





Product Series Code	<b>GBD</b>	Brand	<b>GOTREND</b>
File Version	<b>GBD-V5R6</b>	Editor	<b>Teddy</b>
Established Date	<b>2009.07.24</b>	Description	<b>Multilayer Ferrite Chip Bead</b>
Latest Edit Date	<b>2018.02.26</b>	Pages	<b>Page : 3</b>

### Features & Application:

- \* EMI Suppressor for Wide Band / Narrow Band / High Current
- \* Fit for power line & signal line circuit
- \* To help you go pass the CE/FCC standard.
- \* Mobile Device / Handheld Device / LowProfile Device / Panel...

### Part No Example:

GBD 201209 P GA 601 N  
 1 2 3 4 5 6

1. GBD : GOTREND Series
2. 201209 : Length 2.0mm X Width 1.2mm x Height 0.9mm
3. P : Pb < 100ppm
4. GA : Normal Curve ( General purpose use )  
 GB : Sharp Curve ( Narrow band )  
 GH : High-Current  
 GF : High-Frequency
5. 601 : Impedance (ohm) = 600 ohm
6. N : Tolerance M = +/-20%, N = +/-25%

### Operating & Storage Condition:

OPERATING TEMP : -40~+125°C  
 STORAGE TEMP : -40~+85°C  
 STORAGE LIFE TIME : 12 MONTH @25°C , RH 65%

### Attention & Caution:

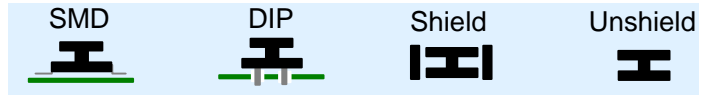
- Please avoid following matters:**
- \* Splashing water or salt water
  - \* Toxic Gas (Hydrogen sulfide, Sulfurous acid, Chlorine, Ammonia)
  - \* Vibrations or shocks which exceed the specified condition
  - \* Dew condenses
  - \* Please be careful for the stress to this product by board flexure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

### 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%

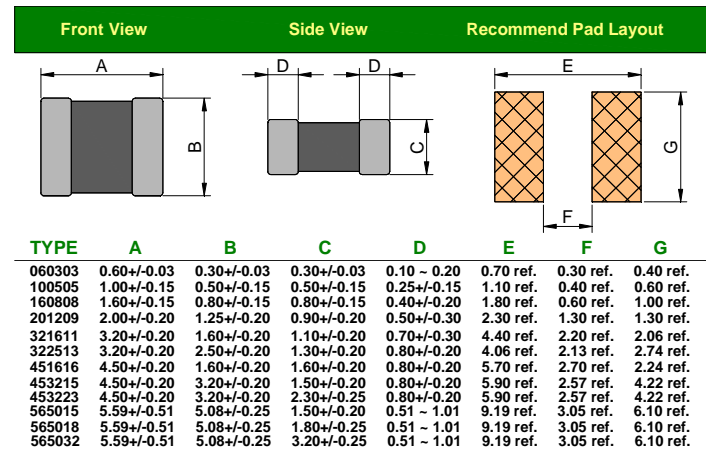
### Product Structure



### 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 醚PBDE
<1000ppm	ND	ND	ND	ND	ND

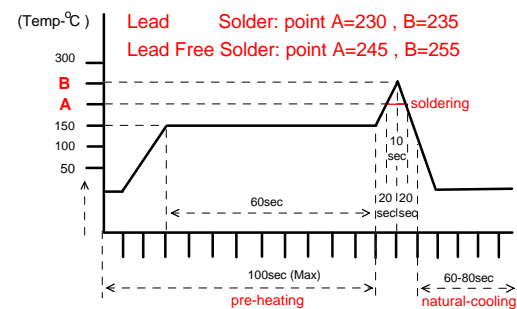
### DIMENSION : [ mm ]



