TF2012A2X Series

COMMON MODE FILTER

TOP-EMC

1. Generals

This reference specification applies to Chip Common Mode Choke Coil Arrays TF2012A2X Series.

2. Features

- Effective for suppressing common mode noise and almost no effect for high speed differential data line
- Ultra low profile (2.0×1.25×1.00mm)
- Ceramic multilayer type SMD component
- Non-polarized product
- It is a product conforming to RoHS directive.

3. Applications

- LVDS lines in notebook computers
- USB2.0, IEEE1394, DVI, HDMI lines in PDP, LCD TV, DVD Player, PC, Audio player, DSC
- MDDI, MIPI in mobile phone

4. Product specifications

4. 1 PART NUMBER CODE

T	F	2012A	2X	900	M	T
①	②	③	④	⑤	⑥	⑦

① Company Name: TOP-EMC

② Product Function: Common Mode Filter

③ Dimensions, 2.0mm (L)×1.2mm (W)

④ Number of lines, 2X = 2 lines

⑤ Common Mode Impedance (at 100MHz), 900= 90Ω

⑥ Tolerance of common mode impedance, M = ±20%

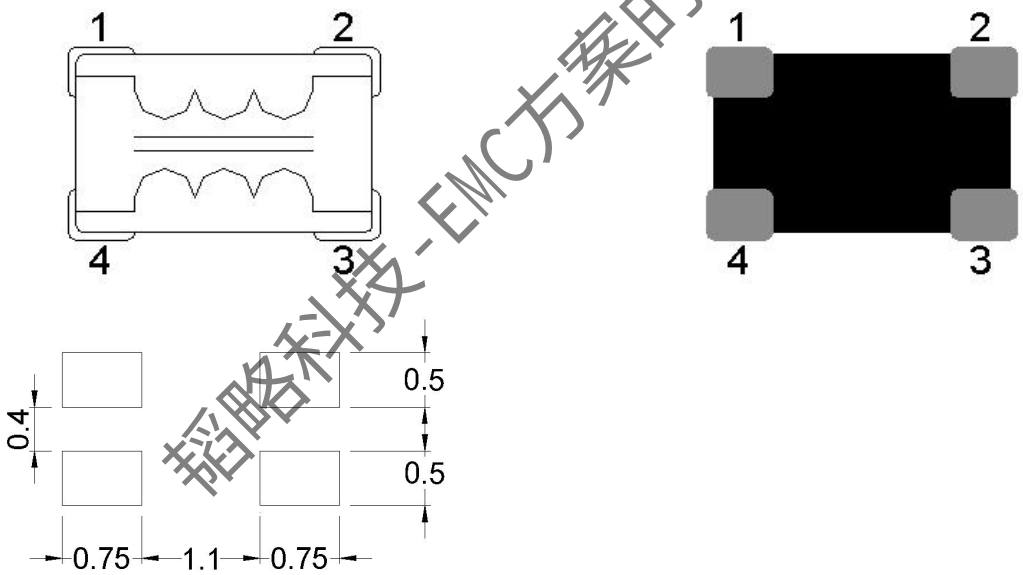
⑦ Packing：Tape & Reel

4.2.Electrical Characteristics

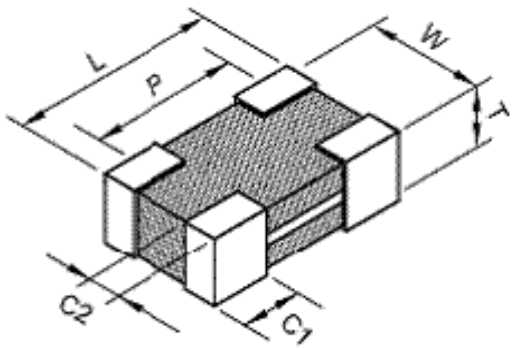
Part Number	Common Mode Impedance (at 100MHz, Under Standard Testing Condition)	Rated Voltage	Withstanding Voltage	Rated Current	DC Resistance	Insulation Resistance
TF2012A2X500MT	50Ω±20%	10V(DC)	25V(DC)	200mA	0.4Ω±25%	100MΩ
TF2012A2X670MT	67Ω±20%			400mA	0.4Ω±25%	200MΩ
TF2012A2X900MT	90Ω±20%			400mA	0.4Ω±25%	
TF2012A2X121MT	120Ω±20%			400mA	0.4Ω±25%	
TF2012A2X161MT	160Ω±20%			400mA	0.5Ω±25%	
TF2012A2X181MT	180Ω±20%			400mA	0.5Ω±25%	
TF2012A2X221MT	220Ω±20%			400mA	0.5Ω±25%	

