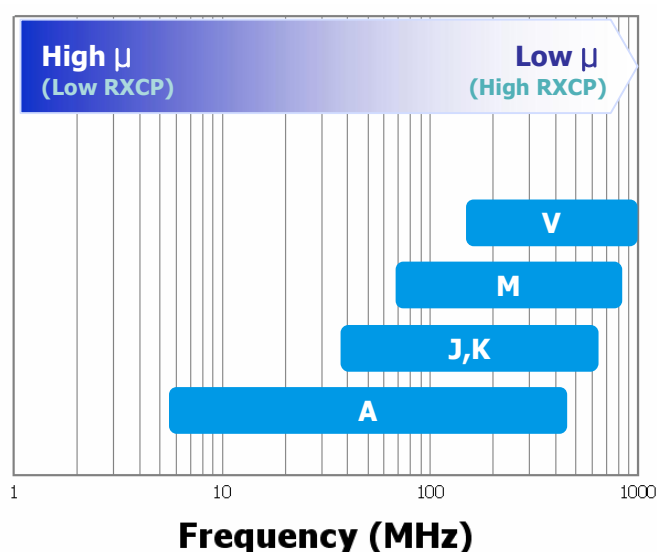


Size	3216
L	3.2±0.20
W	1.6±0.20
T	0.9±0.20
B	0.3±0.20
E	0.4±0.15
D	0.8±0.10

❖ Temperature Range

- Operating Temp. -55 ~ +125°C
- Storage Temp. -10 ~ +40 °C

❖ Typical Material Characteristics



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❖ 3216 SIZE

Samwha P/N	Impedance (Ω) $\pm 25\%$	DC Resistance (Ω) max.	Rated Current (mA) max.	Test Frequency (MHz)
CBA3216GA300N4	30	0.10	200	100
CBA3216GA600N4	60	0.25	200	
CBA3216GA121N4	120	0.30	300	
CBA3216GA221N4	220	0.35	150	
CBA3216GA301N4	300	0.40	100	
CBA3216GA471N4	470	0.45	100	
CBA3216GA601N4	601	0.50	100	
CBA3216GA102N4	100	0.70	50	
CBA3216GK600N4	60	0.25	400	
CBA3216GK121N4	120	0.30	350	
CBA3216GK221N4	220	0.35	250	
CBA3216GK301N4	300	0.40	250	
CBA3216GK471N4	470	0.50	200	
CBA3216GK601N4	600	0.60	200	
CBA3216GK102N4	1000	0.75	150	
CBA3216GM300N4	30	0.10	200	
CBA3216GM600N4	60	0.12	200	
CBA3216GM121N4	120	0.20	100	
CBA3216GM301N4	300	0.45	100	
CBA3216GM471N4	470	0.45	100	
CBA3216GM601N4	600	0.50	100	

