



Product Series Code	GBLM	Brand	GOTREND
File Version	GBLM-V1R0	Editor	Teddy
Established Date	2013.09.30	Description	High Current Multilayer Ferrite Chip Inductor
Latest Edit Date	2013.09.30	Pages	Page : 2

Features & Application :

- * Bead inductor for power energy storage or noise suppressor.
- * 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 :

GBLM 160808 P - 4R7 M
 1 2 3 4 5

1. GBLM : GOTREND BRAND & PRODUCT TYPE
2. 160808 : Dimension - L 1.6 mm X W 0.8 mm X T 0.8 mm
3. P : Pb free < 1000ppm
4. [L] Value : Inductance 4R7 = 4.7 uH
5. M : Tolerance Code - M = 20%

Operating & Storage Condition :

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

Attention & Caution :

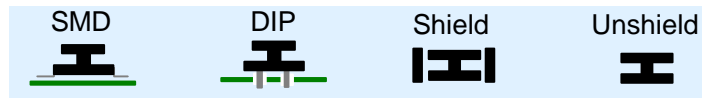
- Please avoid following matters :
- * Splashing water or salt water
 - * Toxic Gas (Hydrogen sulfide, Sulfurous acid, Chlorine, Ammonia)
 - * Vibrations or shocks which exceed the specified condition
 - * Dew condensens
 - * Please be careful for the stress to this product by board flexure or something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

Test Equipment :

* HP4291 , HP4263A - L , IDC , RDC , SRF

Standard Atmospheric Conditions :
 Ambient Temp : 20 +/- 15°C
 Relative Humidity : 50 +/- 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 : 50 +/- 20%

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

DIMENSION : [mm]

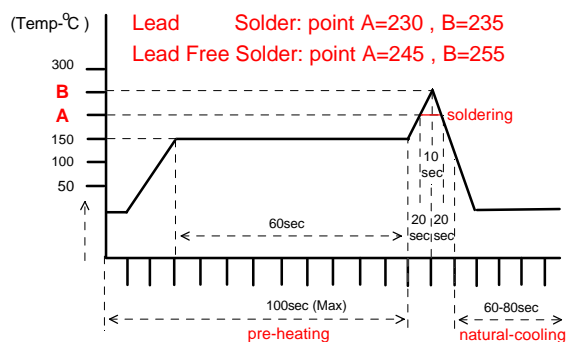


TYPE	A	B	C	D	E	F	G
160808	1.60+/-0.15	0.80+/-0.15	0.80+/-0.15	0.30+/-0.20	2.00 ref.	0.90 ref.	1.00 ref.
201208	2.00+/-0.20	1.25+/-0.20	0.85+/-0.10	0.50+/-0.30	2.40 ref.	0.80 ref.	1.45 ref.
201211	2.00+/-0.20	1.25+/-0.20	1.15+/-0.10	0.50+/-0.30	2.40 ref.	0.80 ref.	1.45 ref.
201608	2.00+/-0.20	1.60+/-0.20	0.80+/-0.20	0.50+/-0.30	2.40 ref.	0.80 ref.	1.80 ref.
252008	2.50+/-0.20	2.00+/-0.20	0.85+/-0.15	0.50+/-0.30	2.90 ref.	1.10 ref.	2.20 ref.

SCHEMATIC :



Recommand Reflow Curve (TIME:Second)



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



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Electrical Characteristics :

Part No.	Inductance (μ H)	SRF (MHz) (min.)	DCR (Ohm) (+/-30%)	Rated current (mA) (max.)
GBLM160808P-1R0M	1.00 \pm 20%	125	0.18	1000
GBLM160808P-1R5M	1.50 \pm 20%	109	0.22	800
GBLM160808P-2R2M	2.20 \pm 20%	90	0.30	700
GBLM160808P-3R3M	3.30 \pm 20%	70	0.40	600
GBLM160808P-4R7M	4.70 \pm 20%	50	0.50	500
GBLM160808P-100M	10.00 \pm 20%	33	0.55	400
GBLM160808P-150M	15.00 \pm 20%	20	0.90	220
GBLM160808P-220M	22.00 \pm 20%	15	1.00	200
GBLM201208P-1R0M	1.00 \pm 20%	75	0.15	1400
GBLM201208P-1R5M	1.50 \pm 20%	60	0.16	1300
GBLM201208P-2R2M	2.20 \pm 20%	50	0.20	1200
GBLM201208P-4R7M	4.70 \pm 20%	35	0.25	1000
GBLM201211P-100M	10.00 \pm 20%	24	0.32	500
GBLM201211P-220M	22.00 \pm 20%	18	0.70	300
GBLM201608P-1R0M	1.00 \pm 20%	60	0.11	1400
GBLM201608P-1R5M	1.50 \pm 20%	50	0.15	1200
GBLM201608P-2R2M	2.20 \pm 20%	40	0.15	1200
GBLM201608P-3R3M	3.30 \pm 20%	30	0.20	1200
GBLM201608P-4R7M	4.70 \pm 20%	20	0.25	1100
GBLM252008P-1R0M	1.00 \pm 20%	60	0.085	1600
GBLM252008P-1R5M	1.50 \pm 20%	50	0.09	1500
GBLM252008P-2R2M	2.20 \pm 20%	40	0.09	1500
GBLM252008P-3R3M	3.30 \pm 20%	30	0.12	1300
GBLM252008P-4R7M	4.70 \pm 20%	20	0.12	1300

