



PRODUCT SPECIFICATION

DOCUMENT NO.ENS000066640				
DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
HCM1012G Series	<i>shann chen</i>	<i>Yun. Wang</i>	<i>cowttun</i>	<i>Albert Wu</i>

**HCM1012G SERIES LOW PROFILE TYPE (Chip Common Mode Filter)
Engineering Specification**



Features and Application

- Powerful components with composite co-fired material to solve EMI problem for high speed differential signal transmission line as USB, and LVDS, without distortion to high speed signal transmission.
- MIPI, MHL serial interface in mobile device.

1.PRODUCT DETAIL

Part No.	Imp. Com. (Ω)±25% @100MHz	DCR Max. (Ω)	Rated Current Max.(mA)	Rated Voltage (V)	Insulation Resistance Min.(MΩ)
HCM1012GD900B05PDG	90	3.0	100	10	100
Test Instruments	•Agilent E4991A RF IMPEDANCE / MATERIAL ANALYZER •HP4338 MILLIOHMMETER •Agilent E5071C ENA SERIES NETWORK ANALYZER •Keithley 2410 1100V SOURCE METER				

2.PART NUMBER CODE

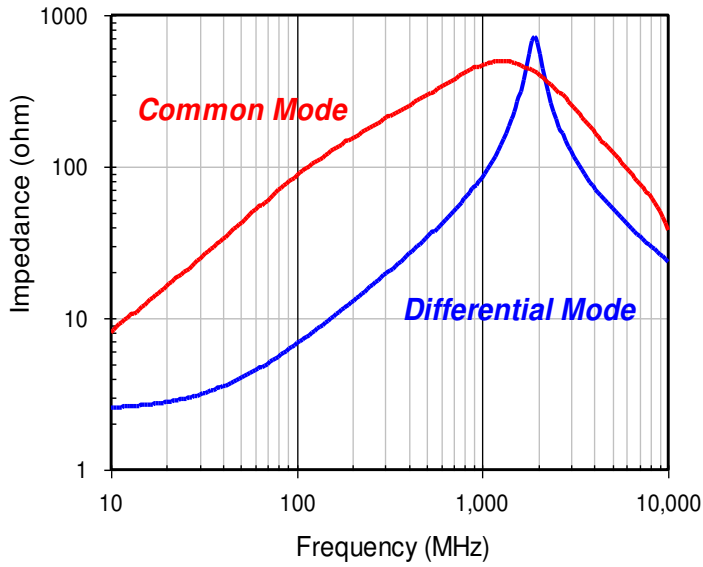
HCM 1012 G □ 90 0 □ 05 P DG
 1 2 3 4 5 6 7 8 9 10

- 1 : Series name
- 2 : Dimensions L*W
- 3 : Material code
- 4 : Product identification number
- 5 : Impedance value
- 6 : Fixed decimal point (ex : 900=90Ω)
- 7 : INPAQ internal code
- 8 : Dimension T (ex : 05=0.50mm)
- 9 : Packaging style
P – Embossed paper tape, 7”reel.
- 10 : INPAQ internal code

