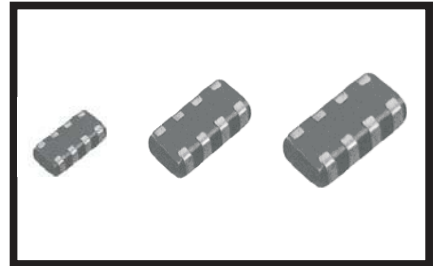


# 片式磁珠排 FERRITE CHIP BEADS ARRAY

## 片式磁珠排 FERRITE CHIP BEADS ARRAY

OPERATING TEMP.	-40~+85℃
-----------------	----------



### ● 特征 FEATURES

- 同尺寸下集多個磁珠于一體，適合于更高密度、更高效率的表面貼裝。
- 在較寬頻率範圍內具有優秀的阻抗頻率特性，對各種噪聲提供優良的抑制。
- 獨石設計，將漏磁、鄰近回路串擾減至最小。
- 應用于回流焊、波峰焊。
- Combine beads with the same dimension into one, suitable for SMT with higher density and efficiency.
- Super impedance frequency within the relatively wide range of frequency, providing excellent suppression to all kinds of noises.
- Monolithic designing, minimizing disturbance from magnetic shield and circuit nearby.
- Used in reflow or wave soldering.

### ● 應用 APPLICATIONS

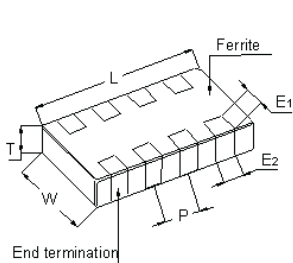
- 應用在HDTV、計算機I/O綫、液晶顯示器外圍總綫、打印機、傳真機等。
- Applied in HDTV, computer I/O wire, peripheral wire of LCD, printer, facsimile and so on.

### ● 產品規格型號的表示方法 ORDERING CODE

$\frac{CBA}{①}$      $\frac{321609}{②}$      $\frac{-4}{③}$      $\frac{U}{④}$      $\frac{310}{⑤}$      $\frac{T}{⑥}$

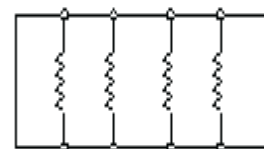
① 產品代號 Product Code		② 規格尺寸(L × W × T) (mm) Dimensions		③ 回路數 Circuit Num.		④ 材料 Material Code	⑤ 阻抗(Ω) Impedance		⑥ 包裝方式 Packaging Style	
CBA	片式磁珠排 Multilayer Chip Beads Array	321609	3.2 × 1.6 × 0.9	實例 Example 4	4 circuits	U	實例 Example 310 601	31 600	T	卷帶盤裝 Tape & Reel
									B	散裝 Bulk