* Inductance test freq. : @ 1MHz / 250mV

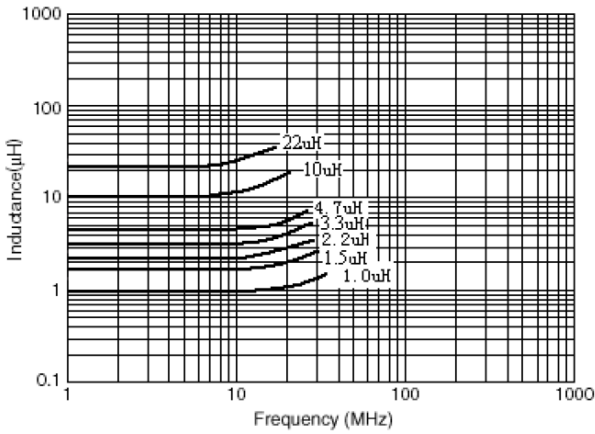
* Rated current based on increasing product temperature : Current when temperature of the product reaches +40 deg.C .



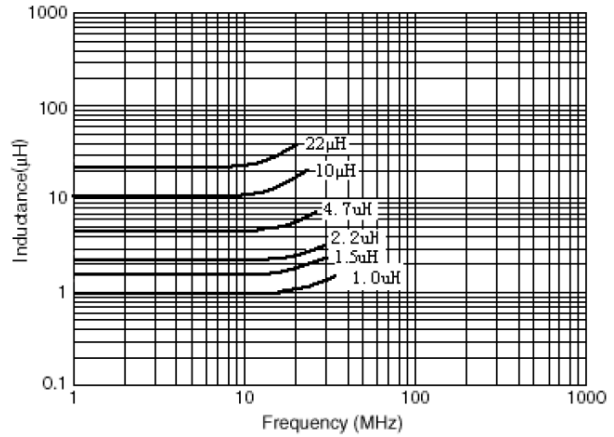
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Inductance vs. Frequency Characteristics :

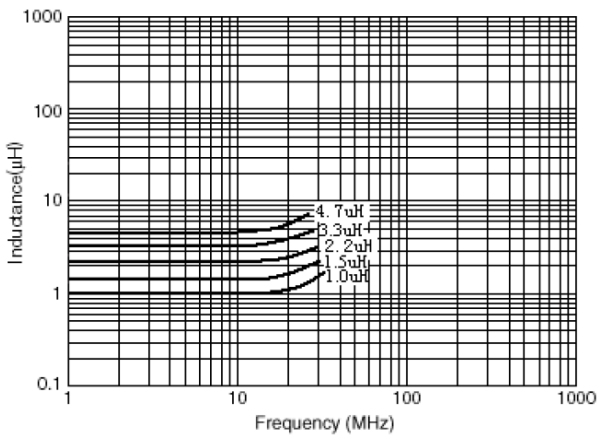
GBLM160808P-SERIES



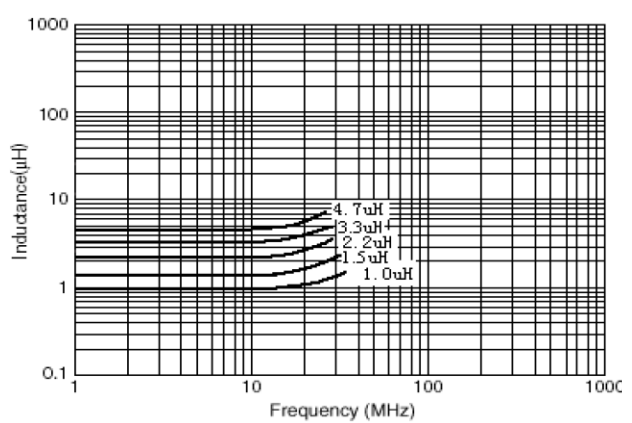
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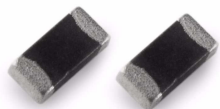