Operating Temperature : -40 to +85℃ Storage Temperature:-40 to +85℃

5.Style and Dimensions



6.Shapes And Dimensions

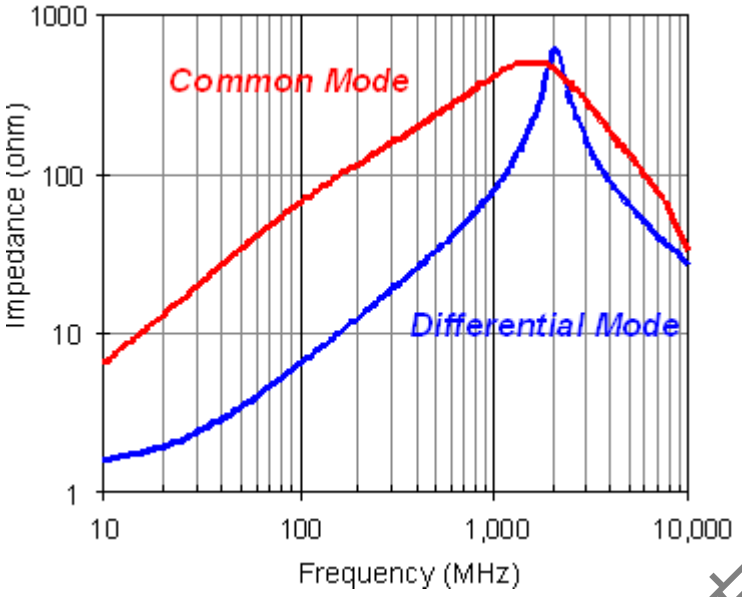


TYPE	2012
L	2.00±0.20
W	1.25±0.20
T	1.00±0.10
P	1.60±0.20
C1	0.40±0.20
C2	0.30±0.20
Unit: mm	

