HCM1012 Series

ROHS

Low Profile Type(Chip Common Mode Filter) Engineering Specification

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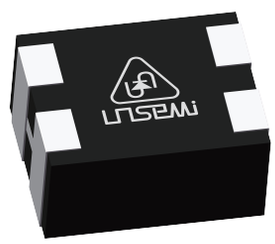
Features and Application

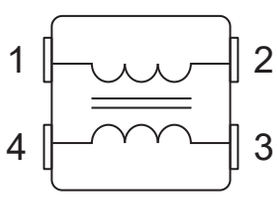
Powerful components with composite co-fired material to solve EMI problem for high speed differential signal transmission line as USB, and LVDS, without distortion to high speed signal transmission
MIPI, MHL serial interface in mobile device.

Part Numbering

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

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: UN internal code
8: Dimension T (ex : 05=0.50mm)
9: Packaging style P – Paper tape, 7”reel.





Product Detail

Part Number	Imp.Com. (Ω)±25% @100MHz	DCR Max. (Ω)	Rated Current Max. (mA)	Rated Voltage (Vac)	Insulation Resistance Min. (MΩ)
HCM1012GH900A05P	90	3.0	100	10	100
HCM1012GD500A05P	50	1.5	100	10	100
HCM1012GD670A05P	67	1.5	100	10	100
HCM1012GD900B05P	90	3.0	100	10	100
Test Instruments	◆ HP4991A/B RF IMPEDANCE / MATERIAL ANALYZER ◆ HP4338A/B MILLIOHMMETER ◆ Agilent E5071C S-PARAMETER NETWORK ANALYZER ◆ HP6632B SYSTEM DC POWER SUPPLY ◆ Keithley 2410 1100V SOURCE METER				

Typical Characteristics

HCM1012GH900A05P

Fig. 1 Impedance vs. Freuqency Characteristics

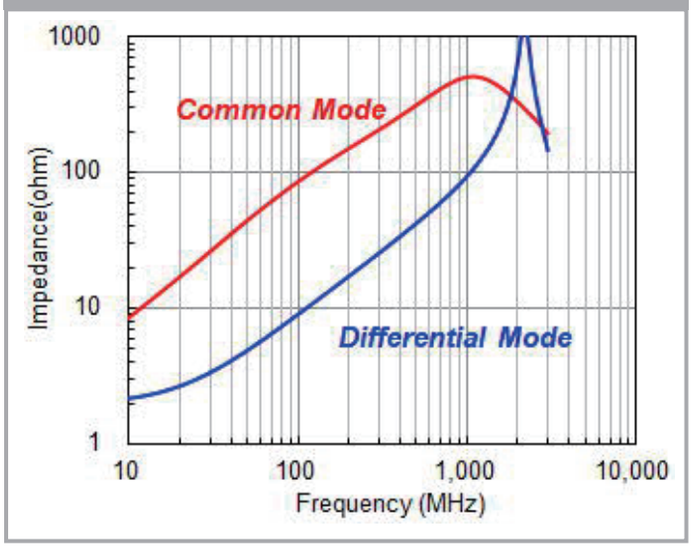
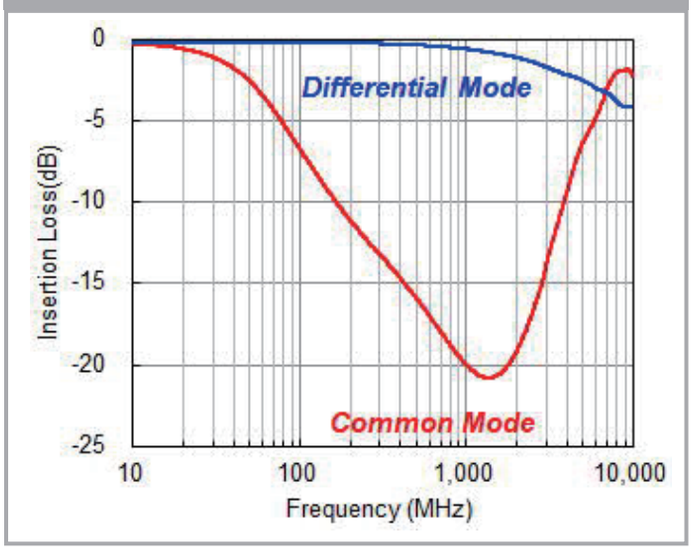