GBLM201608P-SERIES



GBLM252008P-SERIES




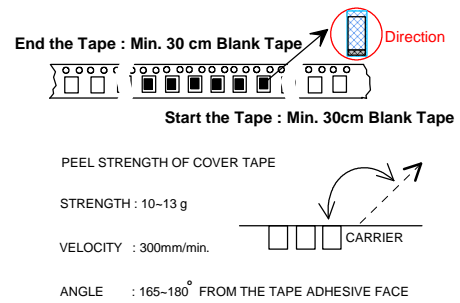
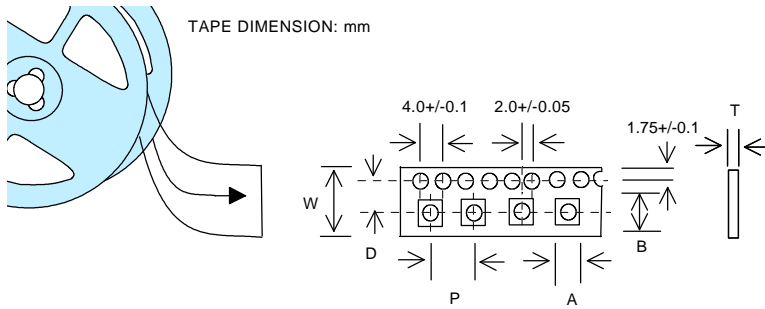


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Reliability Test Result :

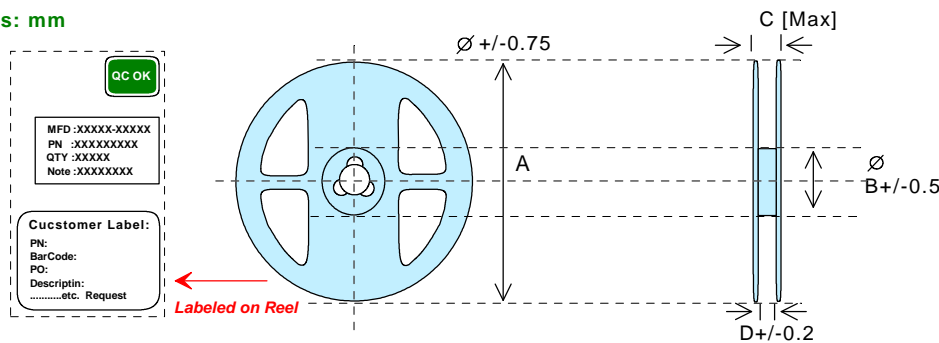
NO	ITEM	TEST CONDITIONS	REMARKS																
1	Thermal Shock (Temperature Cycle)	Temperature:-55 °C/ +125 °C kept stabilized for 30 minutes each Cycle: 100 Cycles	Inductance value shall be within $\pm 10\%$ of the initial value. DCR value shall be within $\pm 20\%$ of the initial value.																
2	Humidity Resistance	Humidity: 90%~ 95% RH Temperature: 40 \pm 2 °C Test Time: 1000 \pm 12 Hours	■NO.1~4 Measurement:After placing for 24 hours (min.)																
3	HighTemperature	Temperature: 125 \pm 2 °C Humidity: 20% Testing Time: 1000 \pm 12 Hours	■NO.2~3 Applied current(spec): Rated current(maximum value)																
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	■NO.5 Cycle: 5 cycles
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.																

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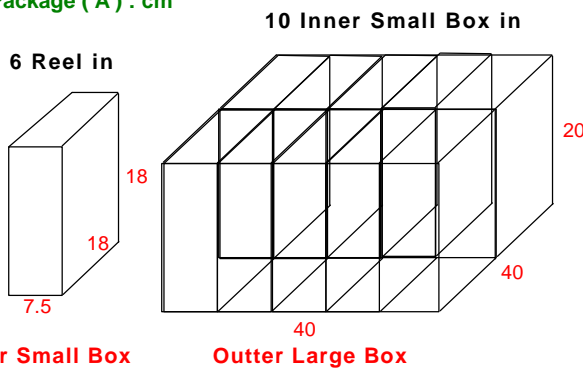
SIZE/mm	W	P	A0	B0	T	F	Carrier Tape
160808	8.00+/-0.30	4.00+/-0.10	1.05+/-0.15	1.90+/-0.15	1.00+/-0.05	3.50+/-0.05	Paper
201208	8.00+/-0.30	4.00+/-0.10	1.50+/-0.15	2.50+/-0.20	1.00+/-0.05	3.50+/-0.05	Paper
201211	8.00+/-0.30	4.00+/-0.10	1.50+/-0.15	2.50+/-0.20	1.10+/-0.05	3.50+/-0.05	Embossed
201608	8.00+/-0.30	4.00+/-0.10	2.00+/-0.20	2.50+/-0.20	1.10+/-0.05	3.50+/-0.05	Paper
252008	8.00+/-0.30	4.00+/-0.10	2.30+/-0.20	2.70+/-0.20	2.00+/-0.05	3.50+/-0.05	Embossed

Reel Dimensions: mm



SIZE / mm	A	B	C	D	REEL SIZE	QTY/REEL
160808	178	60	20	10	7"	4K
201208	178	60	20	10	7"	3K
201211	178	60	20	10	7"	3K
201608	178	60	20	10	7"	3K
252008	178	60	20	10	7"	3K

BOX Package (A) : cm



BOX Package (B) : cm

