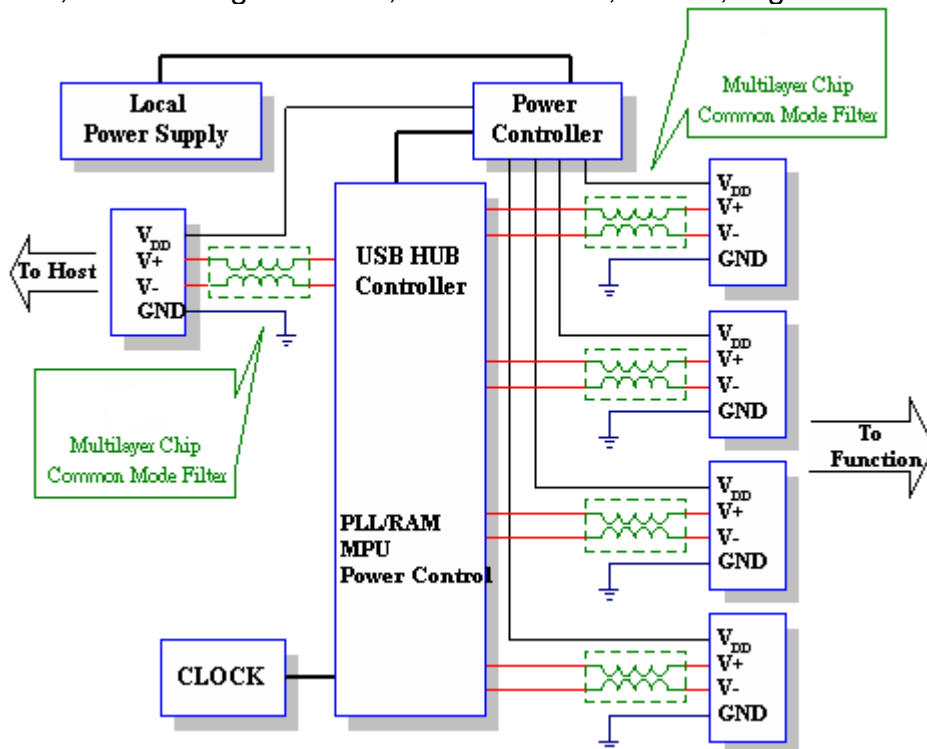


APPLICATION

- High speed digital interfaces: HDMI, Serial-ATA, IEEE1394, LVDS, and USB2.0&3.0
- Notebook and Personal Computers
- Scanners, Data Storage Devices, CD ROM R/W, Printer, Digital Camera



FEATURES

- Excellent common mode noise suppression for differential signal lines.
- Almost no affect on high-speed signals due to excellent characteristic impedance matching.
- High reliability and easy surface mount assembly.
- Lead free construction.

PRODUCT IDENTIFICATION

G M C F - 1 2 1 0 0 6 - 0 0 9 0 - M H B 1

①

②

③

④

① Product Code

② Dimension Code

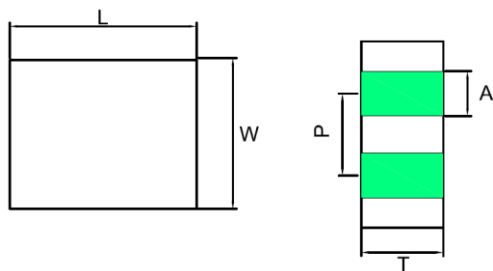
③ Series Type (0090 represents impedance at 100 MHz.)

④ Design Code



MAG.LAYERS

PRODUCT DIMENSION



NOTE : Dimensions in mm

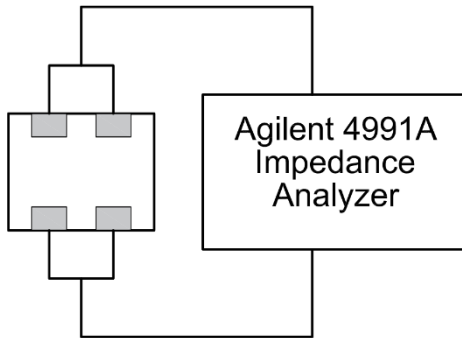
PRODUCT NO.	L	W	T	A	P
GMCF-121006	1.25±0.15	1.00±0.15	0.55±0.1	0.3±0.1	0.55±0.1

