

High speed Chip Common Mode Filter (HCM2012G Series) Engineering Specification



1.PRODUCT DETAIL

Part No.	Imp. Com. (Ω)±30% @100MHz	DCR Max. (Ω)	Rated Current Max.(mA)	Rated Voltage (V)	Insulation Resistance Min.(MΩ)	Withstand Voltage (V)
HCM2012GH670AE_	67	1.0	300	10	200	25
HCM2012GH900AE_	90	1.0	300	10	200	25
HCM2012GD900AE_	90	1.0	300	10	200	25
Test Instruments	<ul style="list-style-type: none"> •Agilent E4991A RF IMPEDANCE / MATERIAL ANALYZER •HP4338 MILLIOHMMETER •Agilent E5071C ENA SERIES NETWORK ANALYZER •Keithley 2410 1100V SOURCE METER 					

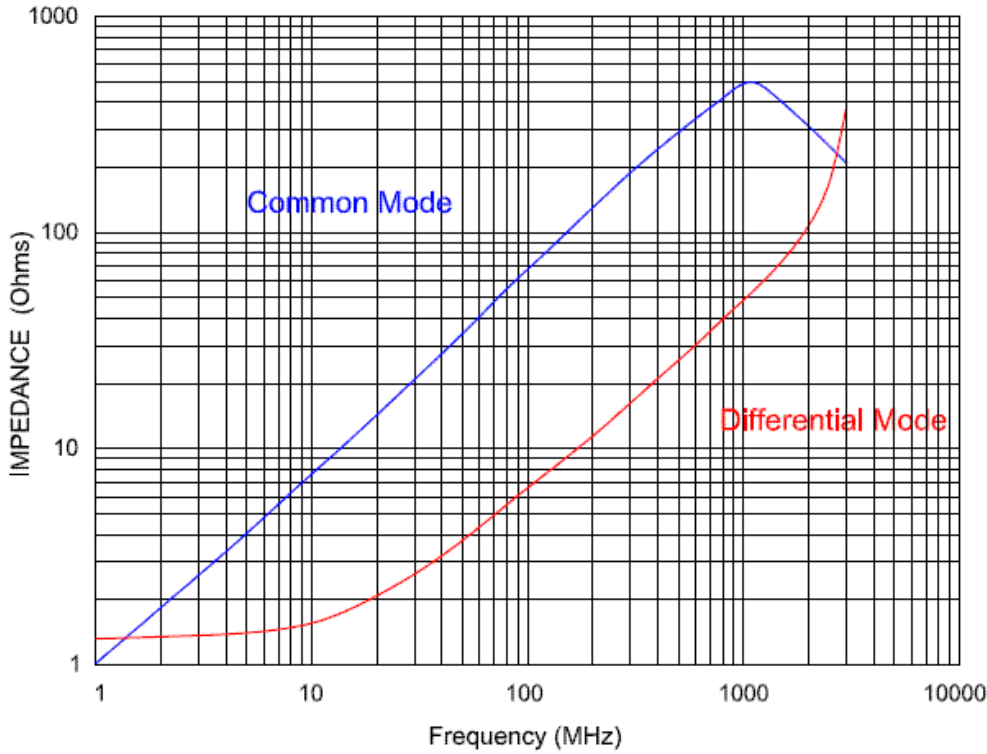
2.PART NUMBER CODE

HCM 2012 G □ 67 0 □ E □
 1 2 3 4 5 6 7 8 9

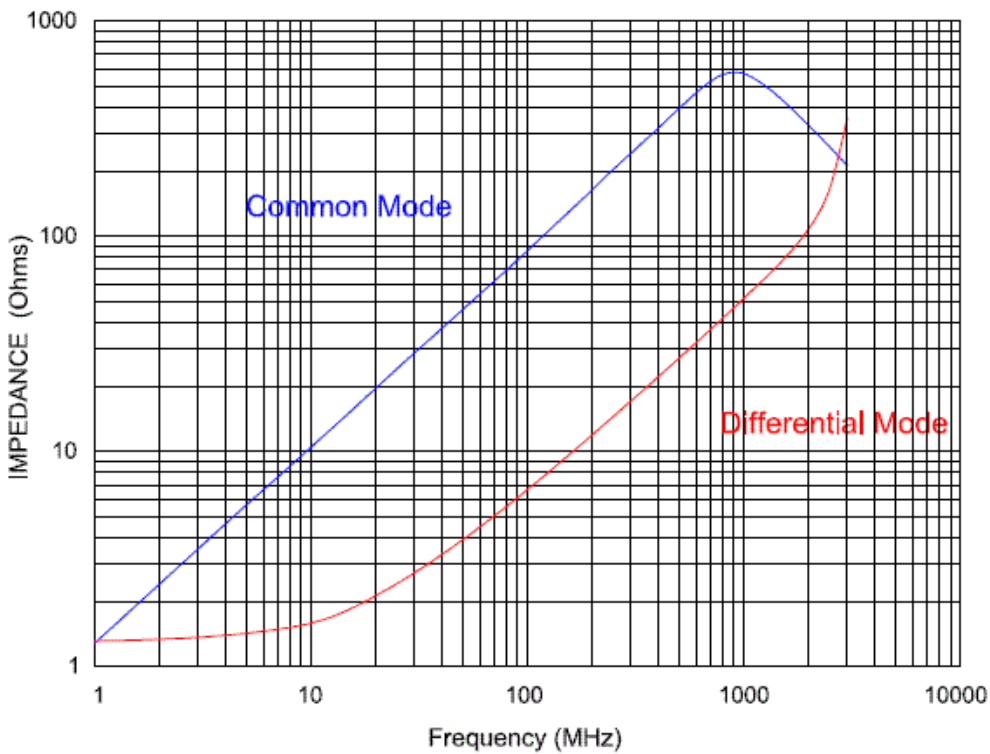
- 1 : Series name
- 2 : Dimensions L*W
- 3 : Material code
- 4 : Product identification number
 H - High speed for USB 、 MIPI ,etc.
 D - High speed for HDMI ,etc
- 5 : Impedance value (ex : 900=90Ω ; 121=120Ω)
- 6 : Fixed decimal point
- 7 : INPAQ internal code
- 8 : Packaging style
 E - Embossed plastic tape, 7" reel
- 9 : INPAQ internal code