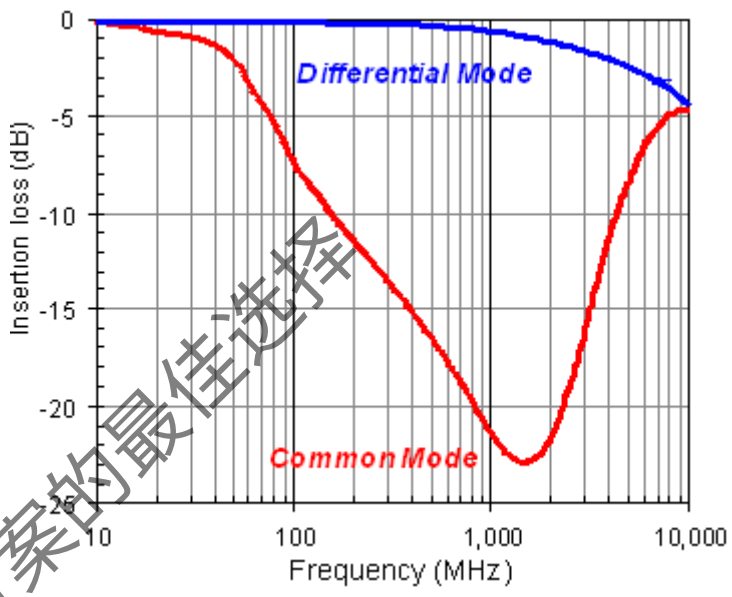
7.Typical Characteristic

TF2012A2X500MT

IMPEDANCE vs. FREUQENCY CHARACTERISTICS

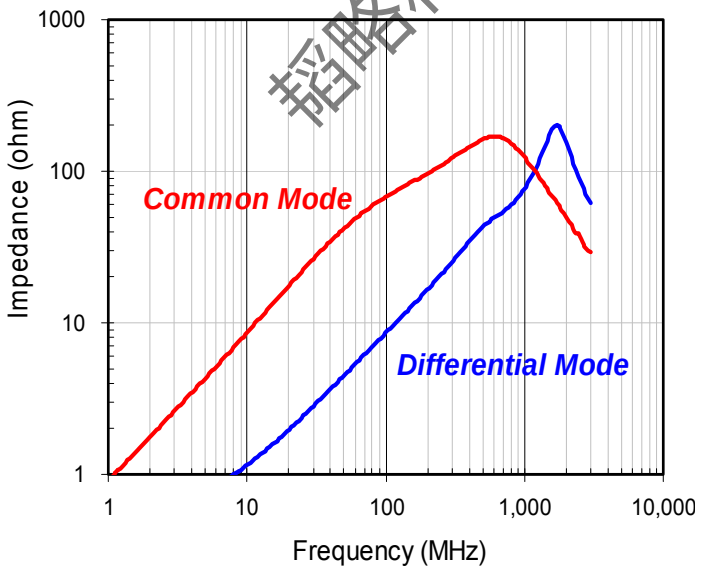


INSERTION LOSS vs. FREUQENCY CHARACTERISTICS

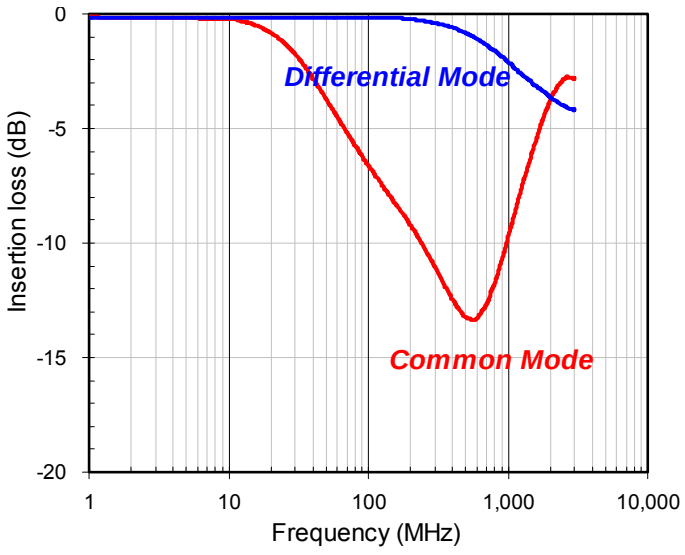


TF2012A2X670MT

IMPEDANCE vs. FREUQENCY CHARACTERISTICS

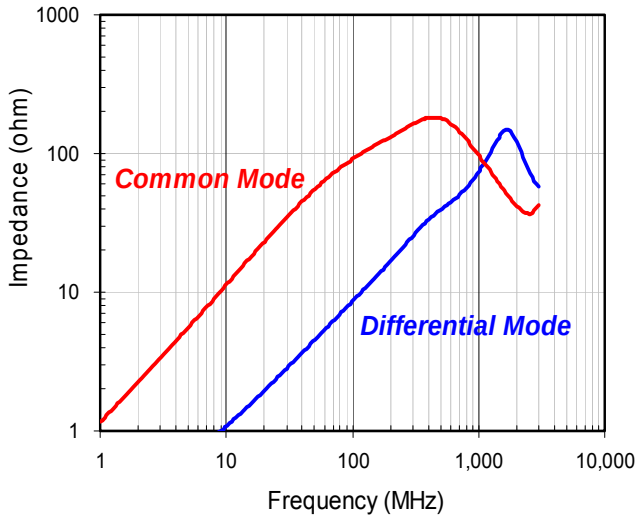


INSERTION LOSS vs. FREUQENCY CHARACTERISTICS

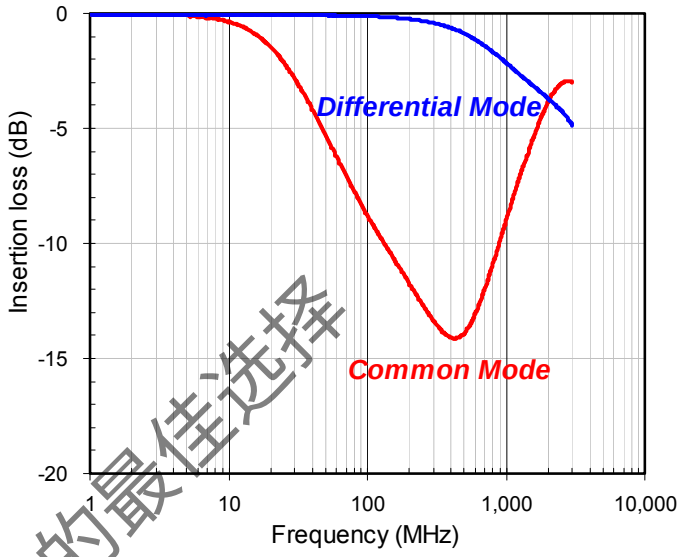


TF2012A2X900MT