### ● 外形尺寸 SHAPE AND DIMENSIONS



unit: mm

L	W	T
3.2 ± 0.2	1.6 ± 0.2	0.9 ± 0.1
E1	E2	P
0.35 ± 0.2	0.3 ± 0.2	0.8 ± 0.1

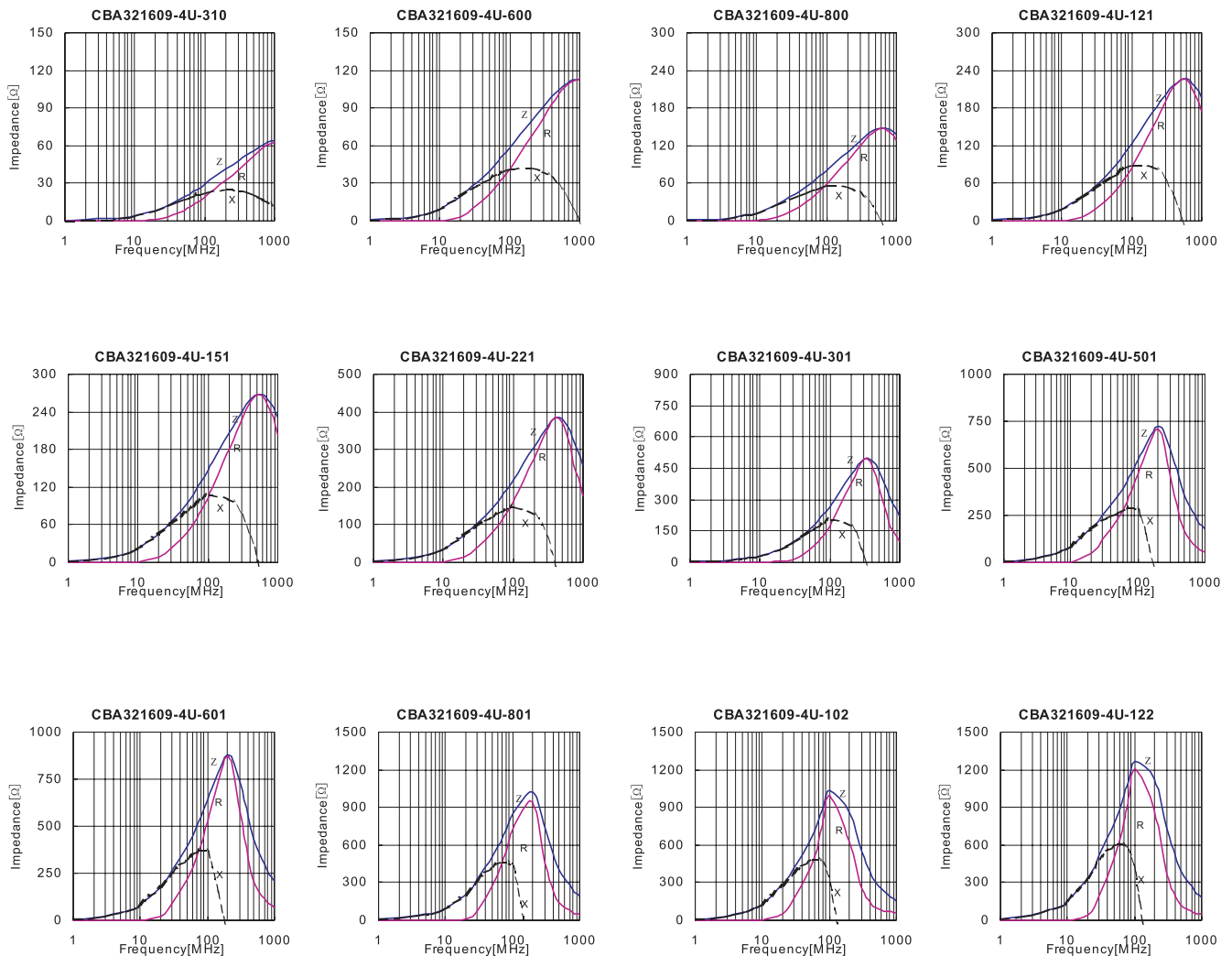


● 電性能參數 ELECTRICAL CHARACTERISTICS

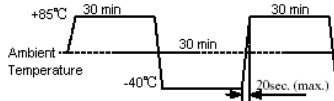
3216 TYPE

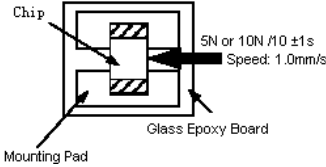
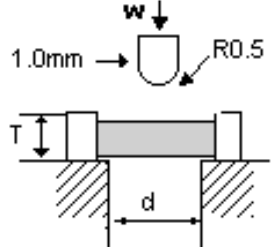
Part No.	Impedance( $\Omega$ ) At 100MHz	DCR ( $\Omega$ )Max	I <sub>r</sub> (mA)Max
CBA321609-4U-310	31 $\pm$ 25%	0.10	500
CBA321609-4U-600	60 $\pm$ 25%	0.15	500
CBA321609-4U-800	80 $\pm$ 25%	0.35	500
CBA321609-4U-121	120 $\pm$ 25%	0.35	500
CBA321609-4U-151	150 $\pm$ 25%	0.35	500
CBA321609-4U-221	220 $\pm$ 25%	0.45	300
CBA321609-4U-301	300 $\pm$ 25%	0.50	250
CBA321609-4U-501	500 $\pm$ 25%	0.70	200
CBA321609-4U-601	600 $\pm$ 25%	0.70	200
CBA321609-4U-801	800 $\pm$ 25%	0.70	100
CBA321609-4U-102	1000 $\pm$ 25%	0.80	50
CBA321609-4U-122	1200 $\pm$ 25%	0.90	50