3.IMPEDANCE vs. FREQUENCY CHARACTERISTICS

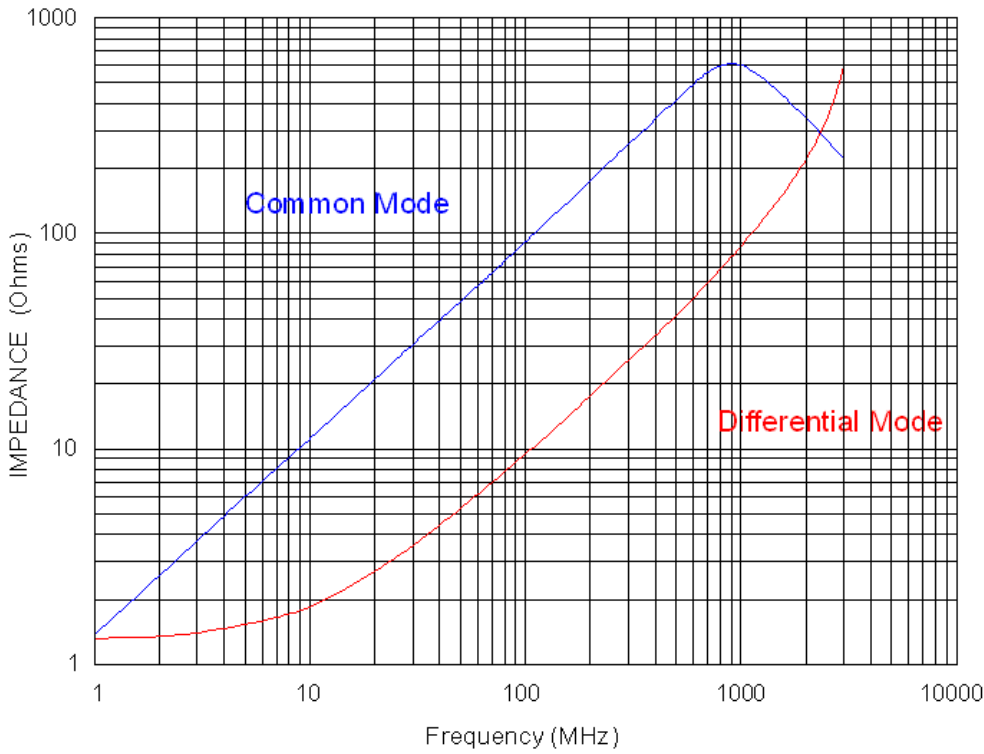
HCM2012GH670AE_



HCM2012GH670AE_