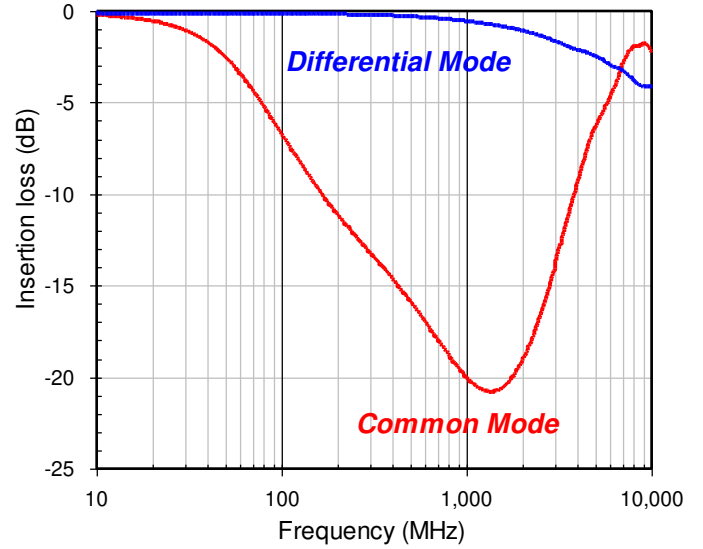
3. TYPICAL CHARACTERISTIC

HCM1012GD900B05PDG

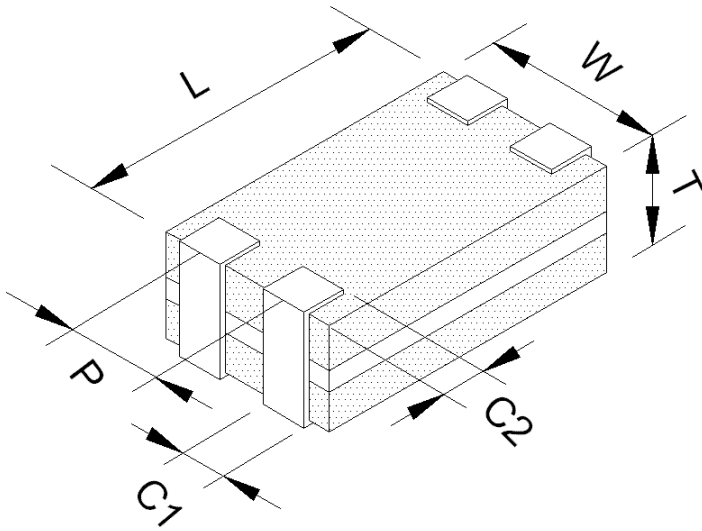
IMPEDANCE vs. FREQUENCY CHARACTERISTICS



INSERTION LOSS vs. FREQUENCY CHARACTERISTICS

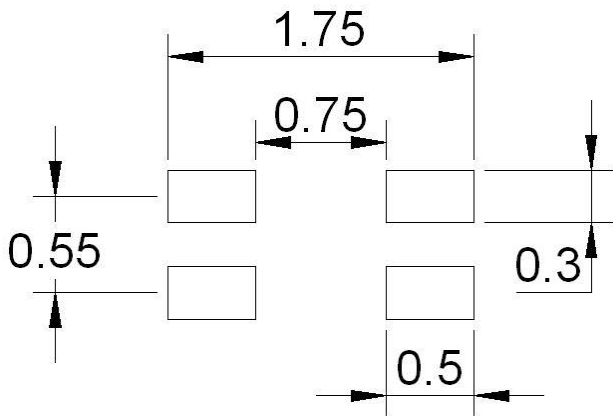
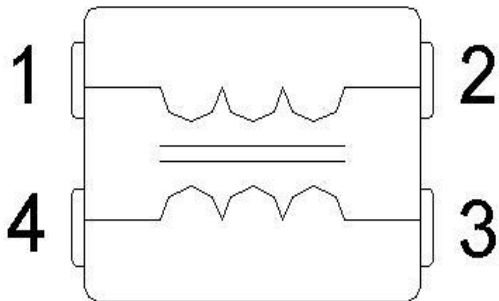


4. SHAPES AND DIMENSIONS



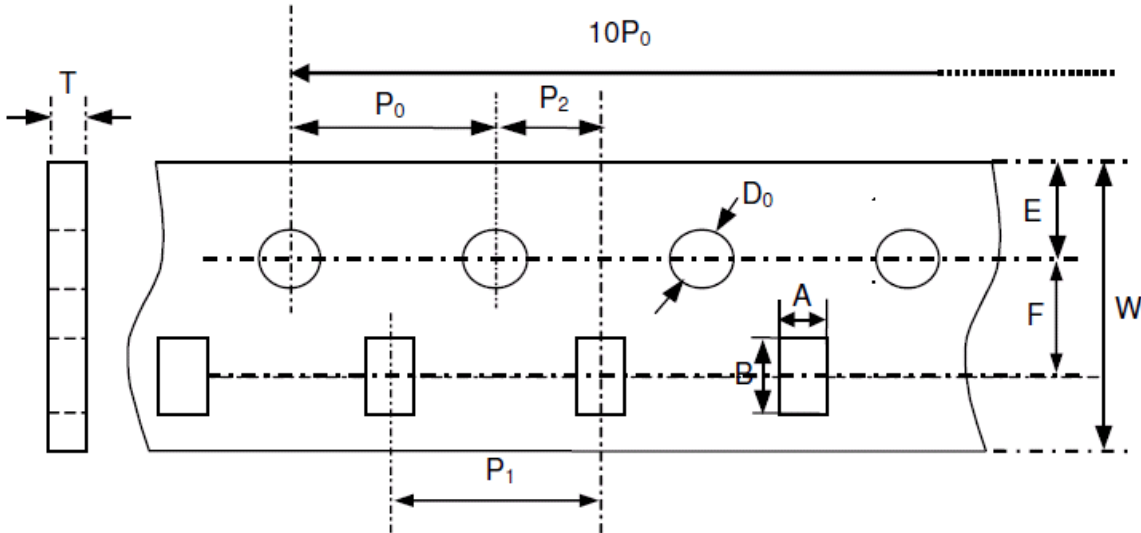
TYPE	Dimension
L	1.25±0.10
W	1.00±0.10
T	0.50±0.10
P	0.55±0.10
C1	0.30±0.10
C2	0.20±0.15
Unit : mm	