■ 片式磁珠排  
FERRITE CHIP BEADS ARRAY



■ 可靠性測試  
RELIABILITY TESTING

Type	Item	Specified value	Test methods
1	Operating temperature range	-40 to +125°C	
2	Storage temperature range	-10 to +40°C	
3	Solderability	At least 90% of terminal electrode is covered by new solder	Solder temperature: 230±5°C Duration: 4±1S Preheating temperature: 120 to 150°C Preheating time: 60S immersion into the colophony flux for 3 to 5 sec. Flux: immersion into methanol solution with colophony for 3 to 5 sec. Immersion speed: 25mm/sec
4	Resistance to soldering	Appearance: No significant abnormality. At least 75% of terminal electrode is covered by new solder Impedance change: within ±20% Inductor change: within ±10%	Solder temperature: 260±5°C Duration: 10±0.5S Preheating temperature: 120 to 150°C Preheating time: 60S immersion into the colophony flux for 3 to 5 sec. Flux: immersion into methanol solution with colophony for 3 to 5 sec. Immersion speed: 25mm/sec
5	Thermal shock	Appearance: No significant abnormality. Impedance change: within ±30% Inductor change: within ±10% Q value change(ferrite):within ±30% Q value change(ceramic):within ±20%	Temperature: -40°C for 30±3min +85°C for 30±3min Transforming interval :max 20 sec Number of cycles: 32 
6	Loading at low temperature	Appearance: No significant abnormality. Impedance change: within ±20% Inductor change: within ±10%	Temperature: -55±2°C Duration: 500 <sup>+24</sup> <sub>-0</sub> hrs
7	Loading at high temperature	Appearance: No significant abnormality. Impedance change: within ±30% Inductor change: within ±10% Q value change(ferrite):within ±30% Q value change(ceramic):within ±20%	Temperature: 85±2°C Duration: 1000 <sup>+24</sup> <sub>-0</sub> hrs Applied current: Rated current
8	Loading under Damp Heat	Appearance: No significant abnormality. Impedance change: within ±30% Inductor change : within ±10% Q value change(ferrite):within ±30% Q value change(ceramic):within ±20%	Temperature: 55±2°C Duration: 500 <sup>+24</sup> <sub>-0</sub> hrs Humidity: 90 to 95%RH Applied current: Rated current

Type	Item	Specified value	Test methods								
9	Vibration	Appearance: No significant abnormality. Impedance change: within $\pm 30\%$ Inductor change: within $\pm 10\%$ Q value change (ferrite): within $\pm 30\%$ Q value change (ceramic): within $\pm 20\%$	Amplitude: 1.5mm Directions: 2hrs each in X Y Z direction Frequency range: 10 to 55 to 10Hz (min) Applied force: 5N force for 1005 and 1608 series. 10N force for 2012, 3216, 3225, 4516, 4532 series. Keep time: $10 \pm 1$ S								
10	Adhesion of electrode	The termination and body should be no damage	Applied force: 5N force for 1005 and 1608 series. 10N force for 2012, 3216, 3225, 4516, 4532 series. Keep time: $10 \pm 1$ S  								
11	Resistance to pressure of substrate	The body shall not be damaged by forces applied on the right.  <table border="1" data-bbox="454 1209 821 1288"> <tr> <td>d</td> <td>1.3</td> <td>1.3</td> <td>2.0</td> </tr> <tr> <td>w</td> <td>2.0</td> <td>3.0</td> <td>4.0</td> </tr> </table>	d	1.3	1.3	2.0	w	2.0	3.0	4.0	
d	1.3	1.3	2.0								
w	2.0	3.0	4.0								

Note: When there are questions concerning, measurement shall be made after  $24 \pm 2$  hrs of recovery under the standard condition.