※ Measuring Equipment

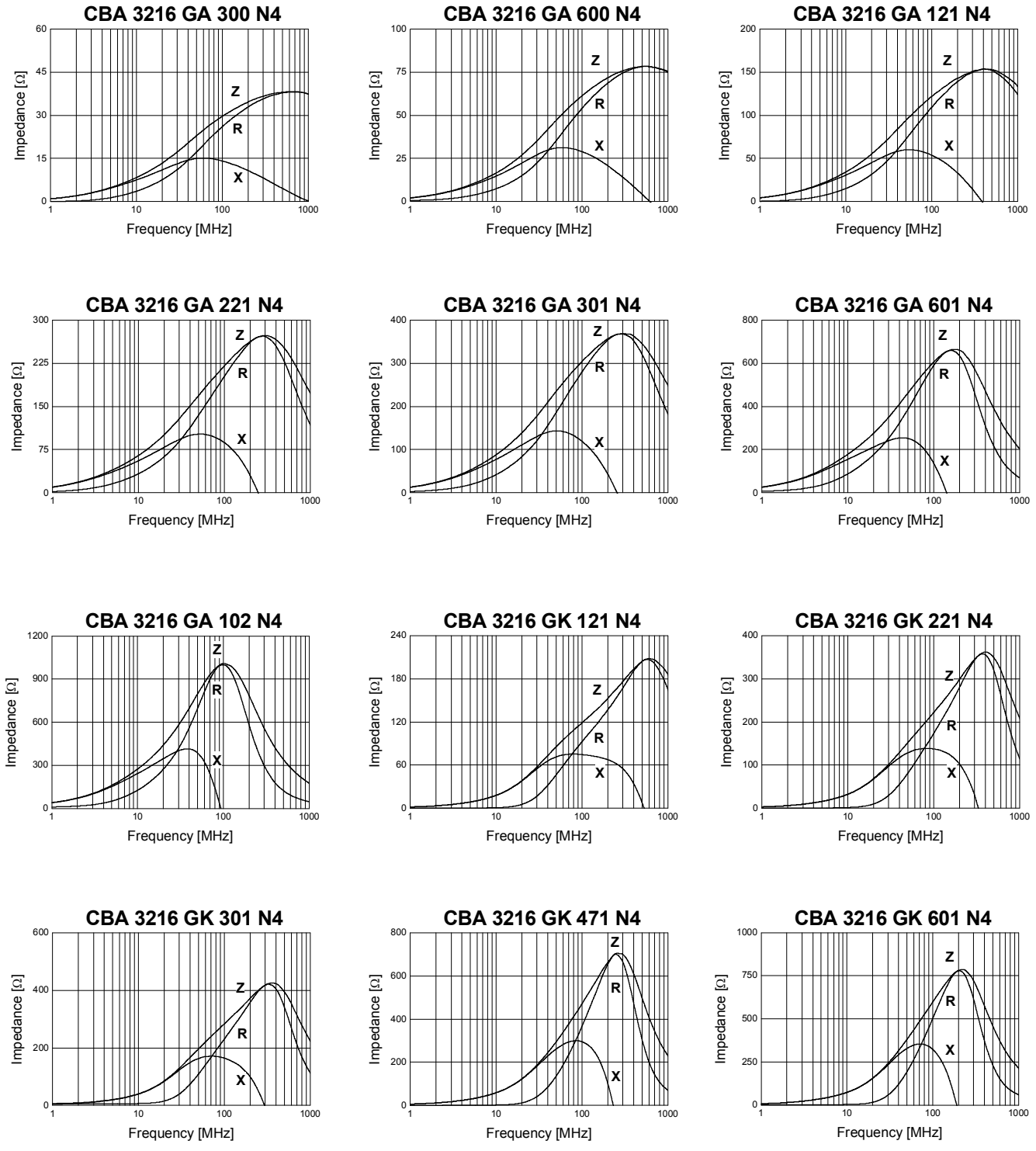
-. Z : HP4291B / E4991A

-. Rdc : HP4338B

CHIP BEADS ARRAY



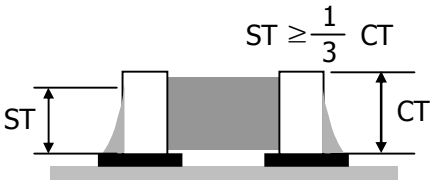
❖ 3216 SIZE



CHIP BEAD ARRAY Series

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Reliability & Test Condition

Item	Requirements	Test Conditions
Operating temperature range	- 55 °C ~ + 125 °C	-
Storage temperature range	40 °C max., 70% RH max.	at packing condition
Solderability	More than 90% of the terminal electrode shall be covered with new solder	Preheat temperature : 100 ~ 150 °C Preheat time : 60 sec. Solder temperature : 245 ± 5 °C Soldering time : 10 ± 1 sec.
Resistance to soldering heat	<ol style="list-style-type: none"> 1. No damage such as cracks should be caused in chip element 2. More than 75% of the terminal electrode shall be covered with new solder 3. Impedance shall not change more than ± 30 % 	Preheat temperature : 100 ~ 150 °C Preheat time : 60 sec. Solder temperature : 270 ± 10 °C Soldering time : 10 ± 0.5 sec.
Reflow soldering	<p>More than 50% of the terminal electrode shall be covered with new solder</p> 	Preheat temperature : 150 °C Preheat time : 60 sec. Solder temperature : 245 ± 5 °C Soldering time : 10 sec. max. (Reflow soldering profile)
High temperature resistance		Temperature : 125 ± 3 °C Time : 500 ± 12 hours Measurement at room ambient temperature after placing for 24 hours
High temperature load resistance	<ol style="list-style-type: none"> 1. No mechanical damage 2. Impedance shall not change more than ± 30 % 	Temperature : 125 ± 3 °C Applied current : rated current Time : 1000 ± 12 hours Measurement at room ambient temperature after placing for 24 hours
Humidity resistance		Temperature : 40 ± 2 °C Humidity : 90 ± 2 % RH Time : 500 ± 12 hours Measurement at room ambient temperature after placing for 24 hours