IMPEDANCE vs. FREUQENCY CHARACTERISTICS

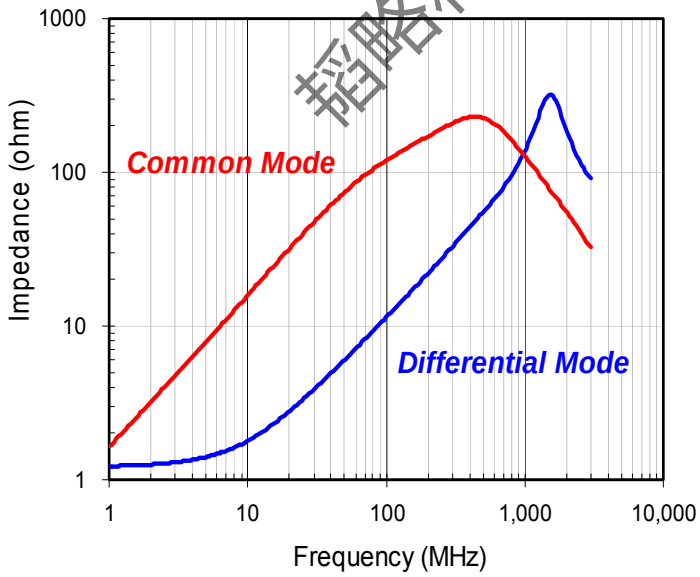


INSERTION LOSS vs. FREUQENCY CHARACTERISTICS

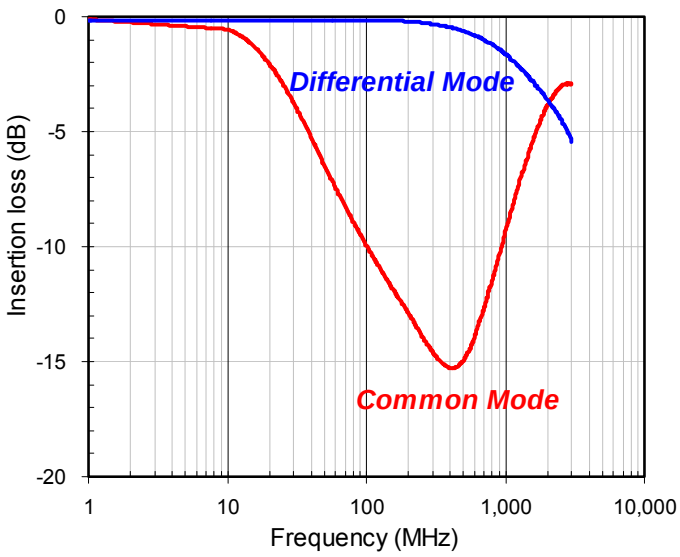


TF2012A2X121MT

IMPEDANCE vs. FREUQENCY CHARACTERISTICS

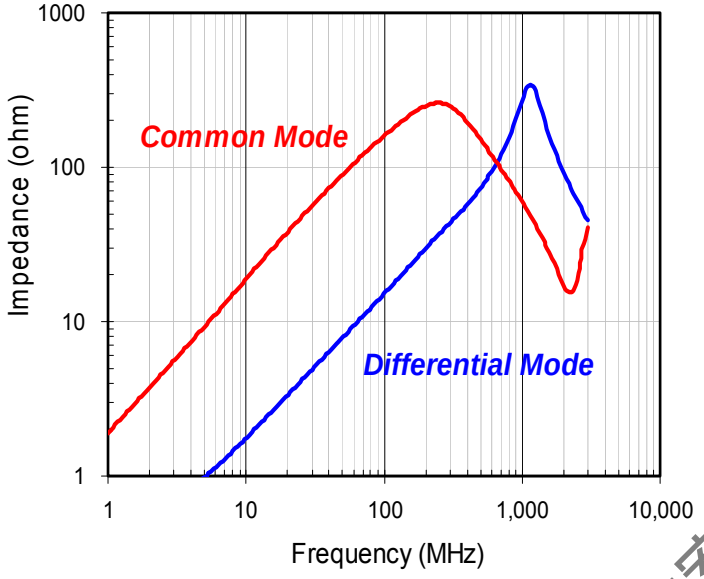


INSERTION LOSS vs. FREUQENCY CHARACTERISTICS

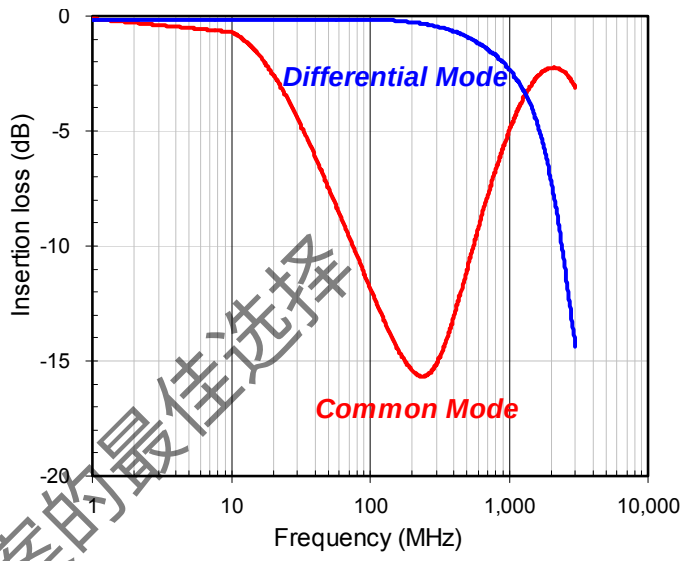


TF2012A2X161MT

IMPEDANCE vs. FREUQENCY CHARACTERISTICS

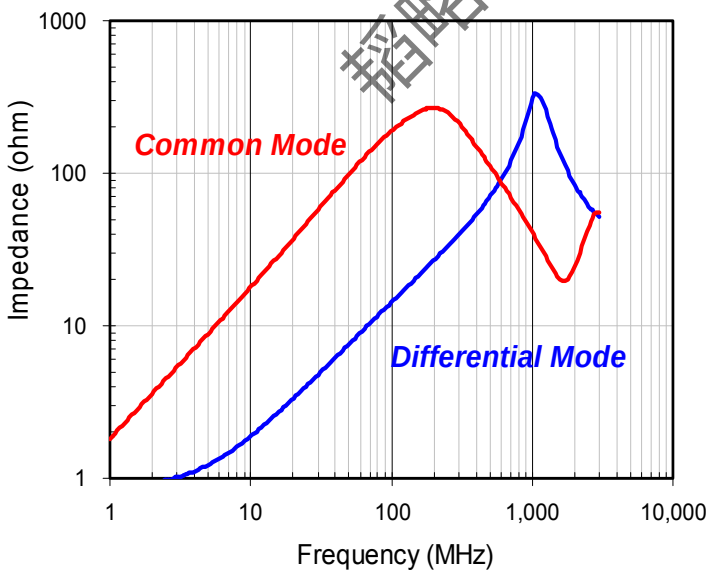