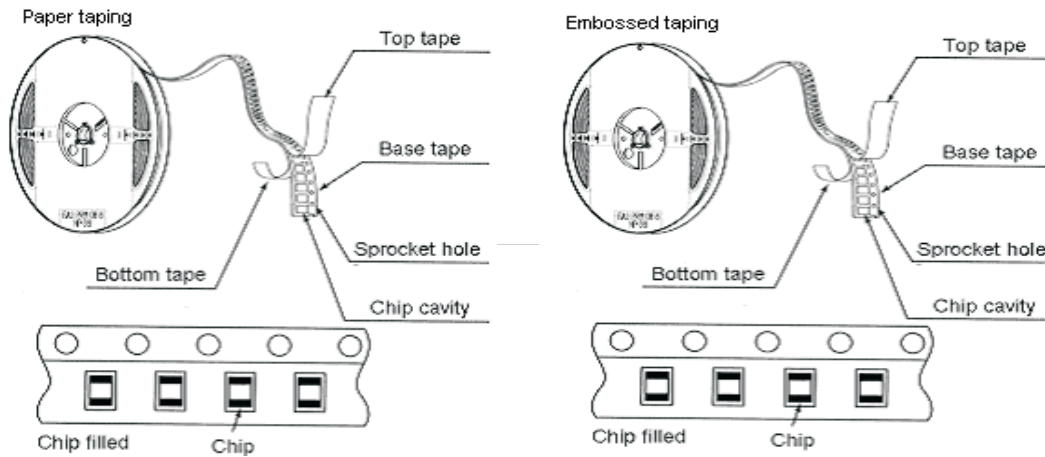
## 包裝PACKAGING

(VHF、CMI、CBG、CBW、CBH、CBY、CBA、CBM SERIES)

### STANDAE QUANTITY

Type	1000505	160808	201209	321609	321611	322513	451616	453215	321609 (磁珠排)
Quantity(pcs)	10000	4000	4000	4000	3000	3000	5000	3000	3000

### TAPING DRAWINGS



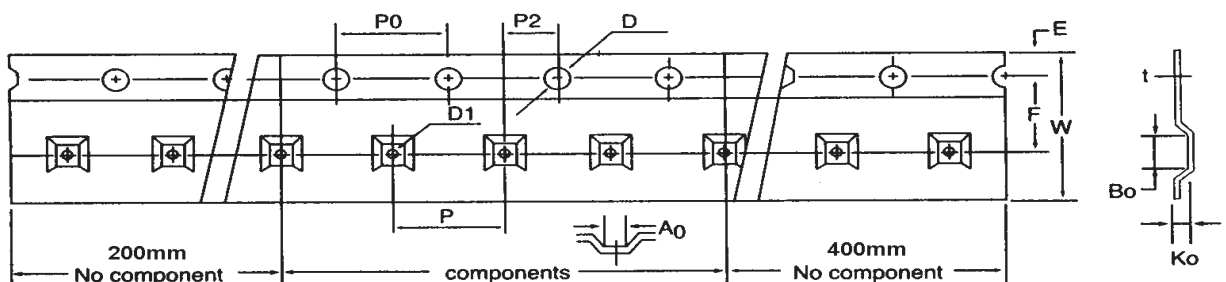
### TAPING DIMENSIONS (UNIT: mm)

#### Paper tape



Part NO.	A	B	F	T
100505	$0.65 \pm 0.1$	$1.15 \pm 0.1$	$2.0 \pm 0.05$	0.62max
160808	$1.1 \pm 0.1$	$1.9 \pm 0.1$	$4.0 \pm 0.05$	1.1max
201209	$1.5 \pm 0.1$	$2.3 \pm 0.1$	$4.0 \pm 0.05$	1.1max
321609	$1.9 \pm 0.1$	$3.5 \pm 0.1$	$4.0 \pm 0.05$	0.97max