Fig. 2 Insertion Loss vs. Freuqency Characteristics



HCM1012GD500A05P

Fig. 3 Impedance vs. Freuqency Characteristics

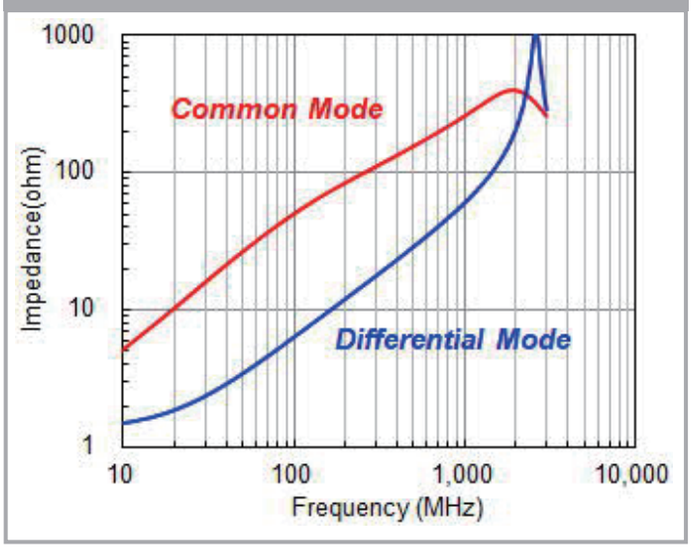
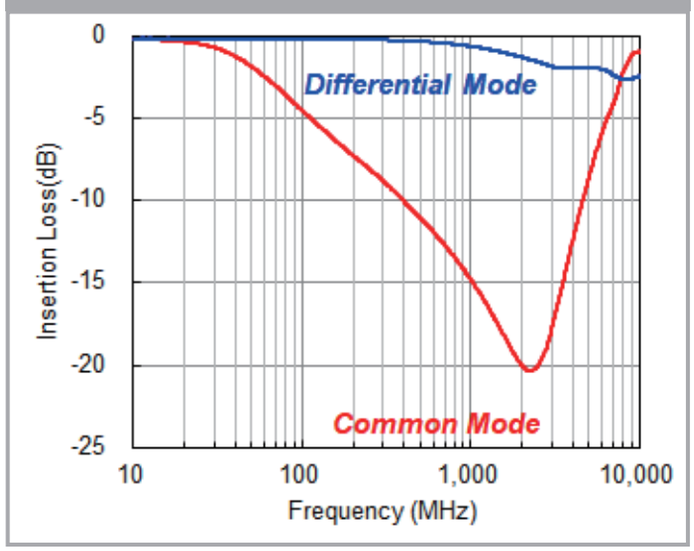


Fig. 4 Insertion Loss vs. Freuqency Characteristics



Typical Characteristics

HCM1012GD670A05P

Fig. 5 Impedance vs. Freuqency Characteristics

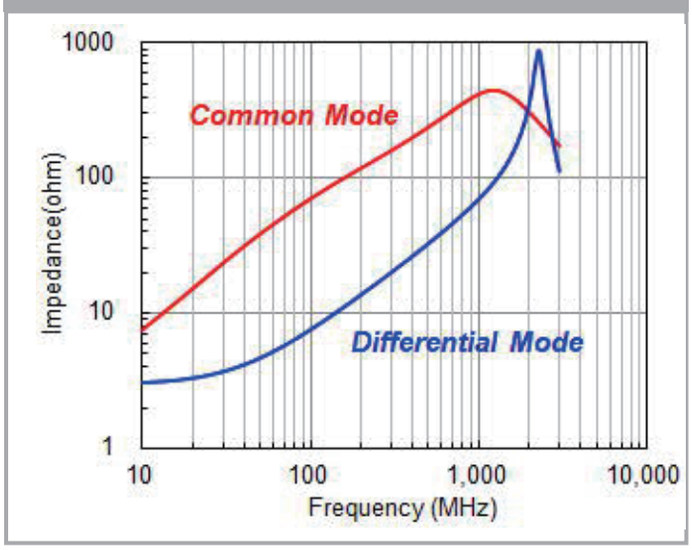
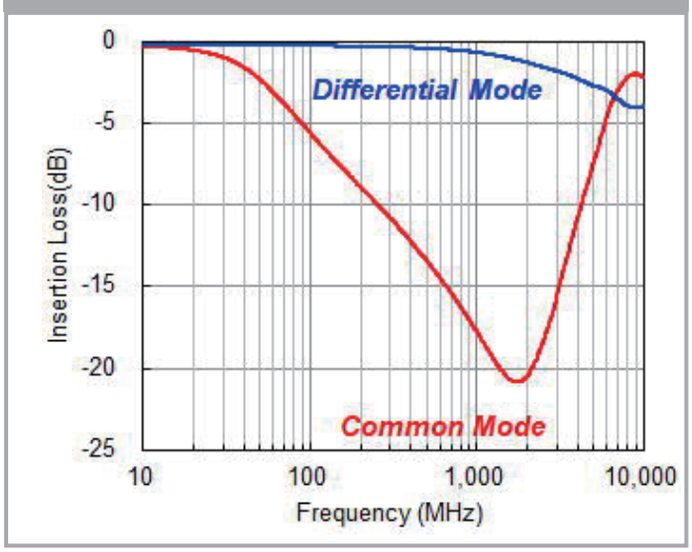