### Size Code & Package Quantity :

JIS CODE	EIA CODE	PCS / REEL
060303	0201	15000
100505	0402	10000
160808	0603	4000
201209	0804	4000
321611	1206	3000
322513	1210	2000
451616	1806	2000
453215	1812	1000
565015	2220	2000
565018	2220	2000
565032	2220	2000

### Recomand Reflow Curve (TIME:Second)

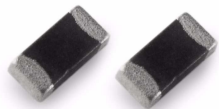




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## GBDXXXXXGAXXX GA Series for Normal Usage

Part No.	Z - Value (ohm) (+/- 25%)	Test Freq. (MHz) / 0.5V	DCR (ohm) (Max.)	Rated Current (mA) (Max.)
GBD060303PGA121N	120	100	0.45	200
GBD060303PGA151N	150	100	0.50	200
GBD100505PGA060N	6	100	0.05	500
GBD100505PGA100N	10	100	0.05	500
GBD100505PGA300N	30	100	0.20	300
GBD100505PGA330N	33	100	0.20	300
GBD100505PGA400N	40	100	0.30	300
GBD100505PGA470N	47	100	0.20	500
GBD100505PGA600N	60	100	0.40	200
GBD100505PGA750N	75	100	0.40	300
GBD100505PGA800N	80	100	0.40	200
GBD100505PGA101N	100	100	0.45	200
GBD100505PGA121N	120	100	0.50	200
GBD100505PGA221N	220	100	0.50	200
GBD100505PGA241N	240	100	0.50	200
GBD100505PGA301N	300	100	0.75	100
GBD100505PGA481N	480	100	0.80	200
GBD100505PGA601N	600	100	1.00	200
GBD100505PGA102N	1000	100	1.50	100
GBD100505PGA152N	1500	100	2.00	60
GBD160808PGA060N	6	100	0.05	500
GBD160808PGA100N	10	100	0.02	500
GBD160808PGA110N	11	100	0.05	500
GBD160808PGA190N	19	100	0.08	500
GBD160808PGA220N	22	100	0.10	400
GBD160808PGA250N	25	100	0.10	400
GBD160808PGA260N	26	100	0.10	400
GBD160808PGA300N	30	100	0.10	400
GBD160808PGA310N	31	100	0.10	400
GBD160808PGA400N	40	100	0.10	400
GBD160808PGA470N	47	100	0.10	300
GBD160808PGA500N	50	100	0.10	300
GBD160808PGA600N	60	100	0.10	300
GBD160808PGA700N	70	100	0.15	300
GBD160808PGA750N	75	100	0.15	300
GBD160808PGA800N	80	100	0.15	300
GBD160808PGA900N	90	100	0.20	300
GBD160808PGA101N	100	100	0.20	300
GBD160808PGA121N	120	100	0.25	300
GBD160808PGA151N	150	100	0.30	200
GBD160808PGA181N	180	100	0.30	200
GBD160808PGA201N	200	100	0.30	200
GBD160808PGA221N	220	100	0.30	200
GBD160808PGA241N	240	100	0.40	200
GBD160808PGA301N	300	100	0.40	200
GBD160808PGA331N	330	100	0.50	200
GBD160808PGA401N	400	100	0.30	400
GBD160808PGA451N	450	100	0.50	200
GBD160808PGA471N	470	100	0.50	200
GBD160808PGA501N	500	100	0.50	200
GBD160808PGA601N	600	100	0.50	200
GBD160808PGA751N	750	100	0.70	200
GBD160808PGA102N	1000	100	0.70	200
GBD160808PGA152N	1500	100	1.00	50
GBD160808PGA222N	2200	100	1.20	50
GBD160808PGA252N	2500	100	1.30	50