ELECTRICAL REQUIREMENTS GMCF-121006

Part Number	Impedance (Ω) at 100 MHz	R _{DC} (Ω)	Rated Current(mA) Max.	Rated Voltage(V)	Cutoff frequency (GHz)Typ.
GMCF-121006-0040-MHA1	40 ± 25%	1.4@Typ.	100	5	5
GMCF-121006-0090-MHA1	90 ± 25%	3@Max.	100	5	3
GMCF-121006-0090-MHB1	90 ± 20%	1.5±25%	150	5	6

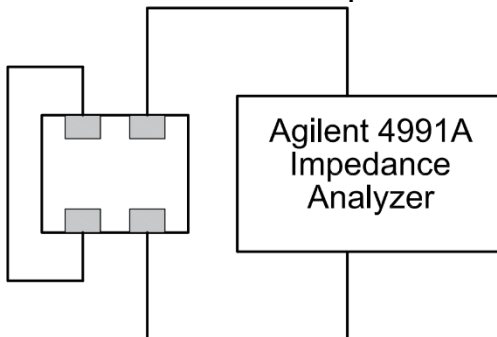
MEASURING DIAGRAM

Common Mode Impedance



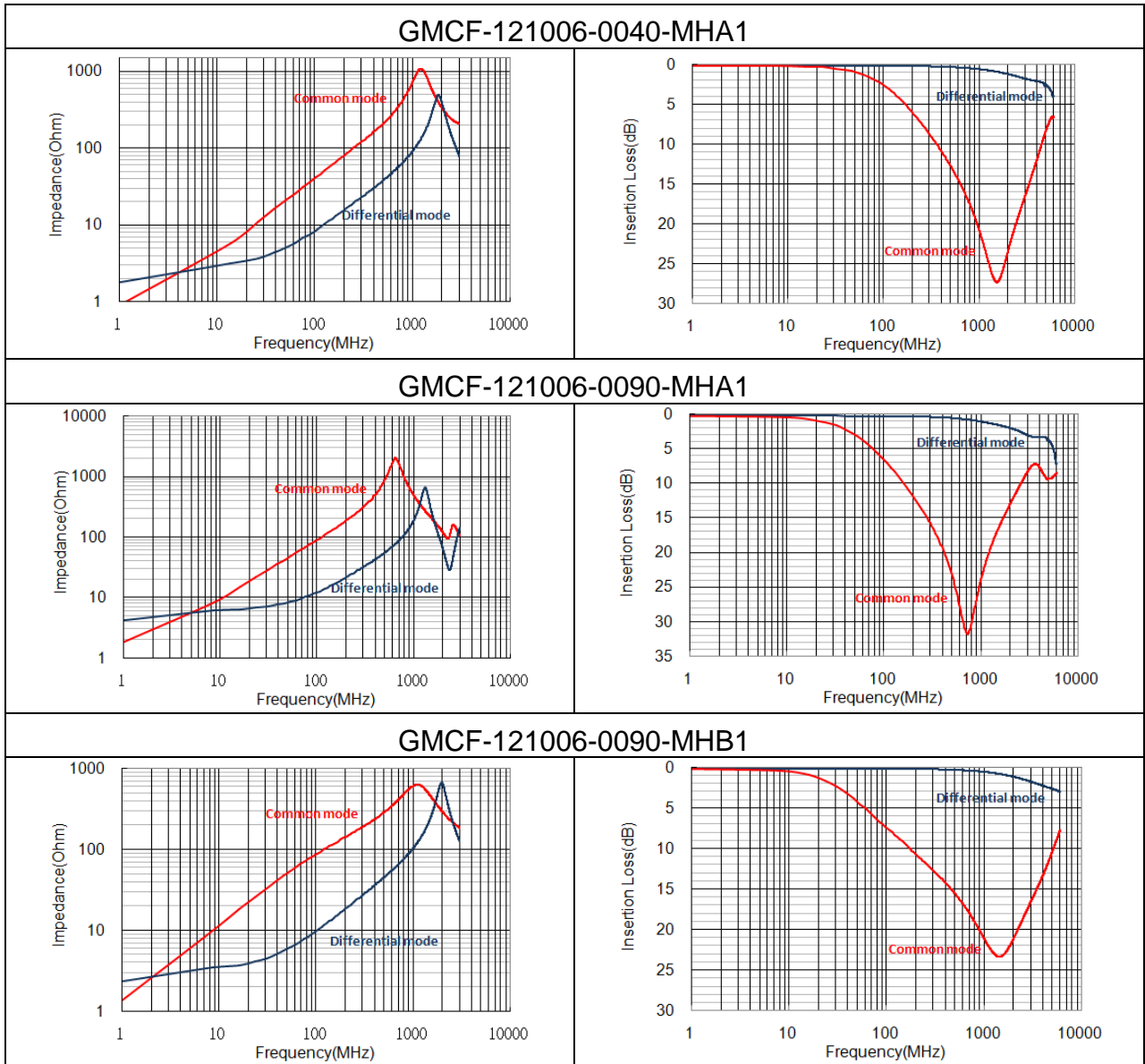
Test Instrument:
Agilent 4991A Impedance Analyzer

