



## MGB Series

# Specification

<b>Product Name</b>	<b>Chip Ferrite Bead For GHz Range</b>
<b>Series</b>	<b>MGB Series</b>
<b>Size</b>	<b>MGB1005-0603 G</b>



## MGB SERIES (Chip Ferrite Bead for GHz Range) Engineering Specification

This product belongs to the industrial grade standard, not the vehicle gauge product! Can not use auto parts, if the customer is not expressly informed and privately used to auto parts, produce any consequences, the original is not responsible for after-sales service, thank you!

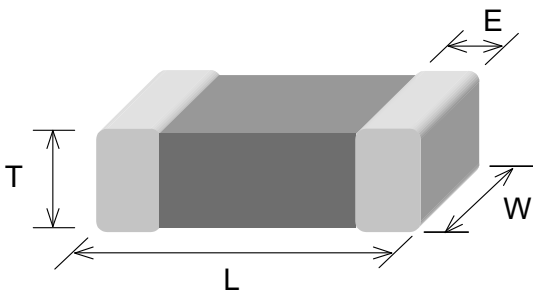
### Features

- Effectively filtering capability over a wide range of frequency (Several MHz to GHz)
- Monolithic inorganic material construction
- Closed magnetic circuit avoids crosstalk
- Excellent solderability and heat resistance
- High reliability

### Application

RF and wireless communication, information technology equipment which includes computer, laptop, telecommunications, radar detectors, automotive electronics, cellular phones, pagers, audio equipment, PDAs, keyless remote system and Navigator systems

### ■ SHAPES AND DIMENSIONS



TYPE	060303 (EIA 0201)	100505 (EIA 0402)
L	0.60±0.03	1.00±0.10
W	0.30±0.03	0.50±0.10
T	0.30±0.03	0.50±0.10
E	0.15±0.05	0.25±0.10
Unit	mm	mm

■ PART NUMBER CODE

MGB   0603   G   60   1   Z   B   P   A16  
 1        2        3        4        5        6        7        8        9

- 1 Series Name
- 2 Size Code : the first two digitals : length(mm), the last two digitals : width(mm)
- 3 Material Code
- 4 Impedance( $\Omega$ )  $\pm$  25% } (ex: 601=600 $\Omega$ )
- 5 Fixed Decimal Point }
- 6 Rated Current Code

C=100mA	D=150mA	E=200mA	F=300mA	G=400mA	H=500mA
L=1000mA	M=1500mA	N=2000mA	Y=250mA	Z=other(refer to code 9)	

- 7 Soldering : Green Parts : B — Lead-Free for whole chip
- 8 Packaging : P - Paper tape, 7" reel.
- 9 Rated Current Value : A16 = 160mA ; A80 = 800mA

■ GENERAL TECHNICAL DATA

Operating temperature range : -55 $^{\circ}$ C ~ +125 $^{\circ}$ C  
 Storage Condition : Less than 40 $^{\circ}$ C and 70% RH  
 Storage Time : 6 months Max.  
 Soldering method : Reflow

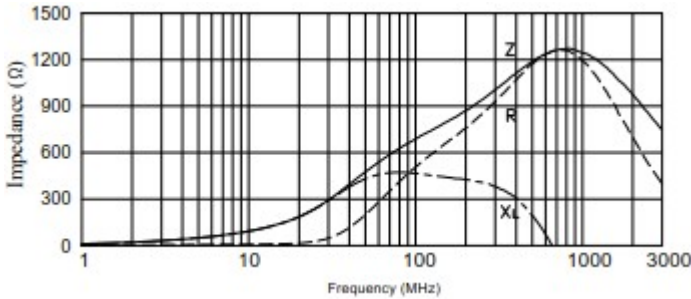
■ PART NUMBER AND CHARACTERISTICS TABLE

Part No.	Impedance ( $\Omega$ ) $\pm$ 25% @100MHz	Impedance ( $\Omega$ ) $\pm$ 40% @1GHz	DCR ( $\Omega$ ) (Max.)	Rated Current (mA)
<b>MGB0603 Series</b>				
MGB0603G601ZBPA16	600	1500	1.60	160
MGB0603G102ZBPA13	1000	2300	2.50	130
MGB0603G152ZBPA12	1500	2700	3.10	120
MGB0603H250ZBPA60	25	135	0.26	600
MGB0603H500ZBPA40	50	255	0.58	400
<b>MGB1005 Series</b>				
MGB1005G601FBP	600	1400	0.85	300
MGB1005G102YBP	1000	2000	1.25	250
MGB1005G182EBP	1800	2700	2.20	200
Item	Test Method			
Impedance	<ul style="list-style-type: none"> <li>•Agilent E4991A RF Impedance Material Analyzer or equivalent</li> <li>•Agilent 16197A fixture or equivalent</li> <li>•Test Level : 250 mV</li> </ul>			
DC Resistance	•HP4338A/B Milliohm meter			