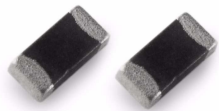


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## GBDXXXXXGAXXX

## GA Series for Normal Usage

Part No.	Z - Value (ohm) (+/- 25%)	Test Freq. (MHz) / 0.5V	DCR (ohm) (Max.)	Rated Current (mA) (Max.)
GBD201209PGA070N	7	100	0.10	600
GBD201209PGA090N	9	100	0.10	600
GBD201209PGA110N	11	100	0.10	600
GBD201209PGA170N	17	100	0.10	600
GBD201209PGA190N	19	100	0.10	600
GBD201209PGA220N	22	100	0.10	600
GBD201209PGA260N	26	100	0.10	600
GBD201209PGA300N	30	100	0.10	600
GBD201209PGA310N	31	100	0.10	600
GBD201209PGA320N	32	100	0.10	300
GBD201209PGA400N	40	100	0.10	500
GBD201209PGA470N	47	100	0.10	500
GBD201209PGA500N	50	100	0.10	500
GBD201209PGA600N	60	100	0.15	500
GBD201209PGA700N	70	100	0.15	500
GBD201209PGA800N	80	100	0.15	500
GBD201209PGA900N	90	100	0.15	500
GBD201209PGA101N	100	100	0.25	300
GBD201209PGA121N	120	100	0.25	300
GBD201209PGA151N	150	100	0.25	300
GBD201209PGA201N	200	100	0.30	300
GBD201209PGA221N	220	100	0.30	300
GBD201209PGA301N	300	100	0.30	300
GBD201209PGA331N	330	100	0.30	300
GBD201209PGA401N	400	100	0.30	300
GBD201209PGA451N	450	100	0.40	300
GBD201209PGA471N	470	100	0.40	300
GBD201209PGA501N	500	100	0.40	300
GBD201209PGA601N	600	100	0.40	300
GBD201209PGA751N	750	100	0.50	200
GBD201209PGA102N	1000	100	0.50	200
GBD201209PGA122N	1200	100	0.60	200
GBD201209PGA152N	1500	100	0.60	200
GBD201209PGA202N	2000	100	0.60	200
GBD201209PGA222N	2200	100	0.60	200
GBD201209PGA252N	2500	100	0.70	200
GBD201209PGA272N	2700	100	0.70	200



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## GBDXXXXXGAXXX

## GA Series for Normal Usage

Part No.	Z - Value (ohm) (+/- 25%)	Test Freq. (MHz) / 0.5V	DCR (ohm) (Max.)	Rated Current (mA) (Max.)
GBD321611PGA110N	11	100	0.05	600
GBD321611PGA190N	19	100	0.05	600
GBD321611PGA260N	26	100	0.05	600
GBD321611PGA300N	30	100	0.05	600
GBD321611PGA310N	31	100	0.05	600
GBD321611PGA320N	32	100	0.05	600
GBD321611PGA470N	47	100	0.10	500
GBD321611PGA500N	50	100	0.10	500
GBD321611PGA600N	60	100	0.10	500
GBD321611PGA700N	70	100	0.10	500
GBD321611PGA800N	80	100	0.15	500
GBD321611PGA900N	90	100	0.15	500
GBD321611PGA101N	100	100	0.15	500
GBD321611PGA121N	120	100	0.15	500
GBD321611PGA151N	150	100	0.15	500
GBD321611PGA201N	200	100	0.20	400
GBD321611PGA221N	220	100	0.20	400
GBD321611PGA301N	300	100	0.20	400
GBD321611PGA401N	400	100	0.20	400
GBD321611PGA471N	470	100	0.20	400
GBD321611PGA501N	500	100	0.20	400
GBD321611PGA601N	600	100	0.30	400
GBD321611PGA102N	1000	50	0.40	200
GBD321611PGA122N	1200	50	0.40	200
GBD321611PGA152N	1500	50	0.45	200
GBD321611PGA202N	2000	30	0.60	200
GBD321611PGA272N	2700	30	0.60	200
GBD321616PGA250N	25	100	0.10	500
GBD321616PGA600N	60	100	0.20	500
GBD321616PGA700N	70	100	0.20	500
GBD322513PGA320N	32	100	0.20	500
GBD322513PGA600N	60	100	0.20	500
GBD322513PGA900N	90	100	0.20	500
GBD451616PGA500N	50	100	0.20	600
GBD451616PGA600N	60	100	0.20	600
GBD451616PGA800N	80	100	0.20	600
GBD451616PGA101N	100	100	0.30	500
GBD451616PGA151N	150	100	0.30	500
GBD451616PGA171N	170	100	0.30	500
GBD453215PGA700N	70	100	0.30	500
GBD453215PGA121N	120	100	0.30	500