Differential mode Impedance



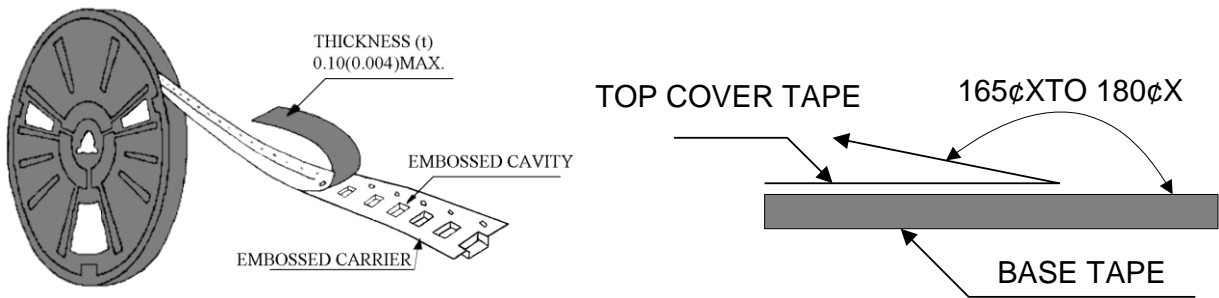
TAPICAL ELECTRICAL CHARACTERISTICS (T=25°C)

GMCF-121006



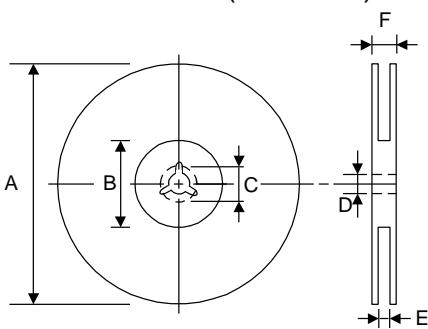
PACKAGING

● Peel-off Force

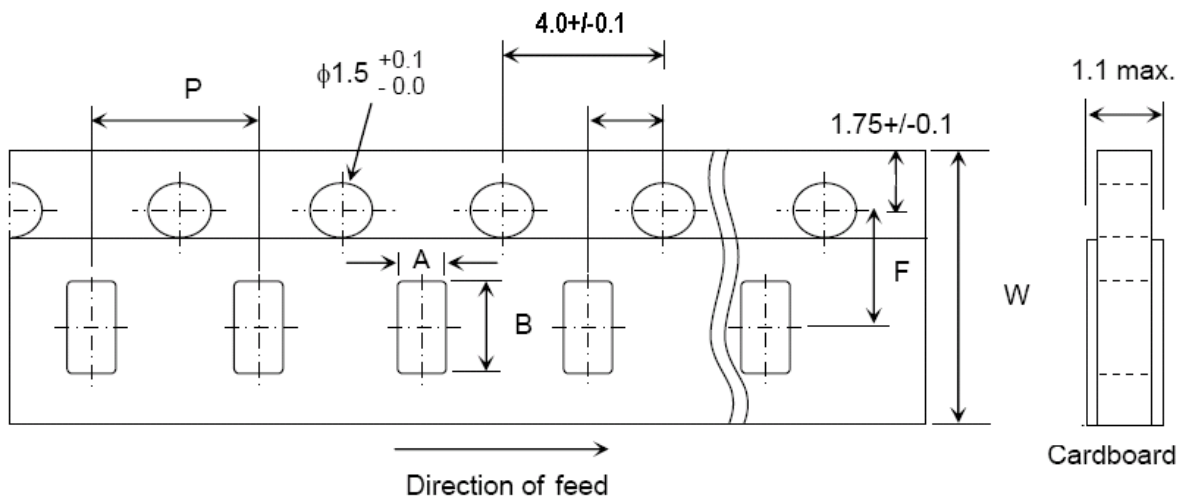


The force for peeling off cover tape is 10 grams in the arrow direction.