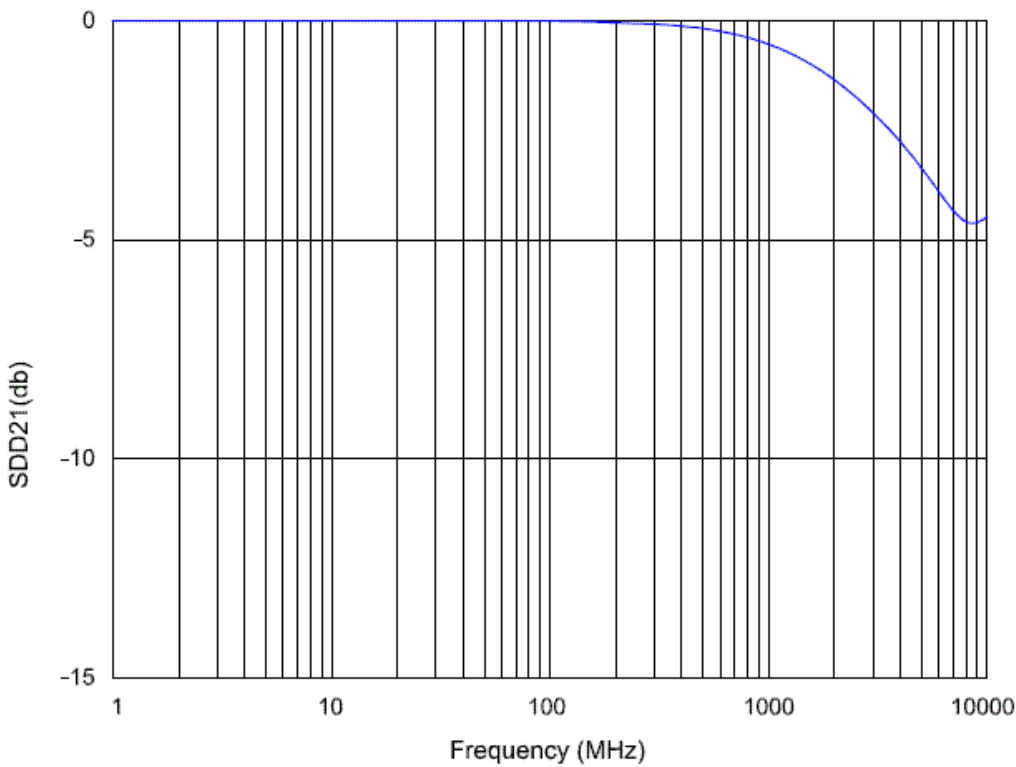


HCM2012GH900AE



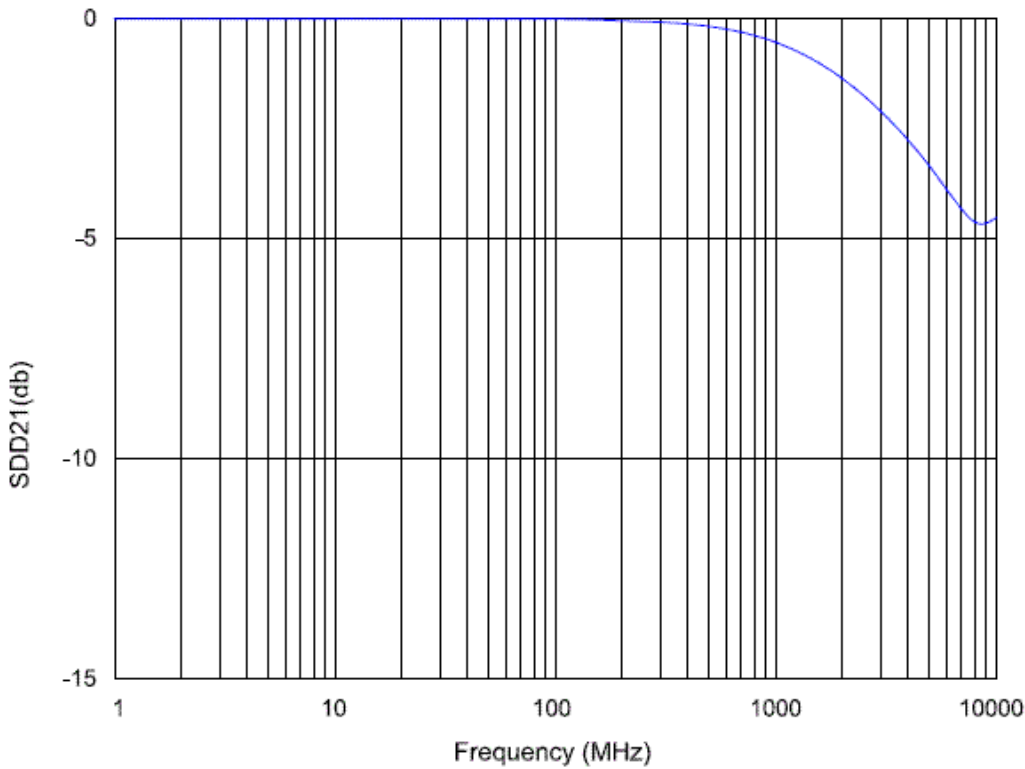
HCM2012GD900AE_

