

HCE 1012 GH 900 BP

Specification

Product Name	Chip Common Mode Filter plus ESD Function
Series	HCE Series
Part No	HCE 1012 GH 900 BP
Size	EIAJ 1012



HCE1012G SERIES (Chip Common Mode Filter plus ESD function) 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.
- Common mode filter plus ESD function.
- MIPI, MHL serial interface in mobile device.

1.PRODUCT DETAIL

Part No.	Imp. Com. (Ω) \pm 25% @100MHz	DCR Max. (Ω)	Rated Current Max. (mA)	Rated Voltage (V)	Insulation Resistance Min. (M Ω)	Capacitance @0.5V 1MHz Max(pF)	Leakage Current @5V Max(μ A)
HCE1012GH900BP	90	2.0	100	10	100	1.3	1
Test Instruments	<ul style="list-style-type: none"> •Meet IEC61000-4-2 level 4: Contact Discharge 8KV · Air Discharge 15KV •Agilent E4991A RF IMPEDANCE / MATERIAL ANALYZER •HP4338A/B MILLIOHMMETER •Agilent E5071C S-PARAMETER NETWORK ANALYZER •HP6632B SYSTEM DC POWER SUPPLY •Keithley 2410 1100V SOURCE METER 						

2.PART NUMBER CODE

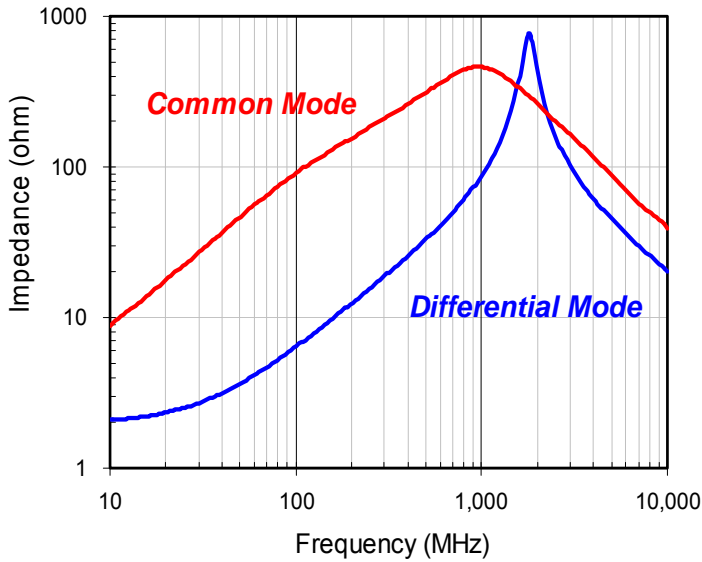
HCE 1012 G 90 0 P
 1 2 3 4 5 6 7 8

- 1 : Series name
- 2 : Dimensions L*W
- 3 : Material code
- 4 : Product identification number
- 5 : Impedance value
- 6 : Fixed decimal point (ex : 900=90 Ω)
- 7 : INPAQ internal code
- 8 : Packaging style
- P - Embossed paper tape, 7" reel