INSERTION LOSS vs. FREUQENCY CHARACTERISTICS

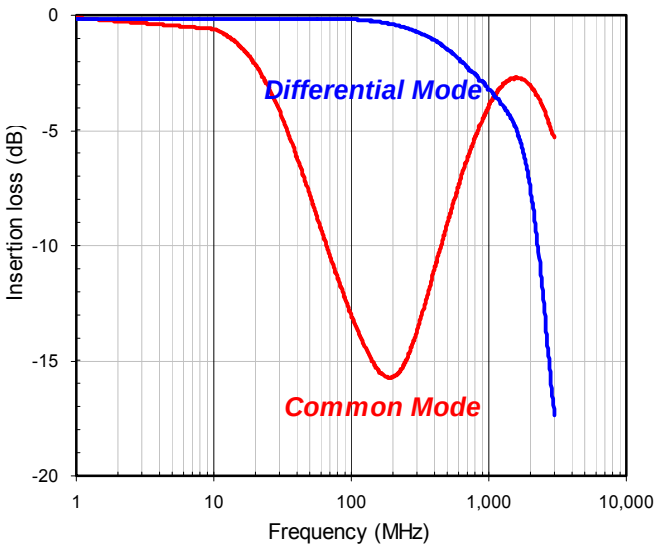


TF2012A2X181MT

IMPEDANCE vs. FREUQENCY CHARACTERISTICS

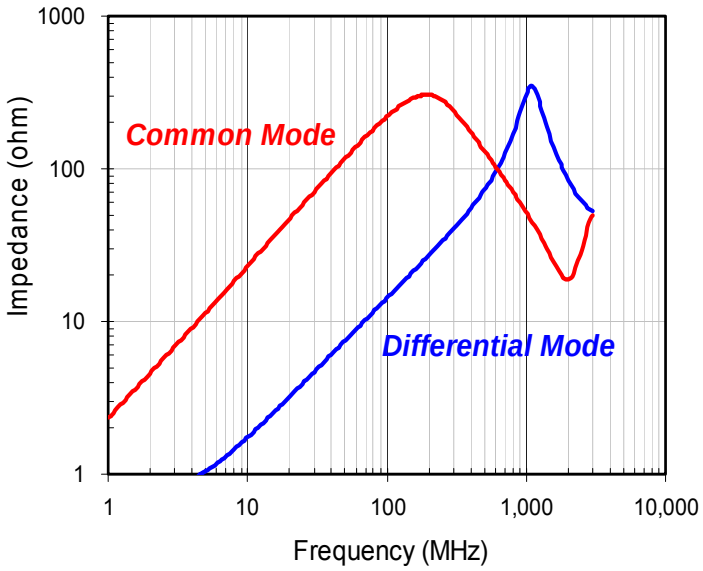


INSERTION LOSS vs. FREUQENCY CHARACTERISTICS

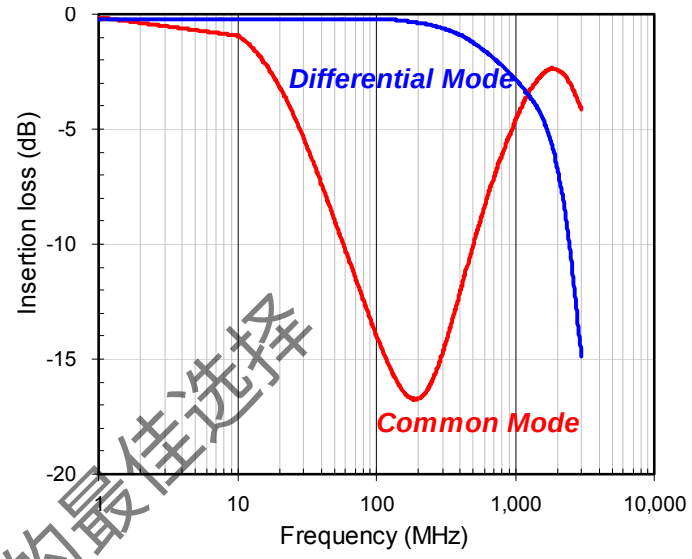


TF2012A2X221MT

IMPEDANCE vs. FREUQENCY CHARACTERISTICS



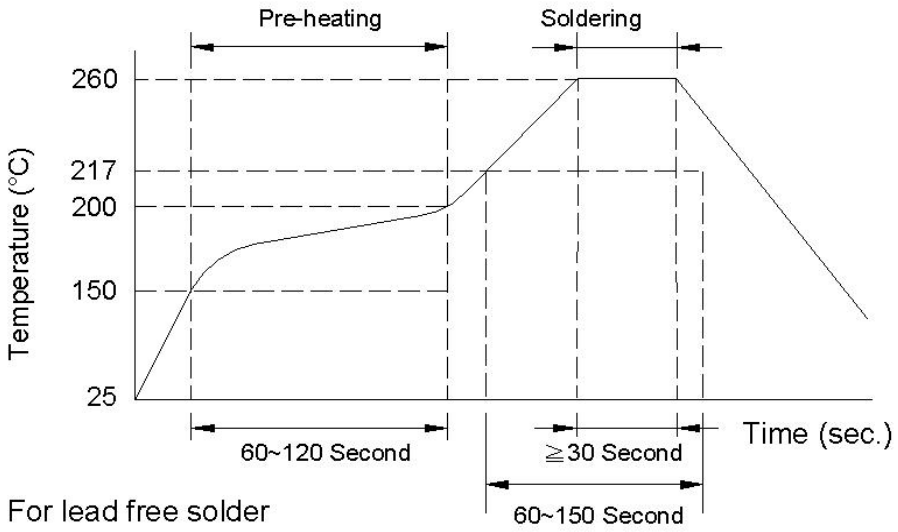
INSERTION LOSS vs. FREUQENCY CHARACTERISTICS



8.Reliability And Test Condition