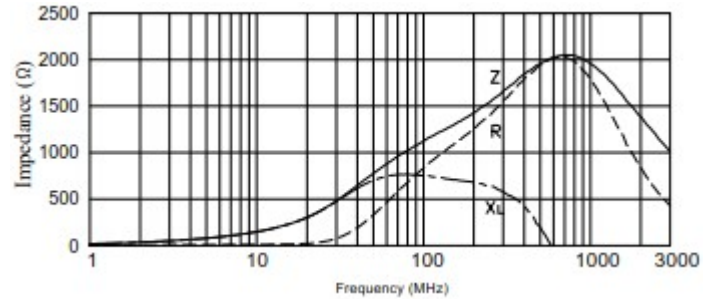
\*\* For special part number which is not shown in the above table, please refer to appendix.

■ TYPICAL CHARACTERISTIC

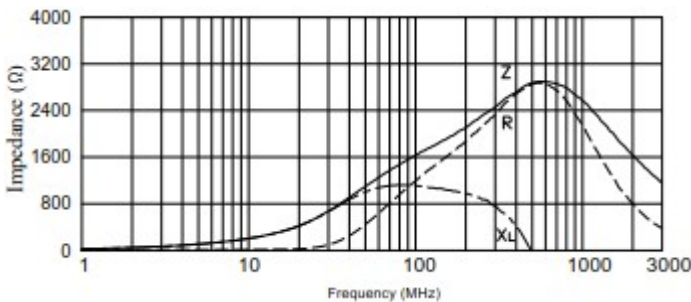
MGB0603G601ZBPA16



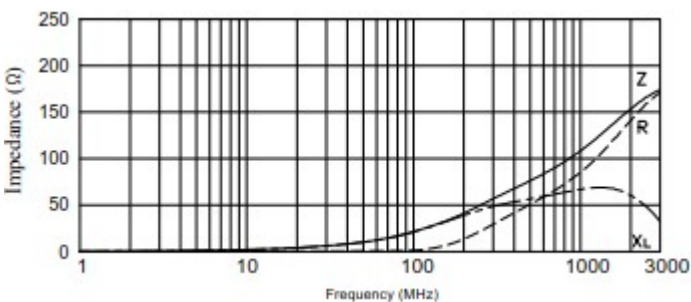
MGB0603G102ZBPA13



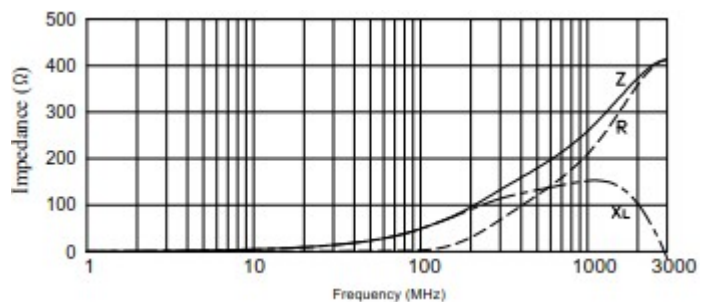
MGB0603G152ZBPA12



MGB0603H250ZBPA60

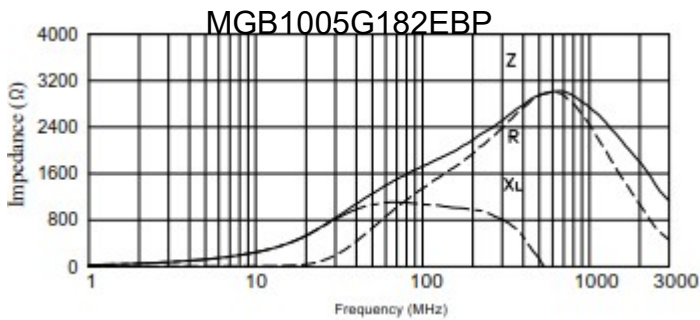
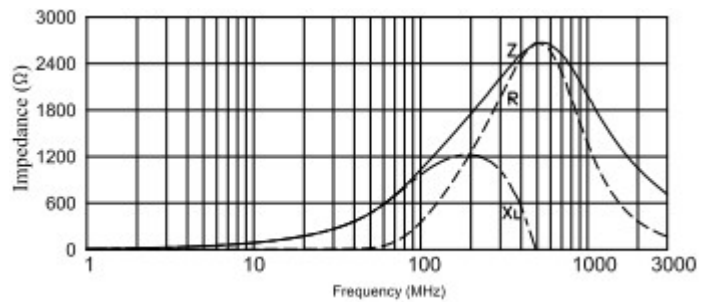
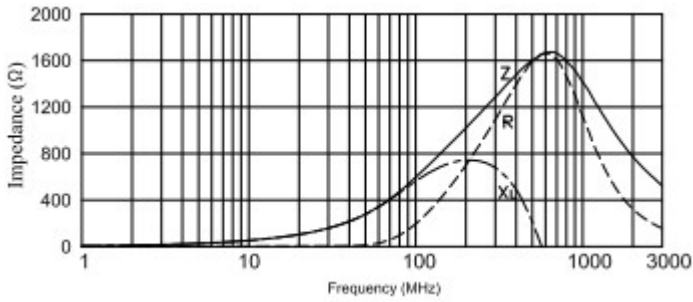