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## GBDXXXXXGBXXXX

## GB Series for **Narrow-Band** Signal Line use

Part No.	Z - Value (ohm)	Test Freq. (MHz) / 0.5V	DCR (ohm) (Max.)	Rated Current (mA) (Max.)
GBD100505PGB060N	6	100	0.10	300
GBD100505PGB100N	10	100	0.20	200
GBD100505PGB400N	40	100	0.40	150
GBD100505PGB800N	80	100	0.60	100
GBD100505PGB121N	120	100	0.80	50
GBD160808PGB060N	6	100	0.05	500
GBD160808PGB100N	10	100	0.07	400
GBD160808PGB300N	30	100	0.30	300
GBD160808PGB400N	40	100	0.30	300
GBD160808PGB470N	47	100	0.30	300
GBD160808PGB600N	60	100	0.30	300
GBD160808PGB750N	75	100	0.40	300
GBD160808PGB800N	80	100	0.40	300
GBD160808PGB101N	100	100	0.40	300
GBD160808PGB121N	120	100	0.40	300
GBD160808PGB131N	130	100	0.40	300
GBD160808PGB151N	150	100	0.40	300
GBD160808PGB221N	220	100	0.40	200
GBD160808PGB241N	240	100	0.40	200
GBD160808PGB301N	300	100	0.50	200
GBD160808PGB481N	480	100	0.60	150
GBD160808PGB601N	600	100	0.60	100
GBD160808PGB102N	1000	100	0.70	100
GBD160808PGB152N	1500	100	0.80	100
GBD160808PGB182N	1800	100	0.95	100
GBD160808PGB222N	2200	100	1.50	50
GBD201209PGB060N	6	100	0.07	800
GBD201209PGB110N	11	100	0.10	700
GBD201209PGB260N	26	100	0.20	600
GBD201209PGB300N	30	100	0.20	600
GBD201209PGB320N	32	100	0.20	600
GBD201209PGB400N	40	100	0.30	500
GBD201209PGB600N	60	100	0.30	500
GBD201209PGB750N	75	100	0.30	500
GBD201209PGB900N	90	100	0.30	500
GBD201209PGB101N	100	100	0.40	400
GBD201209PGB121N	120	100	0.40	400
GBD201209PGB151N	150	100	0.40	400
GBD201209PGB171N	170	100	0.50	400
GBD201209PGB201N	200	100	0.50	300
GBD201209PGB221N	220	100	0.50	300
GBD201209PGB301N	300	100	0.50	300
GBD201209PGB401N	400	100	0.50	300
GBD201209PGB501N	500	100	0.50	200
GBD201209PGB601N	600	100	0.50	200
GBD201209PGB751N	750	100	0.60	100
GBD201209PGB102N	1000	100	0.60	100
GBD201209PGB122N	1200	100	0.70	100
GBD201209PGB152N	1500	100	0.70	100
GBD201209PGB222N	2200	100	0.75	100
GBD201209PGB272N	2700	100	0.85	100



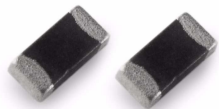
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## GBDXXXXXGBXXXX

## GB Series for **Narrow-Band** Signal Line use

Part No.	Z - Value (ohm)	Test Freq. (MHz) / 0.5V	DCR (ohm) (Max.)	Rated Current (mA) (Max.)
GBD321611PGB190N	19	100	0.20	600
GBD321611PGB320N	32	100	0.20	600
GBD321611PGB600N	60	100	0.30	500
GBD321611PGB800N	80	100	0.30	500
GBD321611PGB900N	90	100	0.30	500
GBD321611PGB121N	120	100	0.40	400
GBD321611PGB151N	150	100	0.40	400
GBD321611PGB201N	200	100	0.50	300
GBD321611PGB221N	220	100	0.50	300
GBD321611PGB351N	350	100	0.60	300
GBD321611PGB401N	400	100	0.60	300
GBD321611PGB601N	600	100	0.80	300
GBD321611PGB122N	1200	100	1.00	200
GBD321611PGB152N	1500	100	1.20	150