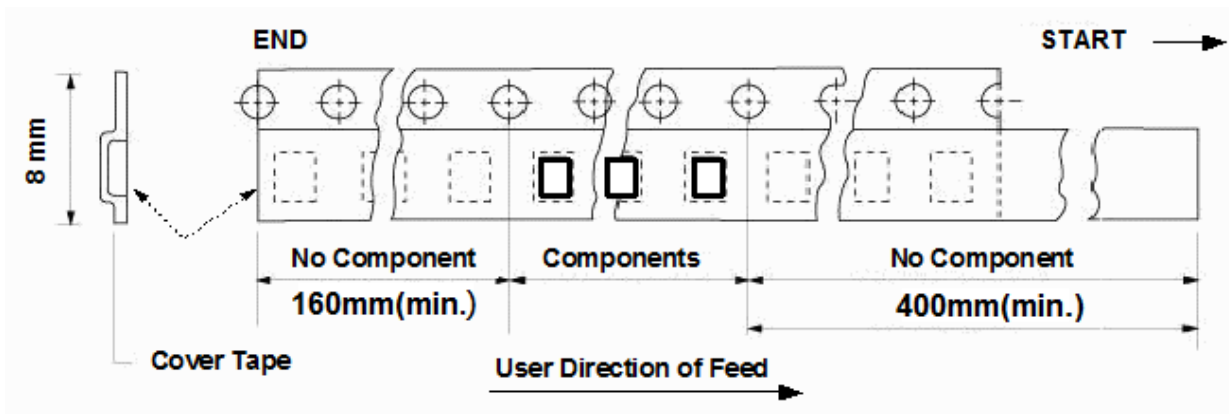
● Dimension (Unit: mm)



TYPE	A	B	C	D	E	F
8 mm	178 ±2.0	50	13±0.2	21 ±0.8	10 ±1.5	8 mm



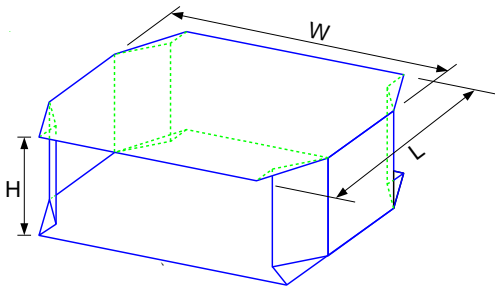
TYPE	SIZE	A	B	W	P	T	CHIPS/REEL
GMCF	121006	1.4±0.05	1.15±0.05	8±0.2	4±0.1	3.5±0.05	5000



● Taping Quantity

SERIES	PCS/Reel
121005	5000

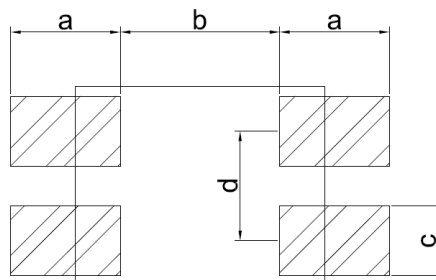
● Tape Packing Case



No. of Reels	W	L	H
2	18±0.5	18±0.5	2.4±0.2
3	18±0.5	18±0.5	3.6±0.2
4	18±0.5	18±0.5	4.8±0.2
5	18±0.5	18±0.5	6.0±0.2