Reliability & Test Condition

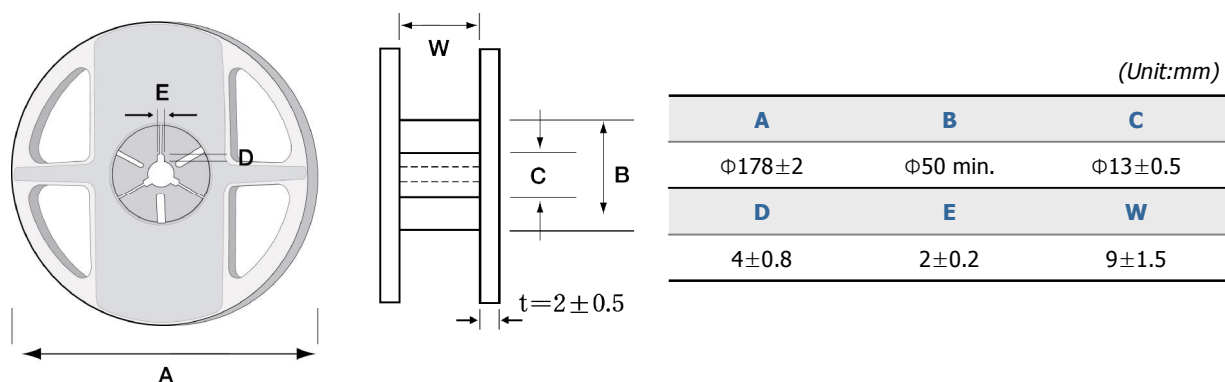
Item	Requirements	Test Conditions	
Humidity load resistance	1. No mechanical damage 2. Impedance shall not change more than $\pm 30\%$	Temperature : $40 \pm 2\text{ }^{\circ}\text{C}$ Humidity : $90 \pm 2\%$ RH Applied current : rated current Time : 500 ± 12 hours Measurement at room ambient temperature after placing for 24 hours	
Low temperature resistance		Temperature : $-55 \pm 3\text{ }^{\circ}\text{C}$ Time : 1000 ± 12 hours Measurement at room ambient temperature after placing for 24 hours	
Thermal shock		1. $-55 \pm 3\text{ }^{\circ}\text{C}$ for 30 minutes 2. $125 \pm 3\text{ }^{\circ}\text{C}$ for 30 minutes 3. repeat 100 cycle	
Vibration		Frequency : 10 ~ 55 Hz Amplitude : 1.5 mm Direction : X, Y, Z Sweep time : 2 hours for each axis	
Drop		Drop 10 times on a concrete floor from a height of 100 cm	
Flexure strength	No mechanical damage		
	ITEM		4 ARRAY
	A (mm)		0.8
	B (mm)		0.8
	C (mm)		3.0
W (kgf)	0.4		
Bending strength	The terminal electrode shall be neither break off nor the chip damage		