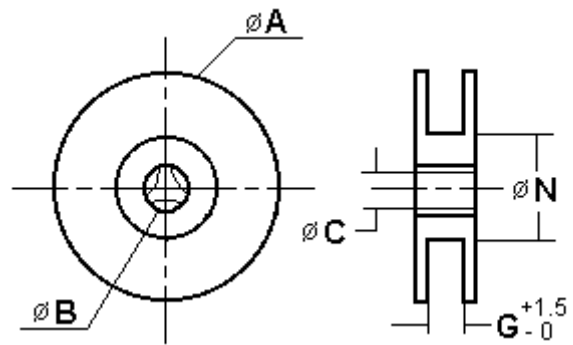
#### Embossed tape



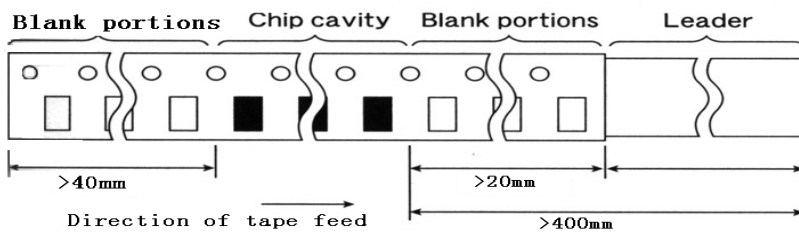
	2012	3216	3225	4516	4532	3216(磁珠排)
W	8.1+/-0.2	8.1+/-0.2	8.1+/-0.2	12.0+/-0.2	12.0+/-0.2	8.1+/-0.2
P	4.0+/-0.10	4.0+/-0.10	4.0+/-0.10	4.0+/-0.10	8.0+/-0.10	4.0+/-0.10
E	1.75+/-0.10	1.75+/-0.10	1.75+/-0.10	1.75+/-0.10	1.75+/-0.10	1.75+/-0.10
F	3.50+/-0.10	3.50+/-0.10	3.50+/-0.10	5.50+/-0.10	5.50+/-0.10	3.50+/-0.10
D	1.55+/-0.05	1.55+/-0.05	1.55+/-0.05	1.55+/-0.05	1.55+/-0.05	1.55+/-0.05
D1	1.50 <sup>+0.25</sup> <sub>-0</sub>	1.50 <sup>+0.25</sup> <sub>-0</sub>	1.50 <sup>+0.25</sup> <sub>-0</sub>	1.50 <sup>+0.25</sup> <sub>-0</sub>	1.50 <sup>+0.25</sup> <sub>-0</sub>	1.50 <sup>+0.25</sup> <sub>-0</sub>
P <sub>0</sub>	4.0+/-0.10	4.0+/-0.10	4.0+/-0.10	4.0+/-0.10	4.0+/-0.10	4.0+/-0.10
P <sub>0</sub> 10	40.0+/-0.20	40.0+/-0.20	40.0+/-0.20	40.0+/-0.20	40.0+/-0.20	40.0+/-0.20
P2	2.0+/-0.05	2.0+/-0.05	2.0+/-0.05	2.0+/-0.05	2.0+/-0.05	2.0+/-0.05
A <sub>0</sub>	1.52+/-0.10	1.90+/-0.10	2.80+/-0.10	1.93+/-0.10	3.66+/-0.10	1.90+/-0.10
B <sub>0</sub>	2.41+/-0.10	3.51+/-0.10	3.50+/-0.10	4.95+/-0.10	4.95+/-0.10	3.51+/-0.10
t	0.23+/-0.10	0.23+/-0.10	0.23+/-0.10	0.23+/-0.10	0.23+/-0.10	0.23+/-0.10
K <sub>0</sub>	1.35+/-0.10	1.27+/-0.10	1.55+/-0.10	1.85+/-0.10	1.74+/-0.10	1.10+/-0.10

• REEL DIMENSIONS(UNIT:mm)

	A	B	C	N	G
CF-8	178±2.0	22±2.0	12.5±1.5	57±2.0	8
CF-12	330±2.0	22±2.0	12.5±1.5	98±2.0	12



• LEADER AND BLANK PORTION



• PEELING OFF FORCE : 0.05 to 0.7N in the direction show below.

