

Product Series Code	GAR	Brand	GOTREND
File Version	GAR321609PGH121N-V1R0	Editor	Teddy
Established Date	2014.08.28	Description	Ferrite Multilayer Chip Bead Array
Latest Edit Date	2014.08.28	Pages	Page : 2

Features & Application:

- * High integrated / compact 4 line bead noise reduce circuit
- * Fit for power line & signal line circuit
- * To help you go pass the CE/FCC standard.
- * Mobil Device / Handheld Device / LowProfile Device / Panel...

Part No Example:

GAR 321609 P GH 121 N

 1 2 3 4 5 6

1. GAR : GOTREND Series
2. 321609 : Dimension : Length x Width x Height
3. P : Pb free < 1000 ppm
4. GH = High-Current
5. 121 : Impedance = 120 Ohm
6. N : Tolerance N = 25%

Test Equipment :

- * HP4284A, HP42841A- L, IDC, Q, RDC
- * HP8753D NETWORK ANALYZER- SRF

Standard Atmospheric Conditions:
 Ambient Temp: 20±15°C
 Relative Humidity: 65±20%
 If there may be any doubt on the result,
 measurement shall be made within the following limits:
 Ambient Temp: 25±5°C
 Relative Humidity: 75±10%

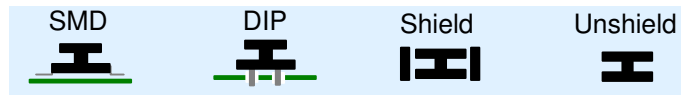
Operating & Storage Condition:

OPERATING TEMP: -55~+125°C
 STORAGE TEMP: -55~+125°C
 STORAGE LIFE TIME: 12 MONTH @25°C , RH 65%

Attention & Caution:

- Please avoid following matters:
- * Splashing water or salt water
 - * Toxic Gas (Hydrogen sulfide, Sulfurous acid, Chlorine, Ammonia)
 - * Vibrations or shocks which exceed the specified condition
 - * Dew condenses
 - * Please be careful for the stress to this product by board flexure or something after the mounting.

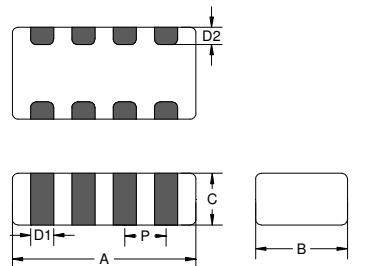
Product Structure



2005 RoHS Compliant - SGS Certified Result

鉛 Pb	鎘 Cd	汞 Hg	六價鉻 Cr+6	溴化聯苯 PBB	溴化聯苯 醌PBDE
<1000ppm	ND	ND	ND	ND	ND

Dimensions: [mm]

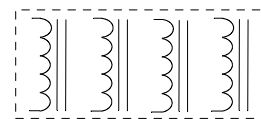


TYPE	A[+/-0.2]	B[+/-0.2]	C[+/-0.2]	D1[+/-0.15]	D2[+/-0.1]	P[+/-0.1]
321609	3.2	1.6	0.9	0.4	0.3	0.8

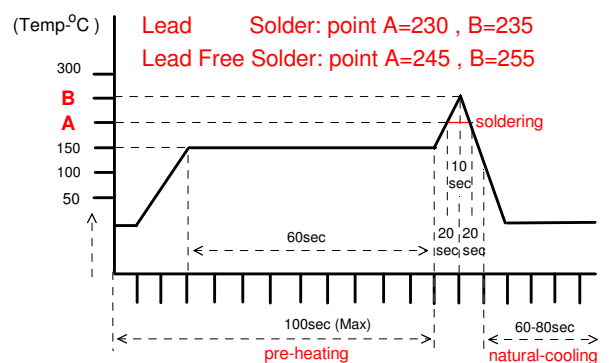
Size Code & Package Quantity:

JIS CODE	EIA CODE	PCS / REEL	REEL / BOX
321609	1206	3000	5

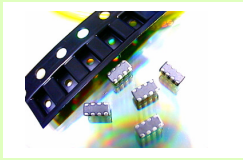
SCHEMATIC:



Recommand Reflow Curve (TIME:Second)



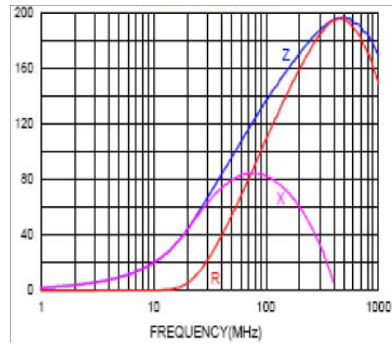
Notice: Iron Soldering: 3 Seconds Max. @260°C

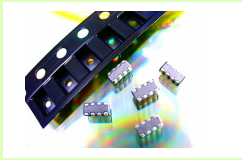


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PART NO.	IMPEDANCE @ 100 MHz [Ohm]	DC RESISTANCE [Ohm]	RATED CURRENT [mA]
GAR321609PGH121N	120 Ohm +/-25%	0.30 Max.	350 Max.