4. INSERTION LOSS vs. FREQUENCY CHARACTERISTICS



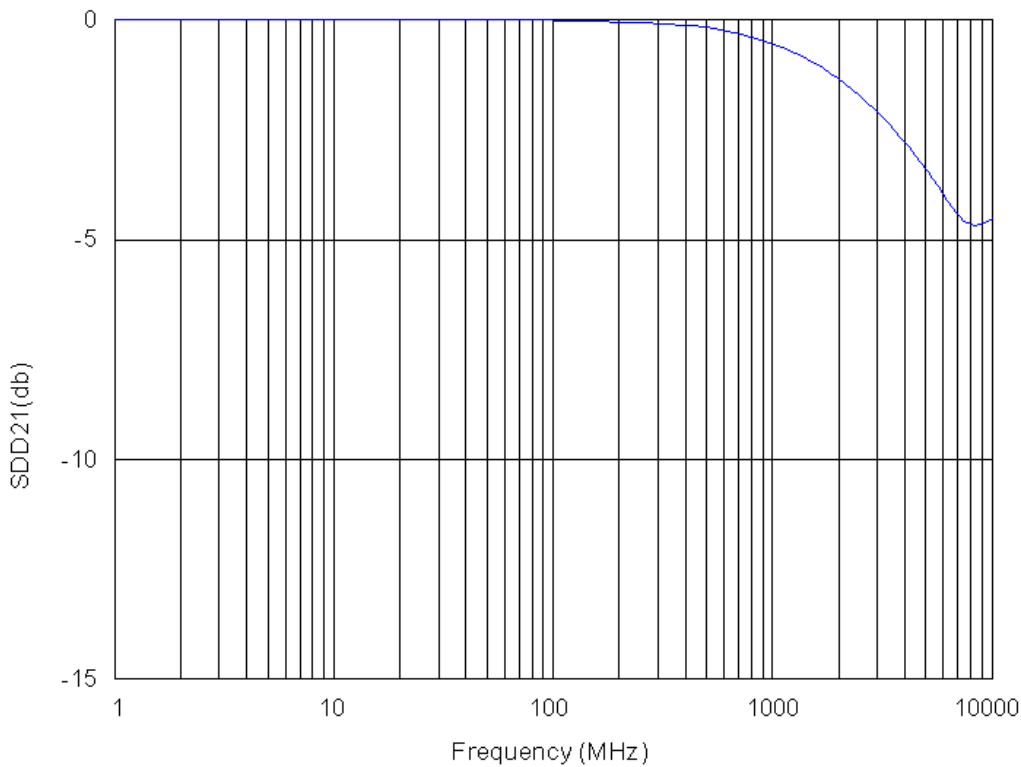
Agilent E5071C ENA Series Network Analyzer