MGB0603H500ZBPA40



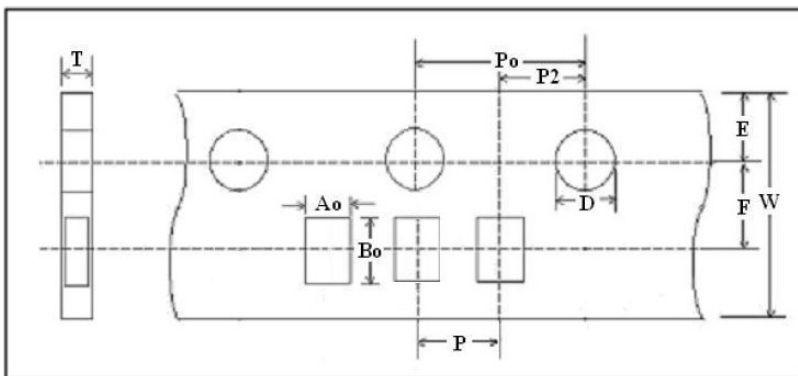
MGB1005G601FBP

MGB1005G102YBP



## ■ TAPE AND REEL SPECIFICATIONS

### PAPER CARRIER

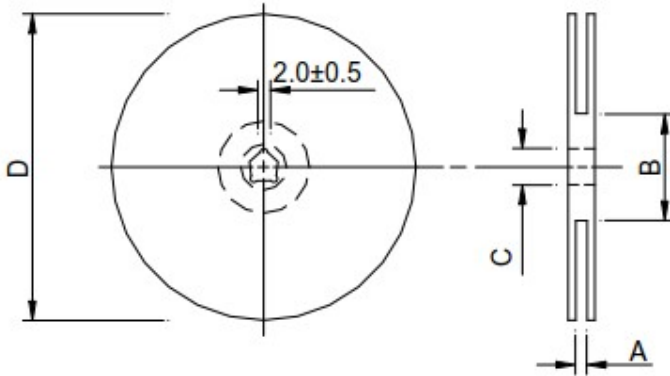


■ TAPING DIMENSIONS

Size(mm)	060303	100505
Symbol	PAPER	PAPER
W	8.00±0.30	8.00±0.30
P	2.00±0.05	2.00±0.05
E	1.75±0.10	1.75±0.10
F	3.50±0.05	3.50±0.05
D	1.50+0.1/-0	1.50+0.1/-0
Po	4.00±0.10	4.00±0.10
P2	2.00±0.05	2.00±0.05
Ao	0.40±0.06	0.65±0.10
Bo	0.70±0.06	1.15±0.10
T	0.45 max.	0.80 max.