5. CIRCUIT CONFIGURATION & LAYOUT PAD



6.TAPE AND REEL SPECIFICATIONS/ TAPING DIMENSIONS

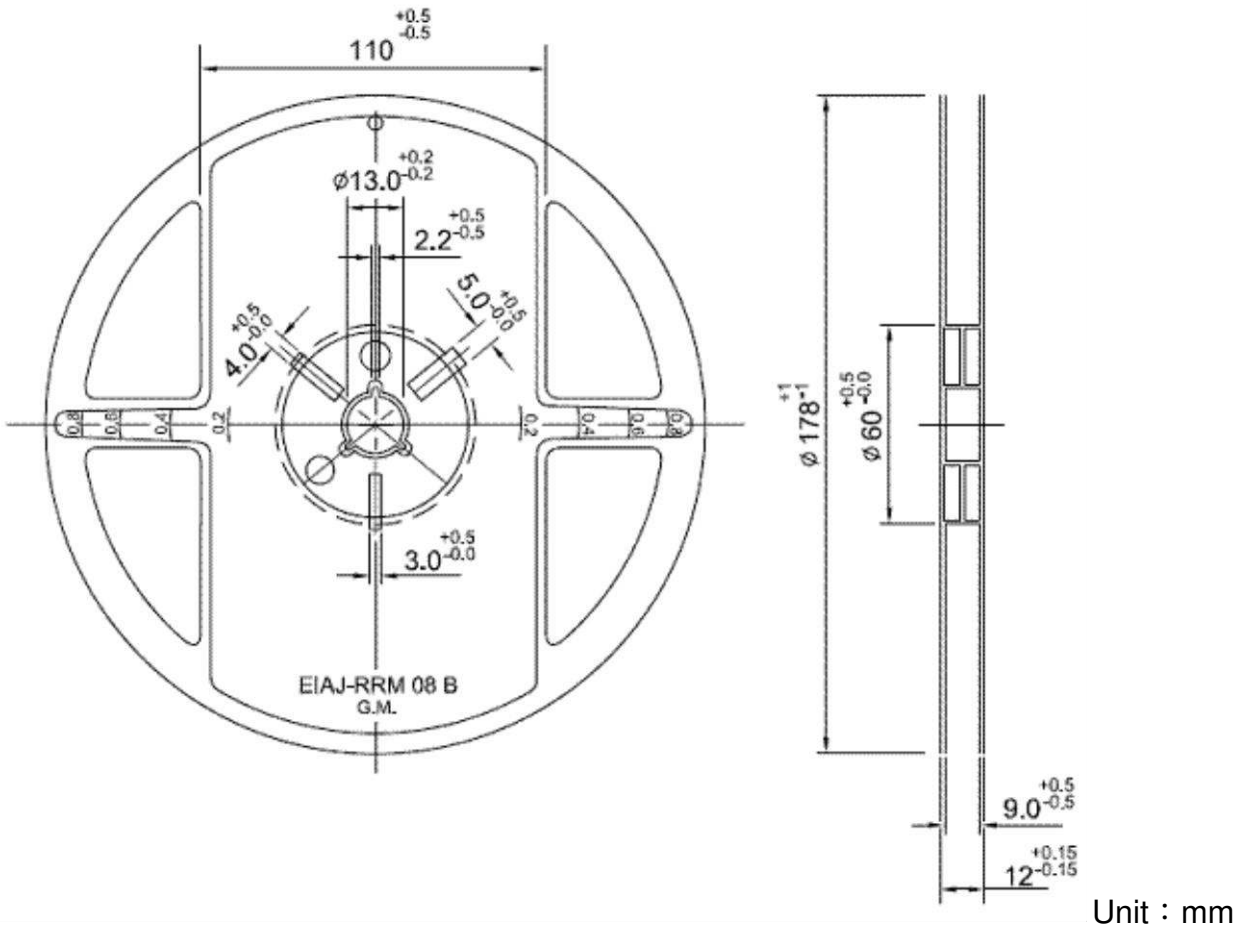
Type : Paper Carrier



Unit : mm

Symbol	Size	Symbol	Size
A	1.20±0.05	Po	4.00±0.10
B	1.45±0.05	P1	4.00±0.10
W	8.00±0.10	P2	2.00±0.05
E	1.75±0.05	Do	1.55±0.05
F	3.50±0.05	T	0.60±0.03