Fig. 6 Insertion Loss vs. Freuqency Characteristics



HCM1012GD900B05P

Fig. 7 Impedance vs. Freuqency Characteristics

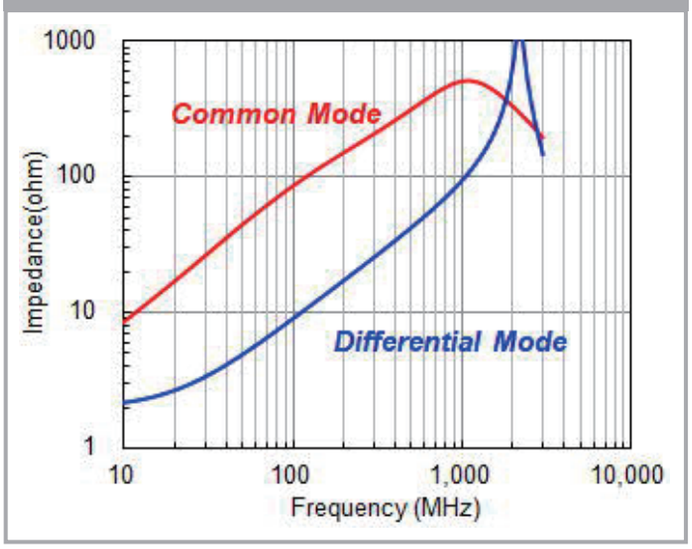
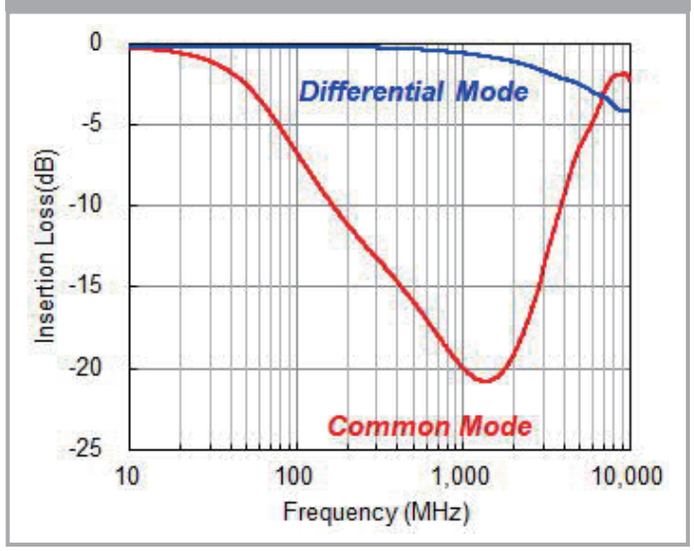
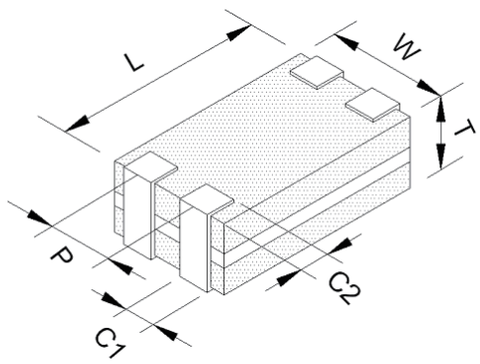