HCM2012GH670AE_



Agilent E5071C ENA Series Network Analyzer

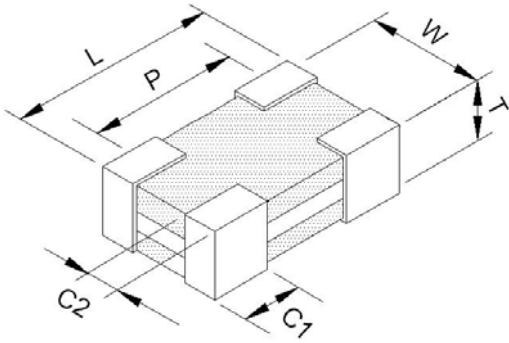
HCM2012GH900AE_



Agilent E5071C ENA Series Network Analyzer

HCM2012GD900AE_

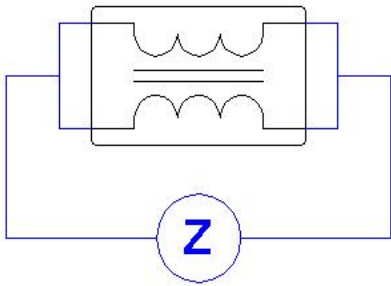
5. SHAPES AND DIMENSIONS



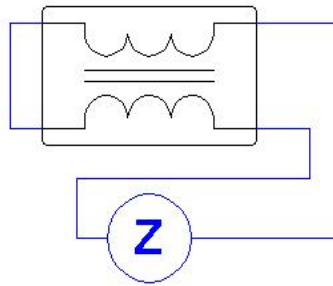
TYPE	Dimension
L	2.00±0.20
W	1.20±0.20
T	1.00±0.10
P	1.60±0.20
C1	0.40±0.20
C2	0.30±0.20
Unit : mm	

6. MEASURING CIRCUITS

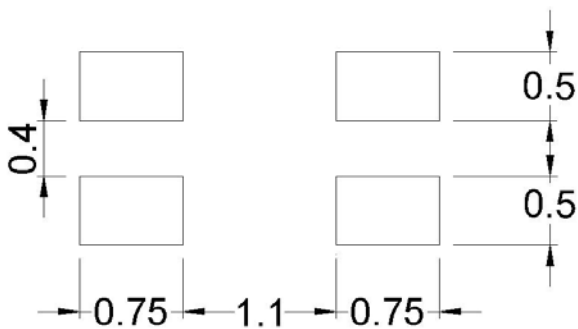
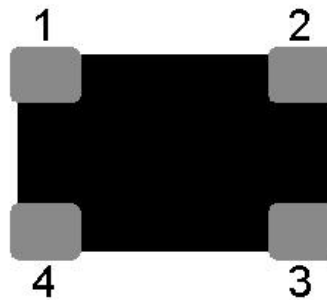
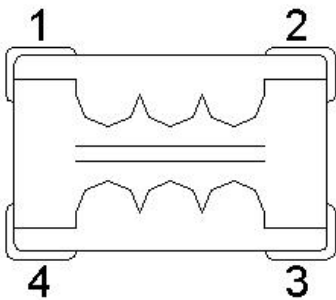
(A): Common mode