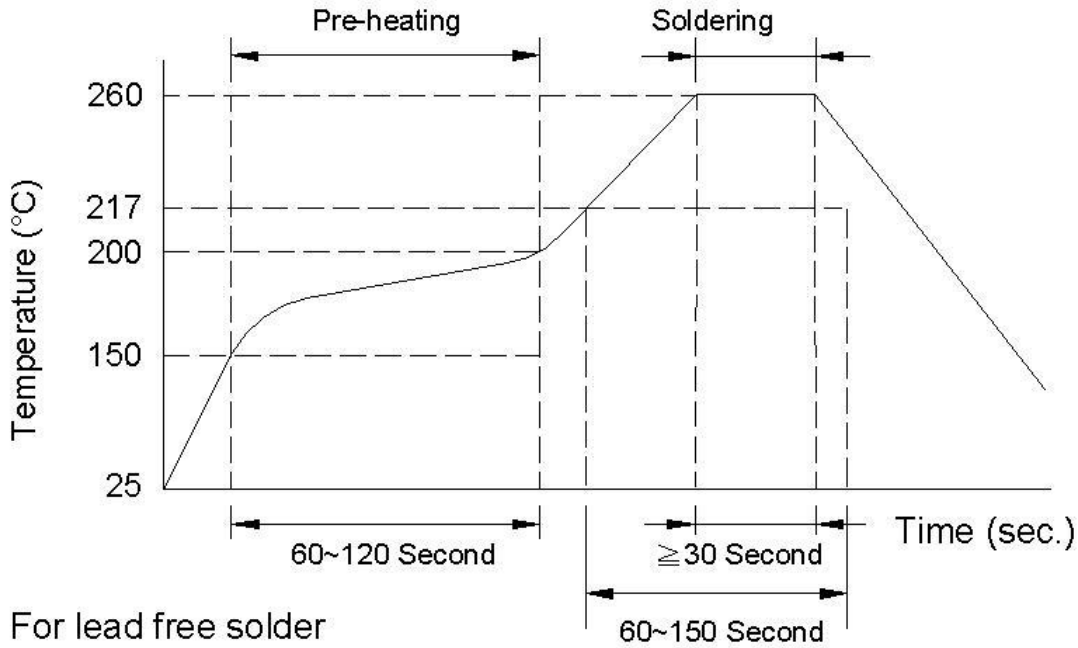
7. REEL DIMENSIONS



8. STANDARD QUANTITY FOR PACKAGING

- Packaging style : Taping
- Reel packaging quantity : 4000 pcs/reel
- Inner box : 5 reel/inner box

9.RECOMMENDED SOLDERING CONDITIONS



10.GENERAL TECHNICAL DATA

- Operating temperature range : - 40°C ~ +85°C
- Storage Condition : Less than 40°C and 70% RH
- Storage Time: 6 months Max.
- Soldering method: Reflow or Wave Soldering

11.RELIABILITY AND TEST CONDITION

Test item	Test condition	Criteria
Temperature Cycle	A. Temperature : -40 ~ +85°C B. Cycle : 100 cycles C. Dwell time : 30minutes Measurement : at ambient temperature 24 hrs after test completion	A. No mechanical damage B. Impedance value should be within $\pm 20\%$ of the initial value
Operational Life	A. Temperature : 85°C \pm 5°C B. Test time : 1000 hrs C. Apply current : full rated current Measurement : at ambient temperature 24 hrs after test completion	A. No mechanical damage B. Impedance value should be within $\pm 20\%$ of the initial value
Biased Humidity	A. Temperature : 40 \pm 2°C B. Humidity : 90 ~ 95 % RH C. Test time : 1000 hrs D. Apply current : full rated current Measurement : at ambient temperature 24 hrs after test completion	A. No mechanical damage B. Impedance value should be within $\pm 20\%$ of the initial value
Resistance to Solder Heat	A. Solder temperature : 260 \pm 5°C B. Flux : Rosin C. DIP time : 10 \pm 1 sec	A. More than 95 % of terminal electrode should be covered with new solder B. No mechanical damage C. Impedance value should be within $\pm 20\%$ of the initial value
Steam Aging Test	A. Temperature : 93 \pm 2°C B. Test time : 4 hrs C. Solder temperature : 235 \pm 5°C D. Flux : Rosin E. DIP time : 5 \pm 1 sec	More than 95 % of terminal electrode should be covered with new solder