Unit: cm

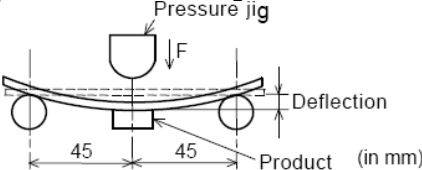
■ **RECOMMENDED PCB LAYOUT**



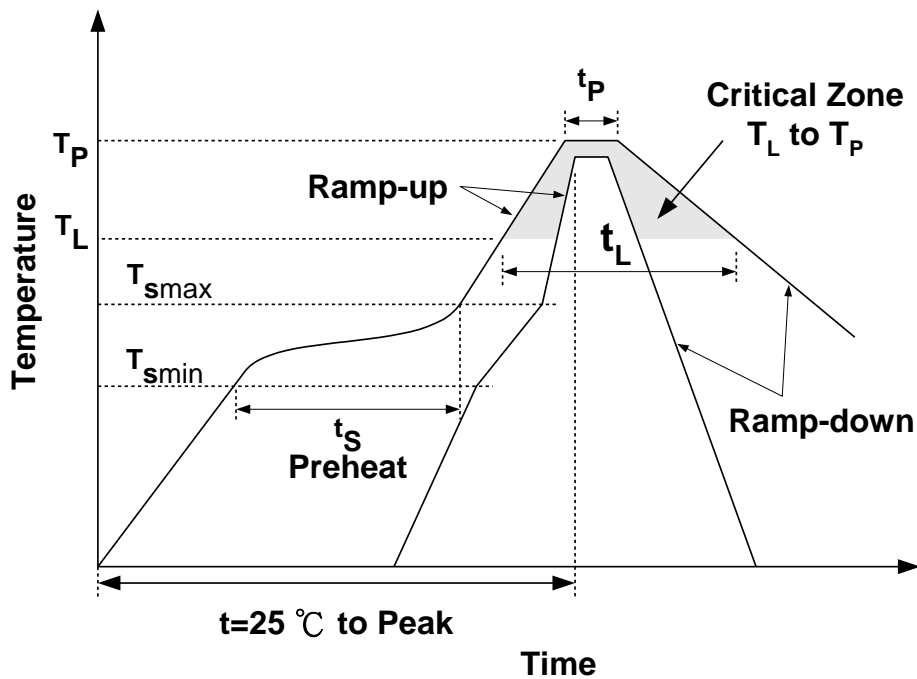
Unit: mm

Type	1210	
Size	L	1.25
	W	1.0
a	0.45~0.55	
b	0.7~0.8	
c	0.25~0.35	
d	0.55	

RELIABILITY TEST

ITEM	SPECIFICATION	TEST CONDITION
SOLDERABILITY	More than 75% of the terminal electrode shall be covered with fresh solder.	Solder: 96.5Sn-3.0Ag-0.5Cu Solder Temperature: 245±5°C Flux: Rosin Dip Time: 3 ± 1 Seconds
SOLDERING HEAT RESISTANCE	The chip shall not crack. Impedance shall be within ± 20% of the initial value.	Solder: 96.5Sn-3.0Ag-0.5Cu Solder temperature : 260 ±5°C Flux: Rosin Dip time: 10 ± 1 seconds
BENDING STRENGTH	Appearance: No damage 	Substrate: PCB(100mm×40mm×0.8mm) Solder: Reflow Speed of Applying Force: 0.5mm / s Deflection: 1mm(MCF1210 series is 2mm) Hold Duration: 30 s
Vibration	There shall be no mechanical damage. Impedance shall be within ±20% of the initial value.	5g's for 20 minutes, 12 cycles each of 3 orientations. Test from 10-2000 Hz.
● Climatic test		
Thermal Shock (Temperature Cycle)	Impedance shall be within ± 20% of the initial value.	Temperature: -40°C~85°C for 30 minutes each, 100 cycles.
Humidity Resistance		Temperature : 85°C Humidity: 85% RH Time: 1000 ± 12 Hours
High Temperature Resistance		Temperature : 85°C±2°C Time: 1000 ± 12 Hours
Low Temperature Resistance		Temperature : -40°C±2°C Time: 1000 ± 12 Hours
NOTE: 1. Operating Temperature Range: -40°C TO +85°C 2. Storage Condition: The temperature should be within -40°C ~ 85°C and humidity should be less than 75% RH. The product should be used within 6 months from the time of delivery.		

RECOMMENDED REFLOW SOLDERING PROFILE



Profile Feature		Sn-Pb	Pb-Free
Preheat	t_s	60~120 seconds	60~180 seconds
	T_{smin}	100°C	150°C
	T_{smax}	150°C	200°C
Average ramp-up rate (T_{smax} to T_P)		3°C/second max.	3°C/second max.
Time main above	Temperature (T_L)	183°C	217°C
	Time (t_L)	60~150 seconds	60~150 seconds
Peak temperature (T_P)		230°C	250~260°C
Time within 5°C of actual peak temperature (t_p)		10 seconds	10 seconds
Ramp-down rate		6°C/sec max.	6°C/sec max.
Time 25°C to peak temperature		6 minutes max.	8 minutes max.

NOTES

The contents of this data sheet are subject to change without notice. Please confirm the specifications and delivery conditions when placing your order.