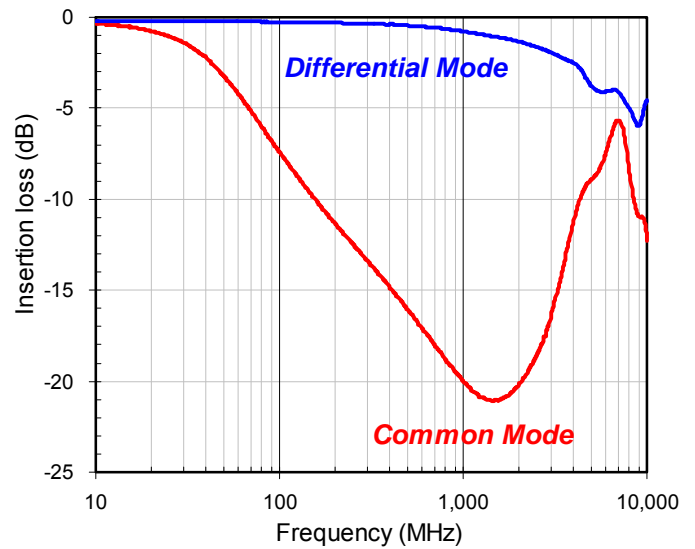
3.TYPICAL CHARACTERISTIC

HCE1012GH900B

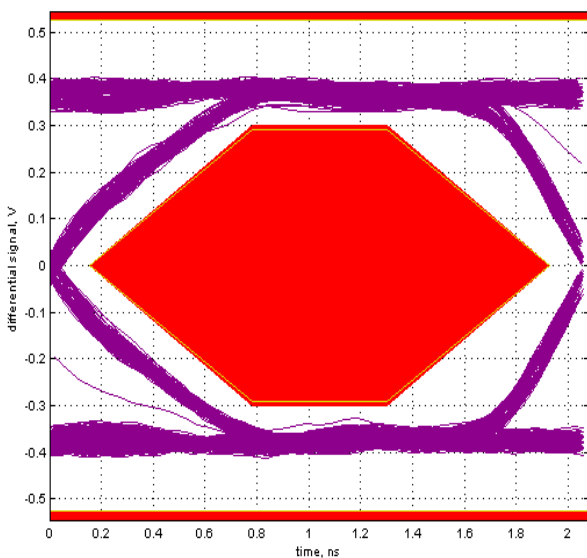
IMPEDANCE vs. FREQUENCY CHARACTERISTICS



INSERTION LOSS vs. FREQUENCY CHARACTERISTICS

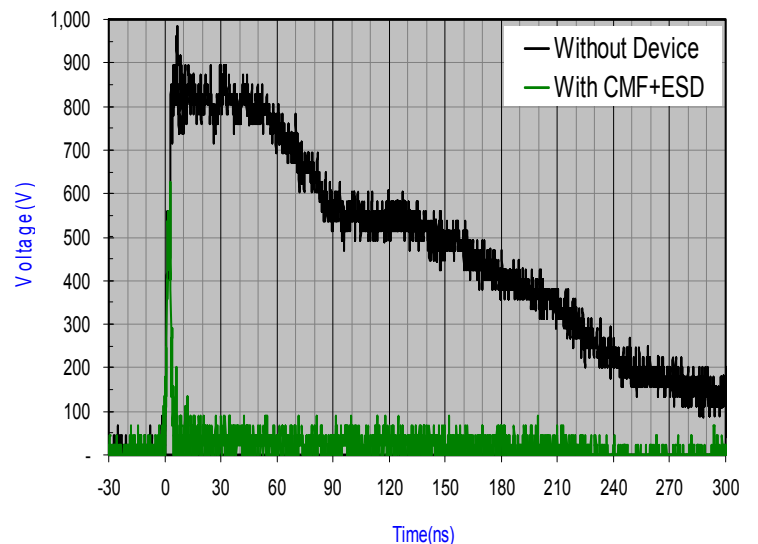


Eye pattern USB 2.0 high speed

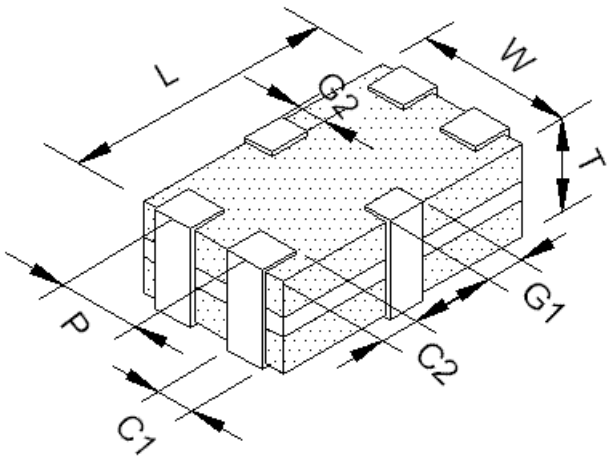


ESD Wave forms