※A,B,T : Sufficient clearance

■ REEL DIMENSIONS

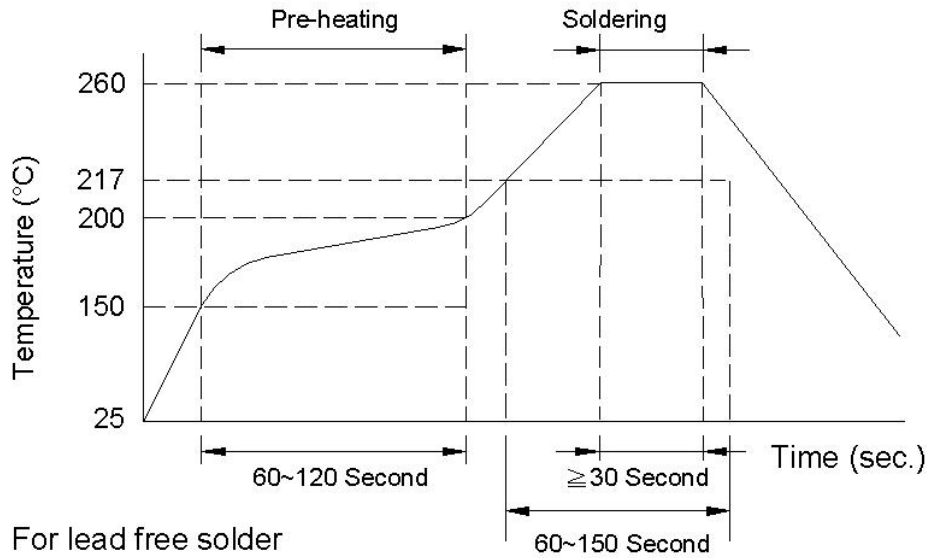


Type	7"
A(mm)	10.0±1.50
B(mm)	50 or more
C(mm)	13.0±0.50
D(mm)	178.0±2.0

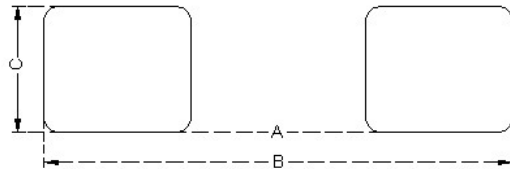
Unit : mm

7" Reel Packaging Quantity		
Part Size (EIA Size)	0603 (0201)	1005 (0402)
Qty.(pcs)	15,000	10,000
BOX	5 reels / inner box	5 reels / inner box

■ RECOMMENDED SOLDERING CONDITIONS



■ LAND PATTERNS FOR REFLOW SOLDERING



Size(mm)	A	B	C
0603	0.2 ~ 0.3 (0.008 ~ 0.012)	0.75 ~ 1.05 (0.030 ~ 0.041)	0.3 (0.012)
1005	0.4 (0.016)	1.2 ~ 1.4 (0.047 ~ 0.055)	0.5 (0.020)

■ RELIABILITY AND TEST CONDITION

Test item	Test condition	Criteria
Temperature Cycle	a. Temperature : -55 ~ +125°C b. Cycle : 100 cycles c. Dwell time : 30minutes d. Measurement : at ambient temperature 24 hrs after test completion	a. No mechanical damage b. Impedance value (at 100MHz) should be within ± 30 %of the initial value
Operational Life	a. Temperature : 125°C ± 5°C b. Test time : 1000 hrs c. Apply current : full rated current d. Measurement : at ambient temperature 24 hrs after test completion	a. No mechanical damage b. Impedance value (at 100MHz) should be within ± 30 %of the initial value

Test item	Test condition	Criteria
Biased Humidity	a. Temperature : 40°C ± 2°C b. Humidity : 90 ~ 95 % RH c. Test time : 1000 hrs d. Apply current : full rated current e. Measurement : at ambient temperature 24 hrs after test completion	a. No mechanical damage b. Impedance value (at 100MHz) should be within ± 30 %of the initial value
Resistance to Solder Heat	a. Solder temperature : 260 ± 5°C b. Flux : Rosin c. DIP time : 10 ± 1 sec	a. More than 95 % of terminal electrode should be covered with new solder b. No mechanical damage c. Impedance value (at 100MHz) should be within ± 30 %of the initial value
Adhesive Test	a. Reflow temperature : 245°C It shall be Soldered on the substrate applying direction parallel to the substrate b. Apply force(F) : 5 N (Size:0603:2N) c. Test time : 10 sec	a. No mechanical damage b. Soldering the products on PCB after the pulling test force > 5 N (Size:0603:2N)
Rated Current Test	a. Apply current : full rated current / 5min	Temperature rise should be less than 25°C