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## GBDXXXXXGHXXXX

## GH Series for High-Current use

Part No.	Z - Value (ohm)	Test Freq. (MHz) / 0.5V	DCR (ohm) (Max.)	Rated Current (mA) (Max.)
GBD100505PGH100N	10	100	0.030	2000
GBD100505PGH300N	30	100	0.050	1700
GBD100505PGH600N	60	100	0.080	1500
GBD100505PGH800N	80	100	0.090	1200
GBD100505PGH101N	100	100	0.090	1200
GBD100505PGH121N	120	100	0.090	1200
GBD100505PGH601N	600	100	0.340	420
GBD160808PGH100N	10	100	0.020	4000
GBD160808PGH110N	11	100	0.020	4000
GBD160808PGH220N	22	100	0.040	3000
GBD160808PGH250N	25	100	0.030	3000
GBD160808PGH300N	30	100	0.030	3000
GBD160808PGH400N	40	100	0.035	3000
GBD160808PGH600N	60	100	0.040	3000
GBD160808PGH700N	70	100	0.050	2500
GBD160808PGH750N	75	100	0.050	2500
GBD160808PGH800N	80	100	0.050	2500
GBD160808PGH900N	90	100	0.050	2500
GBD160808PGH101N	100	100	0.050	2500
GBD160808PGH121N	120	100	0.050	2500
GBD160808PGH151N	150	100	0.080	2000
GBD160808PGH181N	180	100	0.080	2000
GBD160808PGH201N	200	100	0.100	2000
GBD160808PGH221N	220	100	0.100	2000
GBD160808PGH301N	300	100	0.100	2000
GBD160808PGH331N	330	100	0.150	1500
GBD160808PGH391N	390	100	0.140	1000
GBD160808PGH471N	470	100	0.150	1500
GBD160808PGH501N	500	100	0.150	1500
GBD160808PGH601N	600	100	0.200	1000
GBD160808PGH102N	1000	100	0.250	800
GBD160808PGH152N	1500	100	0.400	500
GBD160808PGH202N	2000	100	0.500	500
GBD160808PGH252N	2500	100	0.800	200





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## GBDXXXXXGHXXXX

## GH Series for High-Current use

Part No.	Z - Value (ohm)	Test Freq. (MHz) / 0.5V	DCR (ohm) (Max.)	Rated Current (mA) (Max.)
GBD201209PGH070N	7	100	0.01	6,000
GBD201209PGH110N	11	100	0.01	6,000
GBD201209PGH170N	17	100	0.02	5,000
GBD201209PGH220N	22	100	0.02	4,000
GBD201209PGH270N	27	100	0.02	4,000
GBD201209PGH300N	30	100	0.02	4,000
GBD201209PGH310N	31	100	0.02	4,000
GBD201209PGH400N	40	100	0.02	3,000
GBD201209PGH500N	50	100	0.02	3,000
GBD201209PGH600N	60	100	0.03	3,000
GBD201209PGH700N	70	100	0.04	3,000
GBD201209PGH750N	75	100	0.04	3,000
GBD201209PGH800N	80	100	0.04	3,000
GBD201209PGH900N	90	100	0.04	3,000
GBD201209PGH101N	100	100	0.04	3,000
GBD201209PGH121N	120	100	0.04	3,000
GBD201209PGH151N	150	100	0.05	2,500
GBD201209PGH181N	180	100	0.05	2,500
GBD201209PGH201N	200	100	0.05	2,500
GBD201209PGH221N	220	100	0.08	2,000
GBD201209PGH301N	300	100	0.08	2,000
GBD201209PGH331N	330	100	0.08	2,000
GBD201209PGH401N	400	100	0.10	2,000
GBD201209PGH501N	500	100	0.10	2,000
GBD201209PGH601N	600	100	0.10	2,000
GBD201209PGH102N	1000	100	0.12	1,500
GBD201209PGH152N	1500	100	0.30	1,000