IEC 8KV_ESD Contact

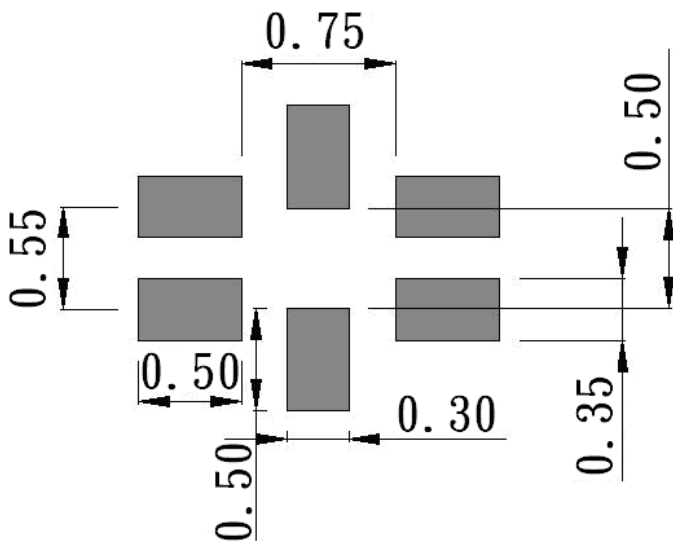
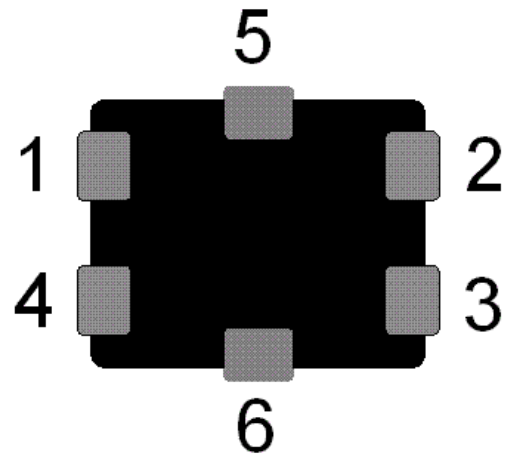
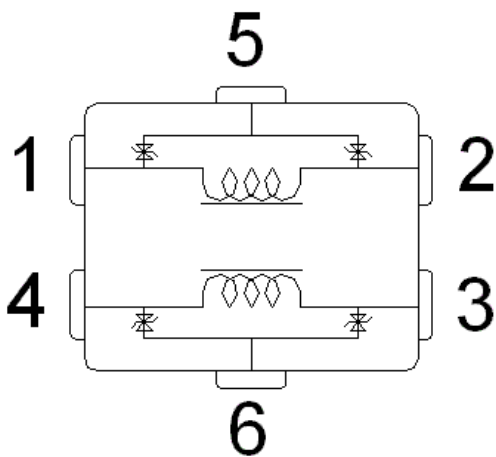


4. SHAPES AND DIMENSIONS



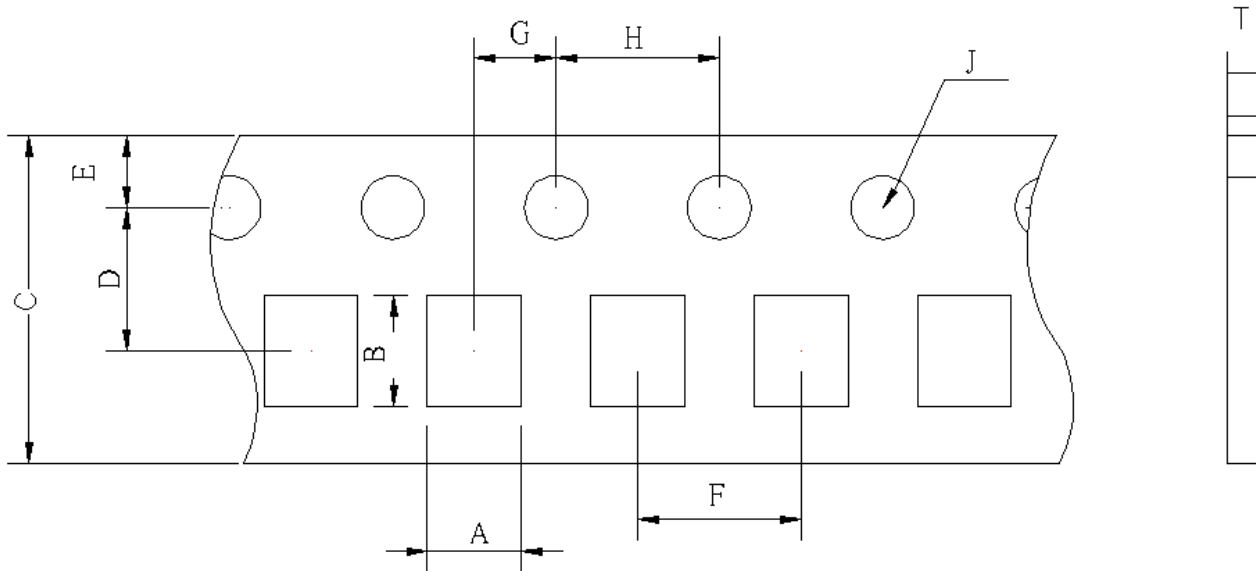
TYPE	Dimension
L	1.25±0.10
W	1.00±0.10
T	0.60±0.10
P	0.50±0.10
C1	0.30±0.10
C2	0.20±0.15
G1	0.30±0.15
G2	0.20±0.15
Unit : mm	