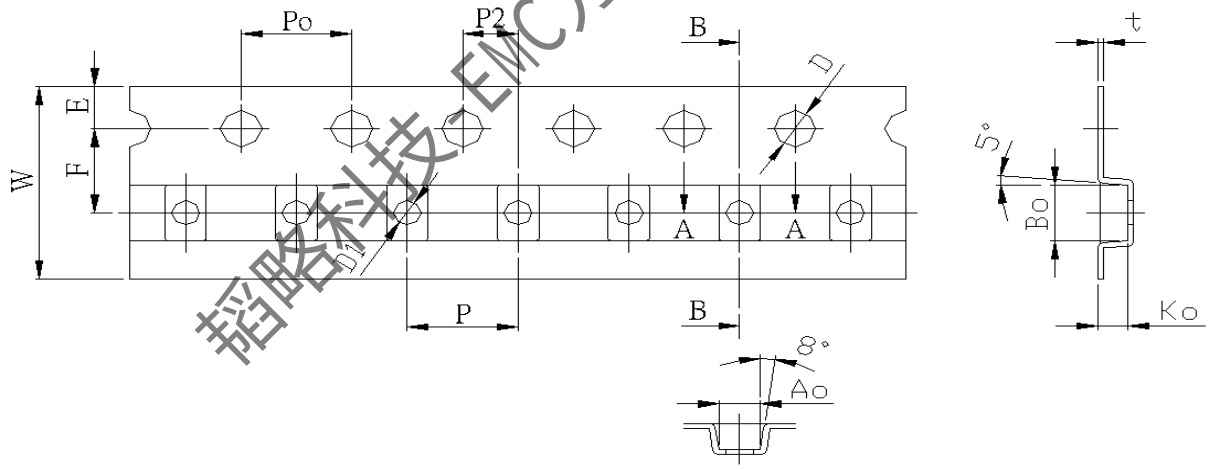
Test item	Test condition	Criteria
Temperature Cycle	A. Temperature : -40 ~ +85℃ B. Cycle : 100 cycles C. Dwell time : 30minutes Measurement : at ambient temperature 24 hrs after test completion	A. No mechanical damage B. Impedance value should be within ± 20 % of the initial value
Operational Life	A. Temperature : 85℃ ± 5℃ 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
Biased Humidity	A. Temperature : 40 ± 2℃ 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 ± 20 % of the initial value
Resistance to Solder Heat	A. Solder temperature : 260 ± 5℃ 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 ± 20 % of the initial value
Steam Aging Test	A. Temperature : 93 ± 2℃ B. Test time : 4 hrs(MCA) Others : 8 hrs C. Solder temperature : 235 ± 5℃ D. Flux : Rosin E. DIP time : 5 ± 1 sec	More than 95 % of terminal electrode should be covered with new solder