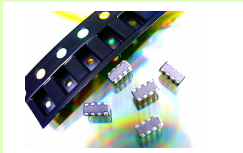
Impedance Frequency Characteristics (Typical)



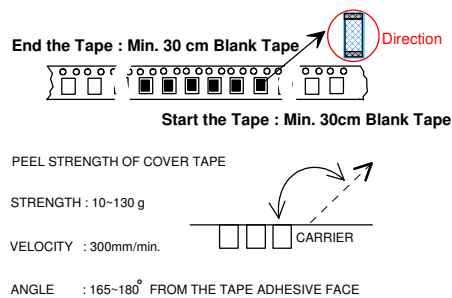
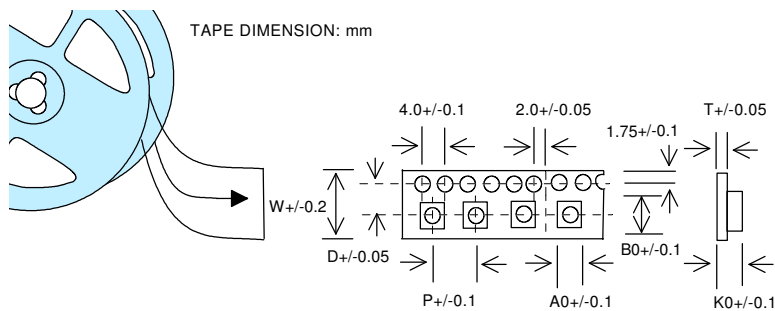


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Reliability Test Result :																			
NO	ITEM	TEST CONDITIONS	REMARKS																
1	Thermal Shock (Temperature Cycle)	Temperature:-55 ° C/+125 ° C kept stabilized for 30 minutes each Cycle: 100 Cycles	Inductance value shall be within $\pm 10\%$ of the initial value. Q-factor shall be within $\pm 30\%$ of the initial value. Impedance shall be within $\pm 20\%$ of the initial value. DCR value shall be within $\pm 20\%$ of the initial value.																
2	Humidity Resistance	Humidity: 90%~ 95% RH Temperature: 40 \pm 2 ° C Test Time: 1000 \pm 12 Hours	<p>■NO.1~4 Measurement:After placing for 24 hours (min.)</p> <p>■NO.2~3 Applied current(spec): Rated current(maximum value)</p> <p>■NO.5 Cycle: 5 cycles</p>																
3	HighTemperature	Temperature: 125 \pm 2 ° C Humidity: 20% Testing Time: 1000 \pm 12 Hours																	
4	Low Temperature	Temperature: -55 \pm 2 ° C Time: 1000 \pm 12 Hours																	
5	Temperature and Humidity Cycle	<table border="1"> <thead> <tr> <th>Step</th> <th>Temp</th> <th>Humidity</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>25\pm 2 ° C</td> <td>95~100%RH</td> <td>3.0Hr</td> </tr> <tr> <td>2</td> <td>55\pm 2 ° C</td> <td>95~96%RH</td> <td>9.5Hr</td> </tr> <tr> <td>3</td> <td>25\pm 2 ° C</td> <td>95~100%RH</td> <td>9.5Hr</td> </tr> </tbody> </table>		Step	Temp	Humidity	Time	1	25 \pm 2 ° C	95~100%RH	3.0Hr	2	55 \pm 2 ° C	95~96%RH	9.5Hr	3	25 \pm 2 ° C	95~100%RH	9.5Hr
Step	Temp	Humidity		Time															
1	25 \pm 2 ° C	95~100%RH	3.0Hr																
2	55 \pm 2 ° C	95~96%RH	9.5Hr																
3	25 \pm 2 ° C	95~100%RH	9.5Hr																
6	Vibration	Frequency: 10Hz~55Hz Amplitude: 1.5mm Direction: X,Y,Z Time: 2 Hours each																	
7	IR Reflow Soldering	Solder: H63A(eutectic solder) Solder Temp.: 230 \pm 5 ° C Time: 6 minutes Cycles: x 1	Impedance(inductance) shall be within $\pm 20\%$ of the initial value. DCR value shall be within $\pm 20\%$ of the initial value.																
8	Soldering Heat Resistance	Preheat:120 ~ 150 ° C (60 sec) Solder:H63A(eutectic solder) Solder Temp.: 260 \pm 5 ° C Flux: Rosin Dip time: 10 \pm 1 seconds	The chip must have no cracks.More than 75% of the terminal electrode must be covered with solder.																
9	Bending Strength		The terminal electrode and the ferrite must not be damaged by the forces applied on the test conditions.																
10	Flexure Strength		No mechanical damage shall be noticed even when the board is bent 2 mm																
11	Terminal Strength		The terminal electrode and the ferrite must not be damaged by the forces applied on the test conditions. 201209: $\geq 1.0\text{kg}$ 321609: $\geq 1.5\text{kg}$																

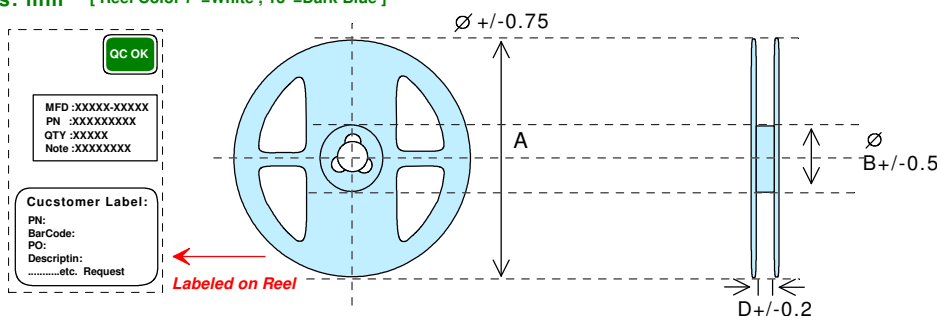


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SIZE/mm	Ao	Bo	W	D	T	P	Ko
321609	1.88	3.50	8.00	3.50	0.20	4.00	1.27

Reel Dimensions: mm [Reel Color 7"=White , 13"=Dark Blue]



SIZE / mm	A	B	D	REEL SIZE	QTY/REEL
321609	178	60	13.5	7"	3K

BOX Package:cm