5. CIRCUIT CONFIGURATION & LAYOUT PAD



6.TAPE AND REEL SPECIFICATIONS/ TAPING DIMENSIONS

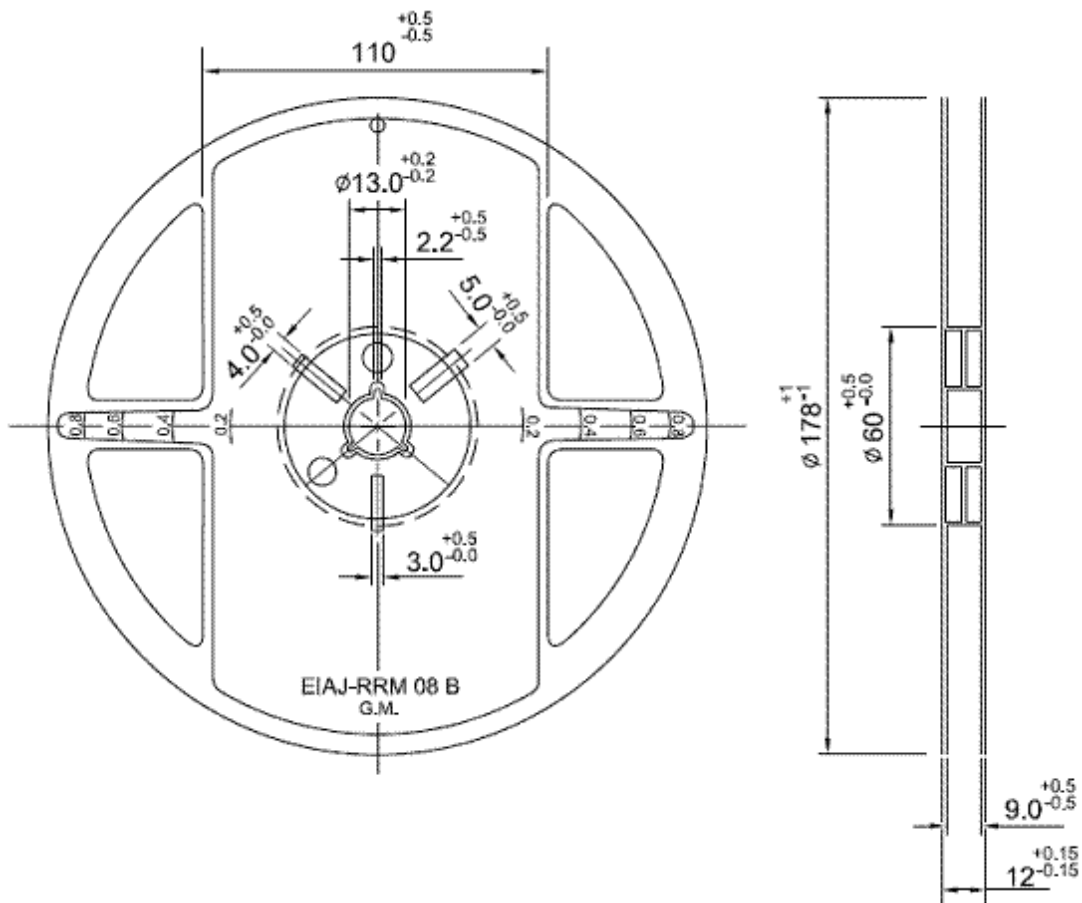
Type : Paper Carrier



Unit : mm

Symbol	Size	Symbol	Size
C	8.00±0.10	H	4.00±0.10
D	3.50±0.05	J	Φ1.55±0.05
E	1.75±0.05	T	0.75±0.03
F	4.00±0.10	A	1.20±0.05
G	2.00±0.05	B	1.45±0.05

7. REEL DIMENSIONS



Unit : mm

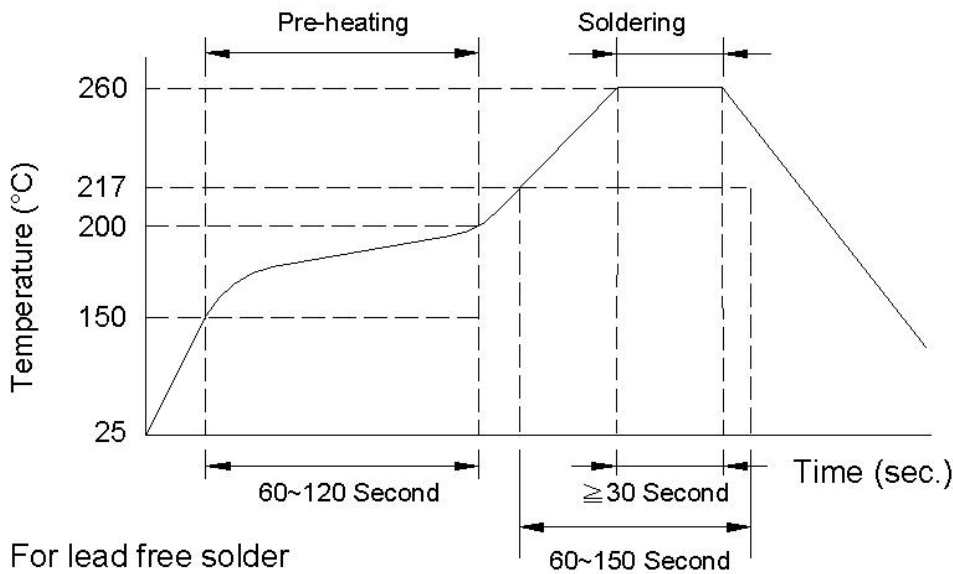
8. STANDARD QUANTITY FOR PACKAGING

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 ± 20 % of the initial value
Operational Life	A. Temperature : 85°C ± 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 ± 20 % of the initial value

Test item	Test condition	Criteria
Biased Humidity	A. Temperature : $40 \pm 2^{\circ}\text{C}$ 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 : $260 \pm 5^{\circ}\text{C}$ 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 should be within $\pm 20\%$ of the initial value
Steam Aging Test	A. Temperature : $93 \pm 2^{\circ}\text{C}$ B. Test time : 4 hrs C. Solder temperature : $235 \pm 5^{\circ}\text{C}$ D. Flux : Rosin E. DIP time : 5 ± 1 sec	More than 95 % of terminal electrode should be covered with new solder
ESD test (contact discharge)	A. Voltage : 8kV(level 4) B. Polarity : +, - C. ESD gun : IEC61000-4-2 standard Measurement : at ambient temperature 24 hrs after test completion	A. No mechanical damage B. Leakage current : within $10\mu\text{A}$
ESD test (air discharge)	A. Voltage : 15kV(level 4) B. Polarity : +, - C. ESD gun : IEC61000-4-2 standard Measurement : at ambient temperature 24 hrs after test completion	A. No mechanical damage B. Leakage current : within $10\mu\text{A}$

12.NOTE

All the products in this specification comply with RoHS 1.0 directive.