(B): Differential mode

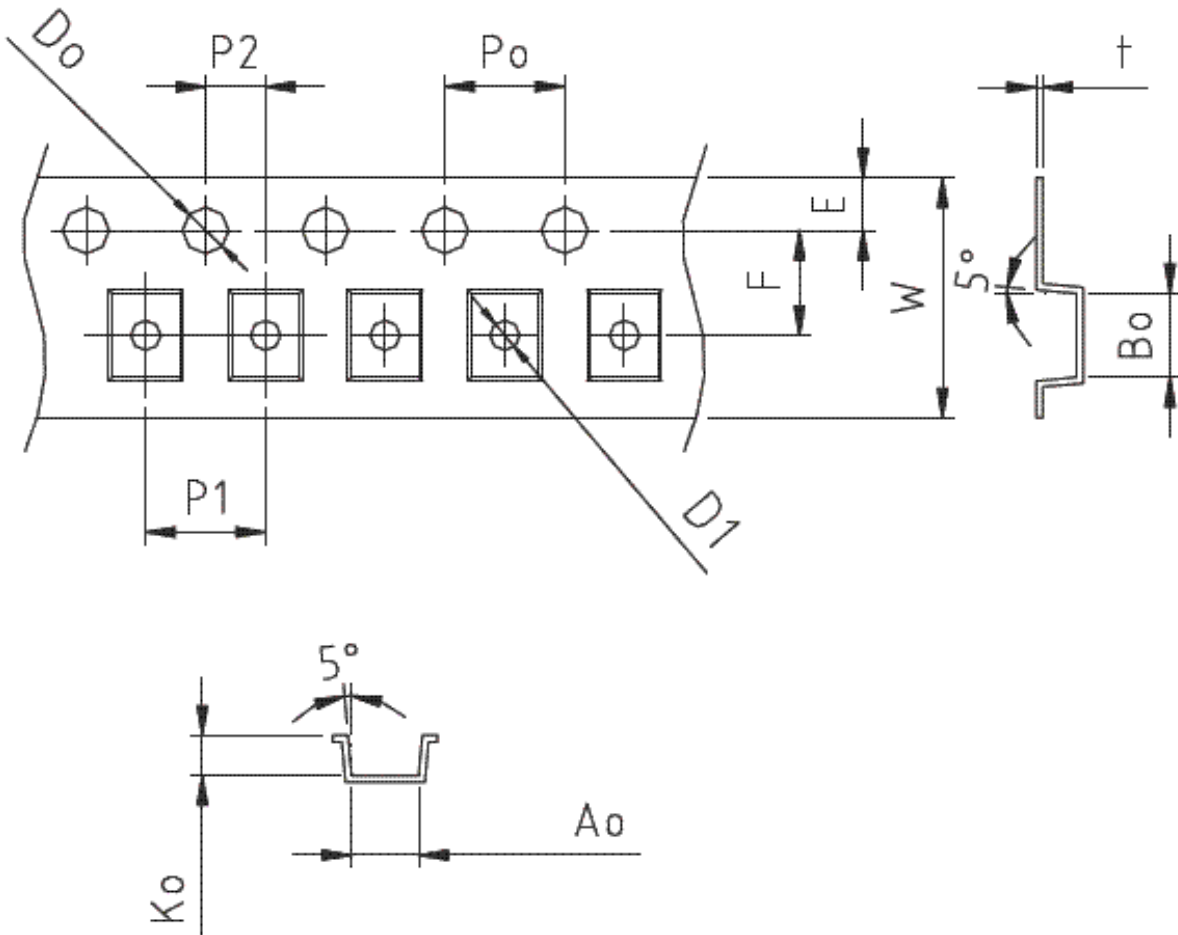


7. CIRCUIT CONFIGURATION & LAYOUT PAD



8.TAPE AND REEL SPECIFICATIONS/ TAPING DIMENSIONS

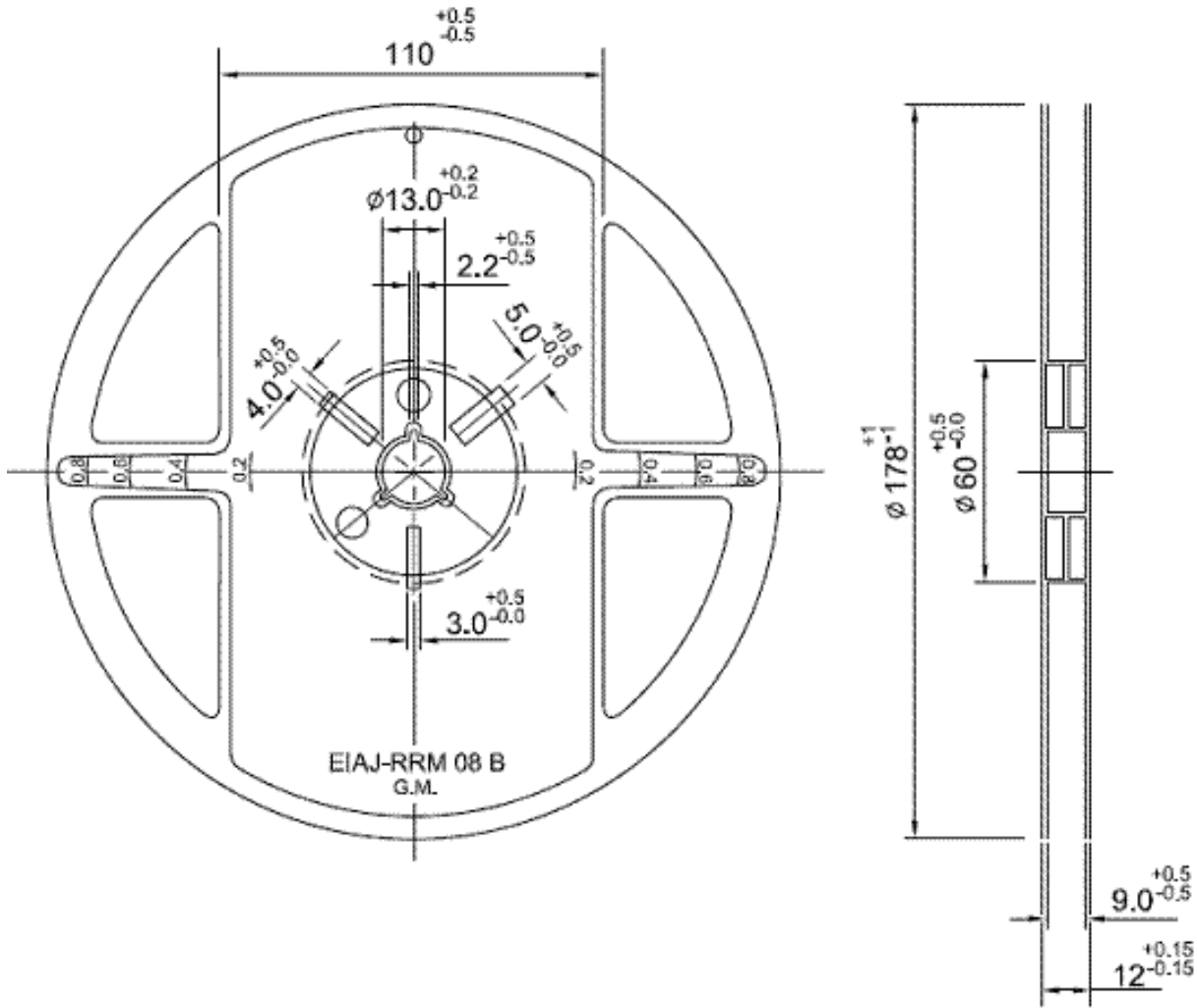
Type : Plastic Carrier



Unit : mm

Symbol	Size	Symbol	Size
W	8.00±0.10	Po	4.00±0.10
P1	4.00±0.10	P2	2.00±0.10
E	1.75±0.10	Bo	2.30±0.10
F	3.50±0.10	Ao	1.40±0.10
Do	1.55±0.05	Ko	1.13±0.10
D1	1.00±0.05	t	0.22±0.05

9. REEL DIMENSIONS

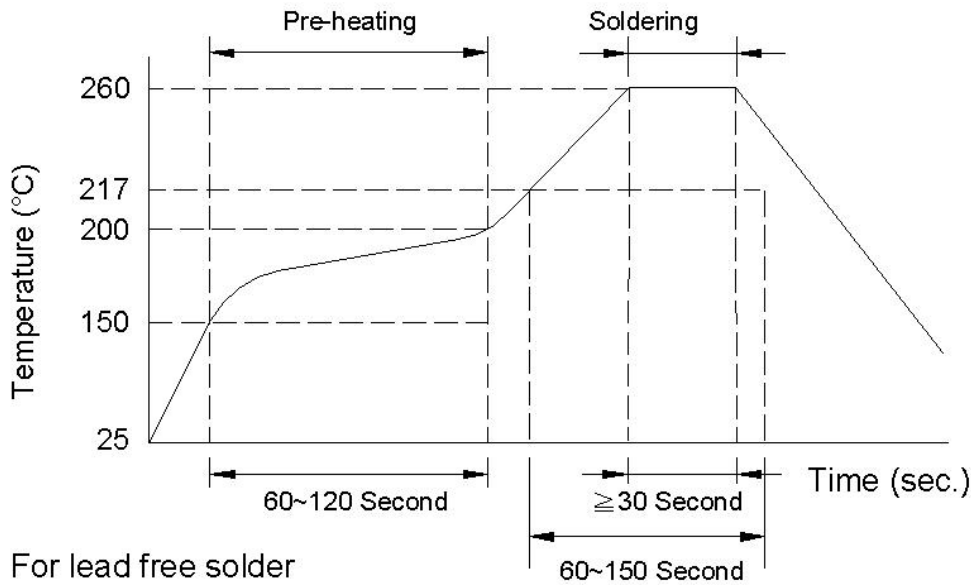


Unit : mm

10. STANDARD QUANTITY FOR PACKAGING

- Packaging style : Taping
- Reel packaging quantity : 3000 pcs/reel
- Inner box : 5 reel/inner box

11. RECOMMENDED SOLDERING CONDITIONS



12.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

13.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

<p>Biased Humidity</p>	<p>A. Temperature : $40 \pm 2^{\circ}\text{C}$ B. Humidity : 90 ~ 95 % RH C. Test time : 1000 hrs D. Apply current : full rated current</p> <p>Measurement : at ambient temperature 24 hrs after test completion</p>	<p>A. No mechanical damage B. Impedance value should be within $\pm 20\%$ of the initial value</p>
<p>Resistance to Solder Heat</p>	<p>A. Solder temperature : $260 \pm 5^{\circ}\text{C}$ B. Flux : Rosin C. DIP time : 10 ± 1 sec</p>	<p>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</p>
<p>Steam Aging Test</p>	<p>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</p>	<p>More than 95 % of terminal electrode should be covered with new solder</p>

14.NOTE

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