Packaging

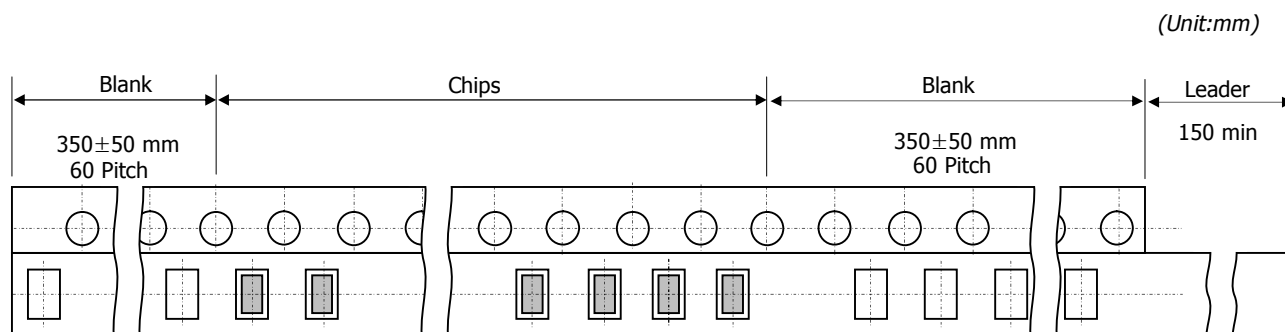
❖ Standard Quantity

Size	Q'TY(PCS)	Remarks
1005	10,000	
1608	4,000	
2012	4,000	0.85 T size
3216	3,000	
4516	2,000	
4532	1,000	

❖ Reel Dimension



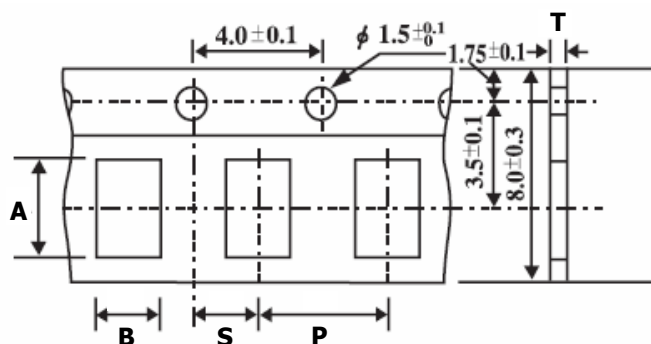
❖ Leader & Blank Portion



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Packaging

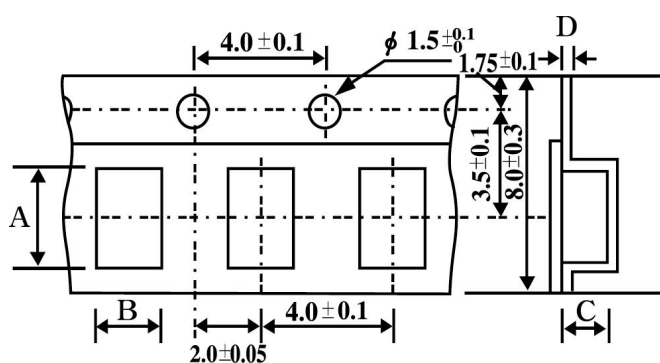
❖ Taping Dimensions (Paper tape)



(Unit:mm)

Type	A ±0.1	B ±0.1	P ±0.1	S ±0.1	T (Max.)
1005	1.15	0.65	2.0	1.0	0.8
1608	1.80	1.00	4.0	2.0	1.1
2012	2.30	1.55	4.0	2.0	1.1

❖ Taping Dimensions (Emboss tape)