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Part No.	Z - Value (ohm)	Test Freq. (MHz)	DCR (ohm) (Max.)	Rated Current (mA) (Max.)
GBD321611PGH110N	11 ± 25%	100	0.015	6000
GBD321611PGH190N	19 ± 25%	100	0.015	6000
GBD321611PGH260N	26 ± 25%	100	0.015	6000
GBD321611PGH300N	30 ± 25%	100	0.015	4000
GBD321611PGH310N	31 ± 25%	100	0.015	4000
GBD321611PGH320N	32 ± 25%	100	0.015	4000
GBD321611PGH500N	50 ± 25%	100	0.020	4000
GBD321611PGH600N	60 ± 25%	100	0.020	4000
GBD321611PGH800N	80 ± 25%	100	0.025	3000
GBD321611PGH900N	90 ± 25%	100	0.030	3000
GBD321611PGH101N	100 ± 25%	100	0.030	3000
GBD321611PGH121N	120 ± 25%	100	0.030	3000
GBD321611PGH151N	150 ± 25%	100	0.040	2000
GBD321611PGH221N	220 ± 25%	100	0.050	2000
GBD321611PGH301N	300 ± 25%	100	0.060	2000
GBD321611PGH401N	400 ± 25%	100	0.065	2500
GBD321611PGH501N	500 ± 25%	100	0.070	2500
GBD321611PGH601N	600 ± 25%	100	0.100	2000
GBD321611PGH102N	1000 ± 25%	50	0.300	1000
GBD321611PGH122N	1200 ± 25%	50	0.180	1000
GBD321611PGH152N	1500 ± 25%	50	0.200	800
GBD322513PGH600N	60 ± 25%	100	0.025	4000
GBD322513PGH900N	90 ± 25%	100	0.025	3000
GBD451616PGH500N	50 ± 25%	100	0.020	6000
GBD451616PGH600N	60 ± 25%	100	0.020	5000
GBD451616PGH800N	80 ± 25%	100	0.025	4000
GBD451616PGH151N	150 ± 25%	100	0.100	2000
GBD453215PGH700N	70 ± 25%	100	0.030	6000
GBD453215PGH121N	120 ± 25%	100	0.030	4000
GBD565015PGH171N	170 ± 25%	100	0.030	4000
GBD565018PGH101N	100 ± 25%	100	0.006	6000
GBD565018PGH151N	150 ± 25%	100	0.015	5000
GBD565018PGH181N	180 ± 25%	100	0.020	5000
GBD565018PGH251N	250 ± 25%	100	0.015	4000
GBD565032PGH271N	270 ± 25%	100	0.035	4000
GBD565032PGH401N	400 ± 25%	100	0.030	4500
GBD565036PGH801N	800 ± 25%	100	0.010	8000



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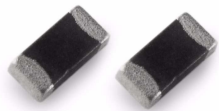
### GBDXXXXXGFXXXX GF Series for High Frequency use

Part No.	Impedance (ohm +/- 25%) @100MHz	Impedance (ohm +/- 40%) @1GHz	DCR (ohm) (Max.)	Rated Current (mA) (Max.)
GBD100505PGF201N	200	420	0.70	200
GBD100505PGF221N	220	420	0.70	500
GBD100505PGF301N	300	560	0.80	200
GBD100505PGF331N	330	560	0.80	200
GBD100505PGF470N	470	1000	1.00	100
GBD100505PGF601N	600	1100	1.20	100
GBD100505PGF102N	1000	1700	1.60	100
GBD160808PGF121N	120	140	0.25	300
GBD160808PGF221N	220	300	0.50	200
GBD160808PGF301N	300	400	0.50	200
GBD160808PGF331N	330	400	0.50	200
GBD160808PGF471N	470	500	0.70	200
GBD160808PGF601N	600	600	0.90	100
GBD160808PGF801N	800	1000	1.50	50
GBD160808PGF102N	1000	1200	1.50	50
GBD160808PGF122N	1200	1000	1.50	50