Fig. 8 Insertion Loss vs. Freuqency Characteristics

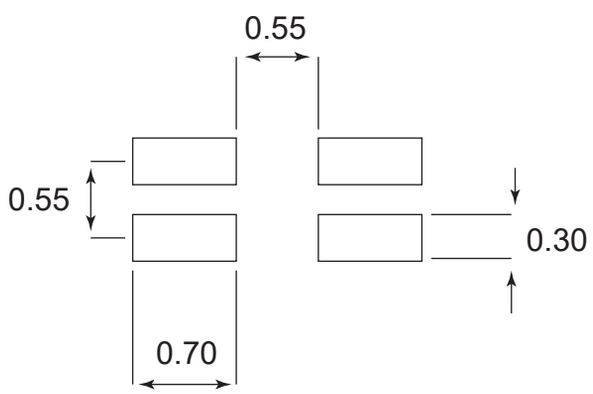


Shares and Dimensions



Type	Dimensions
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	

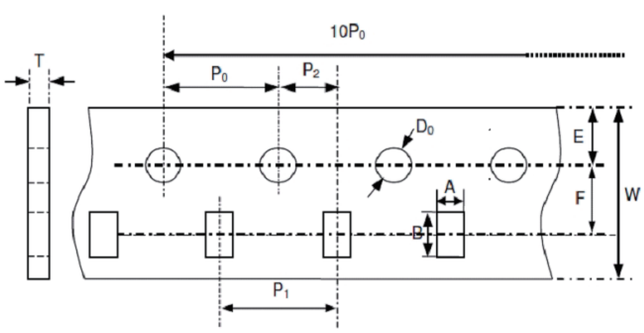
Circuit Configutation & Layout Pad



Tape and Reel Specifications / Taping Dimensions

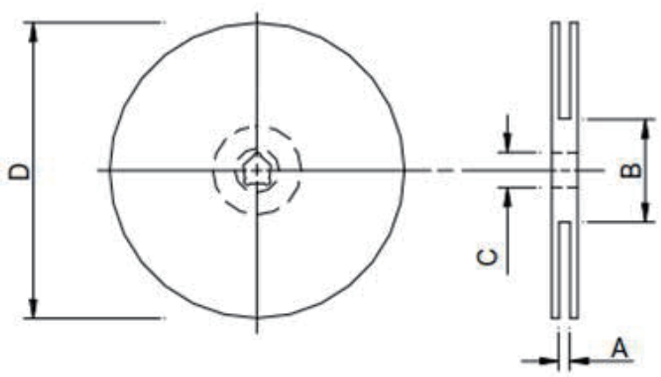
Type : Paper Carrier

Unit : mm



Symbol	Size	Symbol	Size
A	1.20±0.05	P0	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	D0	1.55±0.05
F	3.50±0.05	T	0.60±0.03

Reel Dimensions

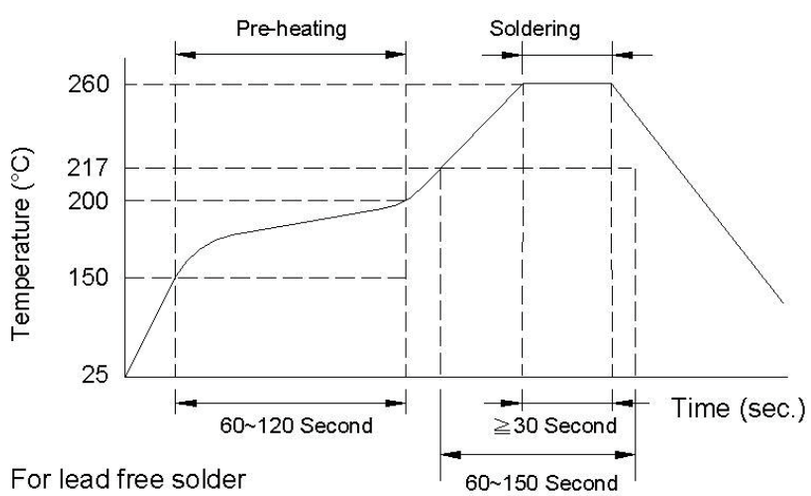


Type	A(mm)	B(mm)	C(mm)	D(mm)
7''	10±1.5	50 or more	13.2±1.0	178±2.0

STANDARD QUANTITY FOR PACKAGING

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

Recommended Soldering Conditions



GENERAL TECHNICAL DATA

Opertation temperatur range : -40℃ ~ +85℃
Storage Condition : Less than 40℃ and 70% RH
Storage Time: 6 months Max.
Soldering method: Reflow or Wave Soldering

Reliability and Test Condition

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

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ROHS

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