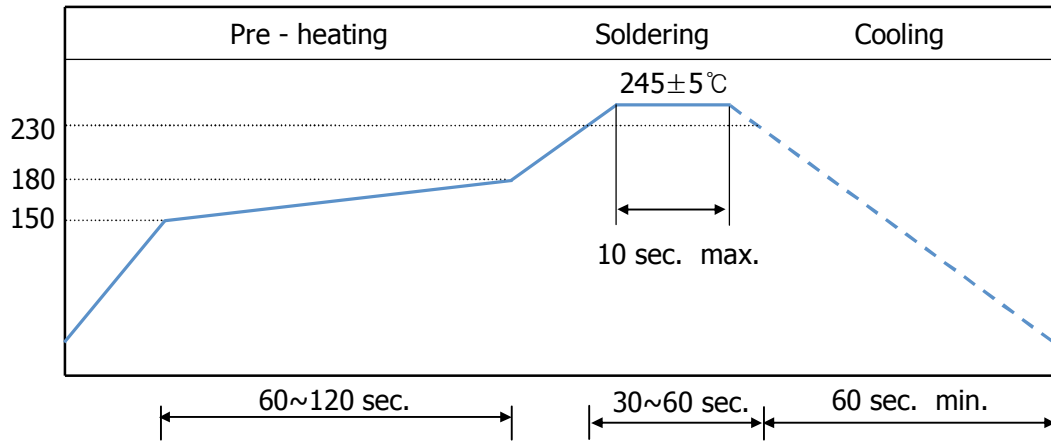
(Unit:mm)

Type	A ±0.1	B ±0.1	C ±0.1	D ±0.1
2012	2.25	1.45	1.50	0.23
3216	3.50	1.85	1.25	0.23
4516	4.90	1.90	1.35	0.30
4532	4.85	3.60	1.40	0.30

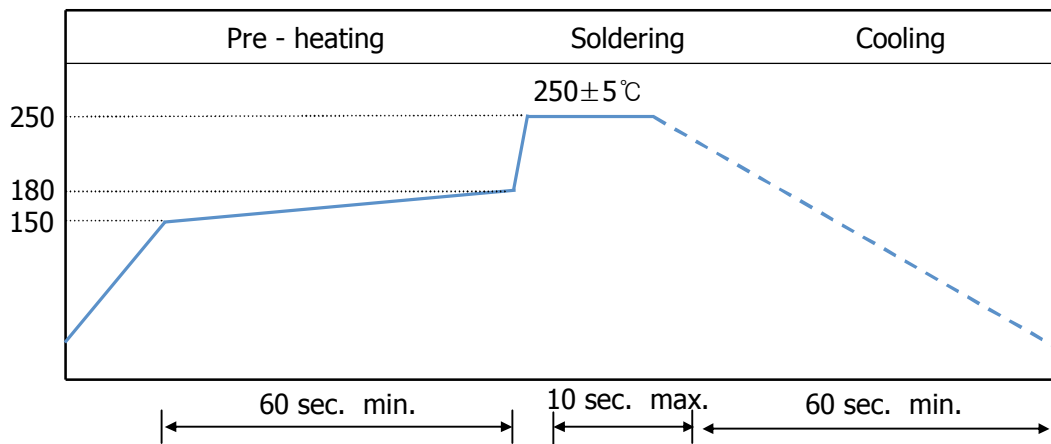
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Soldering Profile

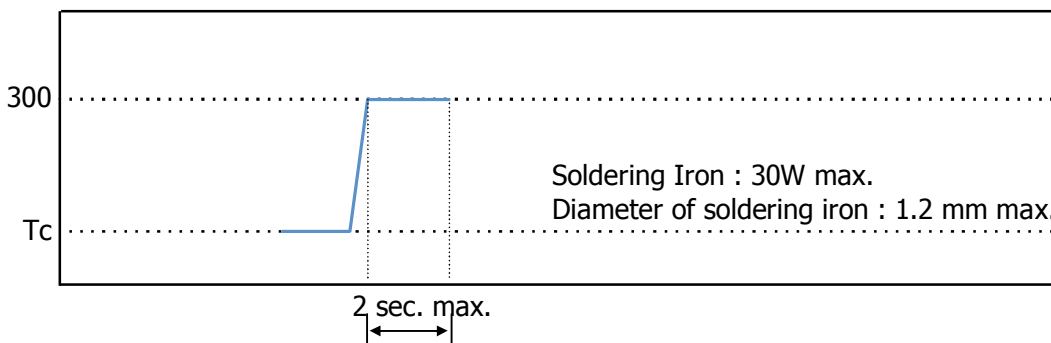
❖ Reflow Soldering



❖ Flow Soldering



❖ Manual Soldering



CHIP BEAD, Soldering Profile

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