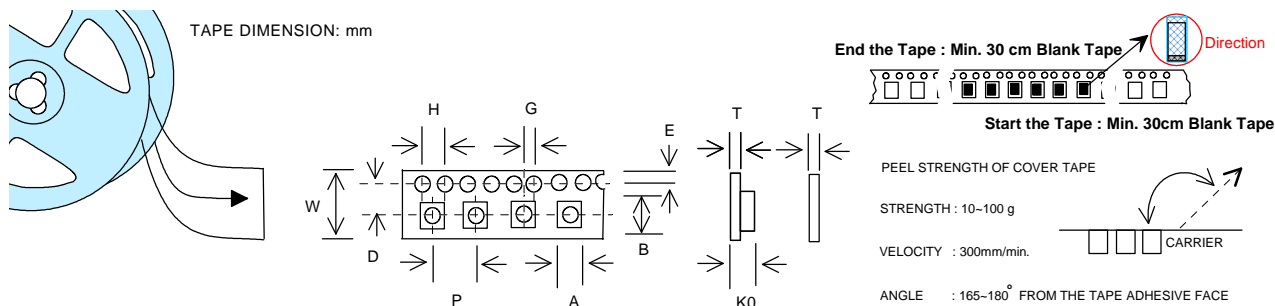


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Reliability Test Result :																			
NO	ITEM	TEST CONDITIONS	REMARKS																
1	Thermal Shock (Temperature Cycle)	Temperature: -40 ° C / +125 ° C kept stabilized for 30 minutes each  Cycle: 100 Cycles	Inductance value shall be within $\pm 10\%$ 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. ■NO.1~4 Measurement: After placing for 24 hours (min.) ■NO.2~3 Applied current(spec): Rated current(maximum value) ■NO.5 Cycle: 5 cycles																
2	Humidity Resistance	Humidity: 90%~ 95% RH Temperature: 40 $\pm$ 2 ° C Test Time: 1000 $\pm$ 12 Hours																	
3	High Temperature	Temperature: 125 $\pm$ 2 ° C Humidity: 20% Testing Time: 1000 $\pm$ 12 Hours																	
4	Low Temperature	Temperature: -40 $\pm$ 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<math>\pm</math> 2 ° C</td> <td>95~100%RH</td> <td>3.0Hr</td> </tr> <tr> <td>2</td> <td>55<math>\pm</math> 2 ° C</td> <td>95~96%RH</td> <td>9.5Hr</td> </tr> <tr> <td>3</td> <td>25<math>\pm</math> 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																	
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																	
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.																



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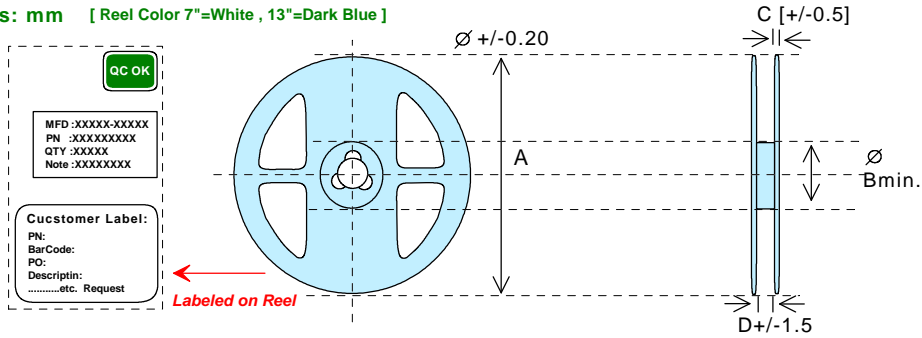