9.Recommended Soldering Conditions



10.Tape And Reel Specifications

Type ： Plastic Carrier

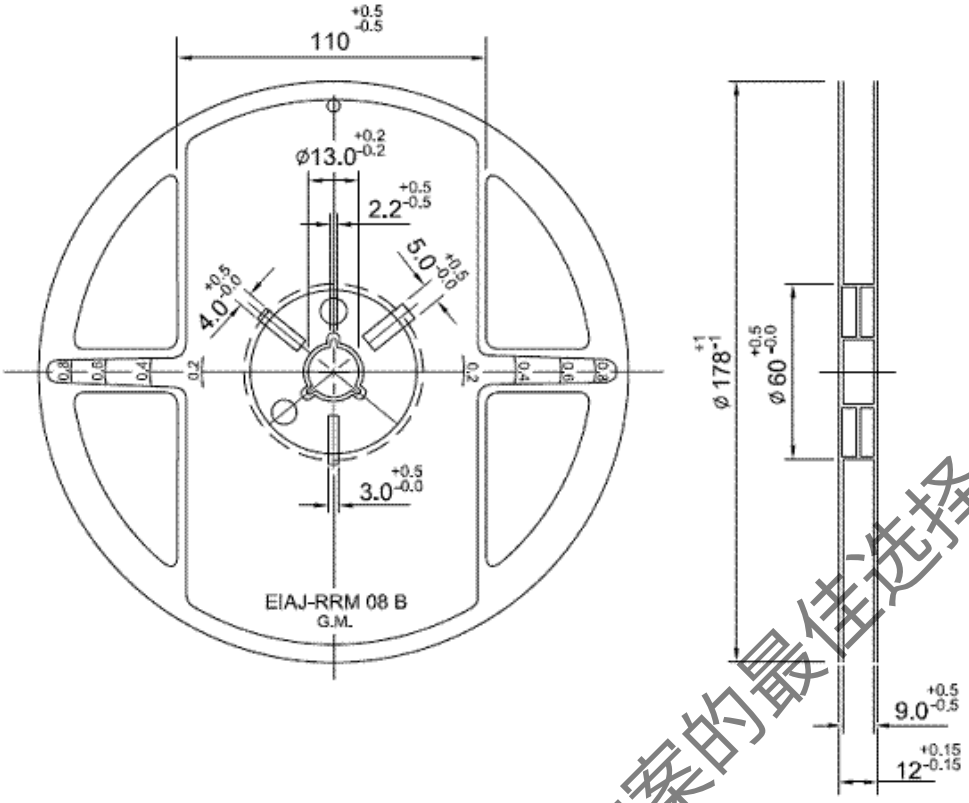


Unit ： mm

Symbol	Size	Symbol	Size
W	8.00±0.10	D1	1.00±0.10
P	4.00±0.10	Po	4.00±0.10
E	1.75±0.10	Ao	1.40±0.10
F	3.50±0.05	Bo	2.30±0.10
P2	2.00±0.05	Ko	1.13±0.10
D	$1.50^{+0.10}_{-0.00}$	t	0.22±0.05

11.Reel Dimensions

Unit: mm



12.Standard Quantity For Packaging

Packaging style ： Taping

Reel packaging quantity： 3000 pcs/reel

13.General Thechnical Data

Operating temperature range : - 40℃ ~ +85 ℃

Storage Condition : Less than 40℃ and 70% RH

Storage Time: 6 months Max.

Soldering method: Reflow or Wave Soldering

14.Contact Information

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