SIZE/mm	A	B	W	D	E	P	G	H	K0	T
<b>060303</b>	0.38+/-0.04	0.68 +/-0.04	8.00+/-0.20	3.50 +/-0.05	1.75 +/-0.10	4.00 +/-0.10	2.00 +/-0.05	4.00 +/-0.10	N/A	1.1 max.
<b>100505</b>	0.65+/-0.10	1.15 +/-0.10	8.00+/-0.20	3.50 +/-0.05	1.75 +/-0.10	2.00 +/-0.10	2.00 +/-0.05	4.00 +/-0.10	0.80 +/-0.05	0.20 +/-0.05
<b>160808</b>	1.10 +/-0.10	1.90 +/-0.10	8.00 +/-0.20	3.50 +/-0.05	1.75 +/-0.10	4.00 +/-0.10	2.00 +/-0.05	4.00 +/-0.10	1.10 +/-0.05	0.20 +/-0.05
<b>201209</b>	1.55 +/-0.10	2.30 +/-0.10	8.00 +/-0.20	3.50 +/-0.05	1.75 +/-0.10	4.00 +/-0.10	2.00 +/-0.05	4.00 +/-0.10	1.20 +/-0.05	0.20 +/-0.05
<b>321611</b>	1.90 +/-0.10	3.50 +/-0.10	8.00 +/-0.20	3.50 +/-0.05	1.75 +/-0.10	4.00 +/-0.10	2.00 +/-0.05	4.00 +/-0.10	1.40 +/-0.05	0.20 +/-0.05
<b>322513</b>	2.90 +/-0.10	3.60 +/-0.10	8.00 +/-0.20	3.50 +/-0.05	1.75 +/-0.10	4.00 +/-0.10	2.00 +/-0.05	4.00 +/-0.10	1.70 +/-0.05	0.25 +/-0.05
<b>451616</b>	2.90 +/-0.10	4.90 +/-0.10	12.0 +0.20	5.50 +/-0.05	1.75 +/-0.10	8.00 +/-0.10	2.00 +/-0.05	4.00 +/-0.10	2.05 +/-0.05	0.30 +/-0.05
<b>453215</b>	3.60 +/-0.10	4.90 +/-0.10	12.0 +0.20	5.50 +/-0.05	1.75 +/-0.10	8.00 +/-0.10	2.00 +/-0.05	4.00 +/-0.10	2.05 +/-0.05	0.30 +/-0.05
<b>565015</b>	5.40 +/-0.10	5.95 +/-0.10	12.0 +0.20	5.50 +/-0.05	1.75 +/-0.10	8.00 +/-0.10	2.00 +/-0.05	4.00 +/-0.10	2.28 +/-0.05	0.30 +/-0.05
<b>565018</b>	5.40 +/-0.10	5.95 +/-0.10	12.0 +0.20	5.50 +/-0.05	1.75 +/-0.10	8.00 +/-0.10	2.00 +/-0.05	4.00 +/-0.10	2.28 +/-0.05	0.30 +/-0.05
<b>565032</b>	5.40 +/-0.10	5.95 +/-0.10	12.0 +0.20	5.50 +/-0.05	1.75 +/-0.10	8.00 +/-0.10	2.00 +/-0.05	4.00 +/-0.10	3.42 +/-0.05	0.30 +/-0.05



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



SIZE / mm	A	B	C	D	REEL SIZE	QTY/REEL
<b>060303</b>	178	60	2	10	<b>7"</b>	15K
<b>100505</b>	178	60	2	10	<b>7"</b>	10K
<b>160808</b>	178	60	2	10	<b>7"</b>	4K
<b>201209</b>	178	60	2	10	<b>7"</b>	4K
<b>321611</b>	178	60	2	10	<b>7"</b>	3K
<b>322513</b>	178	60	2	10	<b>7"</b>	2K
<b>451616</b>	178	60	2	14.5	<b>7"</b>	2K
<b>453215</b>	178	60	2	14.5	<b>7"</b>	1K
<b>565015</b>	330	100	2	14.5	<b>13"</b>	2K
<b>565018</b>	330	100	2	14.5	<b>13"</b>	2K
<b>565032</b>	330	100	2	14.5	<b>13"</b>	2K

BOX Package:cm

