SMM2012M Series

Chip Common Mode Filter

◆ Features

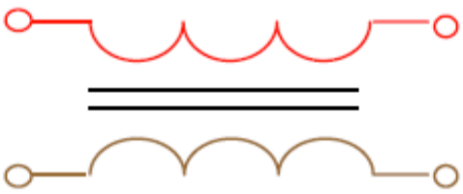
Powerful components with composite co-fired material to solve EMI problem for high speed differential signal transmission line as USB, and LVDS, without distortion to high speed signal transmission.

◆ Application

1 Common mode noise suppression of signal lines in high speed and high density digital equipment ；

2、USB2.0/3.0 of PC, peripheral equipments, small digital AV equipments, etc 。

◆ Equivalent Circuit Diagram



◆ PRODUCT IDENTIFICATION

SMM	2012	M	900	D	T	E
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Series Type

(2) Chip Size（mm）:Length X Width

(3) Material type : With maganetic shield(B/D/H)

(4) Nominal Impedance:900=90Ω；
101=100Ω

(5) Rated Curren：A=250mA; B=300mA;C=350mA;
D=400mA; E=1000mA;F=1500mA
G=3000mA

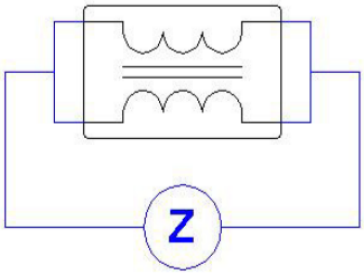
(6) Company Code

(7) Packaging: P – Embossed paper tape, 7" reel
E – Embossed plastic tape, 7" reel
T – Tape & reel

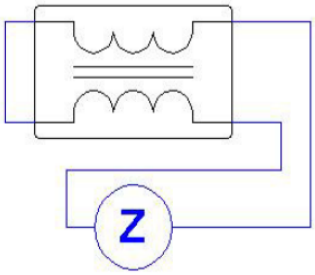
◆ Impedance :

Measured by using Agilent E4991A RF Impedance Analyzer

(A):Common mode

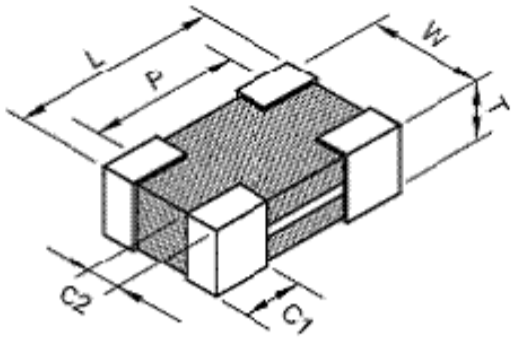


(B):Differential mode



◆ Dimensions

Unit: mm



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

◆ Specifications

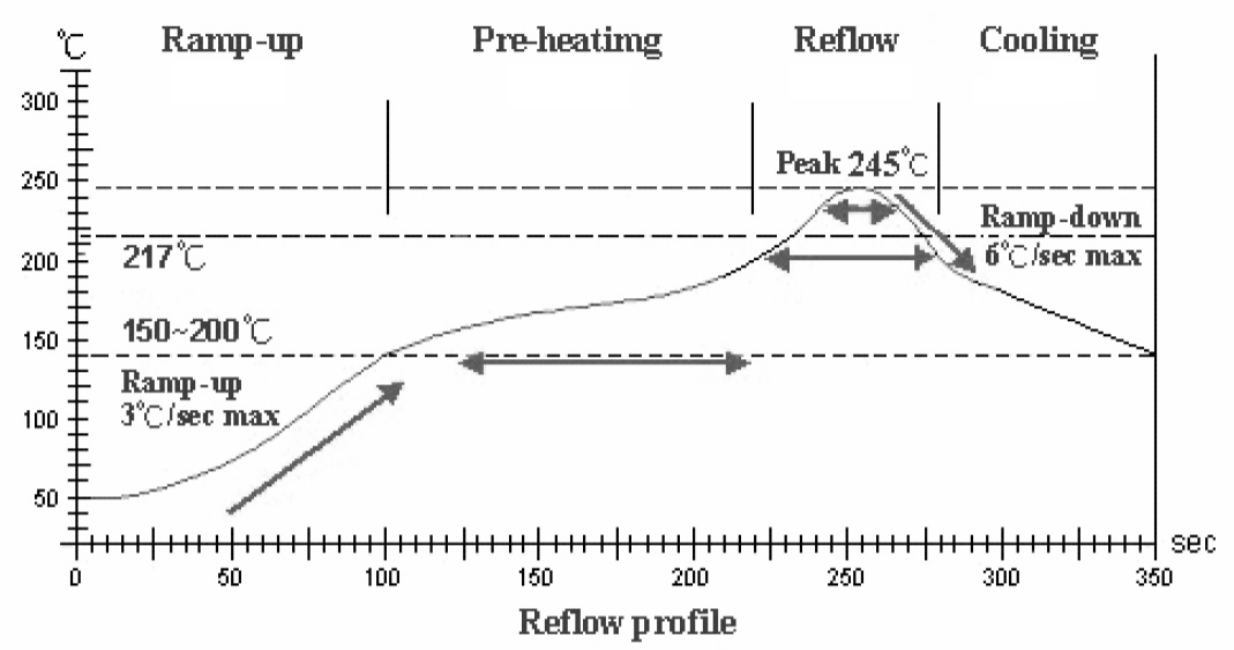
Part Number	Imp. Com. (Ω)±25% @100MHz	DCR Max. (Ω)	Rated Current Max. (mA)	Rated Voltage (V)	Withstand Voltage (V)	Insulation Resistance Min.(MΩ)
SMM2012M670DTE	67	0.40	400	10	25	200
SMM2012M900DTE	90	0.40	400	10	25	200
SMM2012M121DTE	120	0.40	400	10	25	200
SMM2012M161DTE	160	0.50	400	10	25	200
SMM2012M181DTE	180	0.50	400	10	25	200
SMM2012M221BTE	220	0.50	300	10	25	200

Test Instruments

•Agilent E4991A RF IMPEDANCE / MATERIAL ANALYZER
•HP4338 MILLIOHMMETER
• Agilent E5071C ENA SERIES NETWORK ANALYZER
•Keithley 2410 1100V SOURCE METER

Operating temperature range : - 40℃ ~ +85℃S torage
Condition : Less than 40℃ and 70% RH

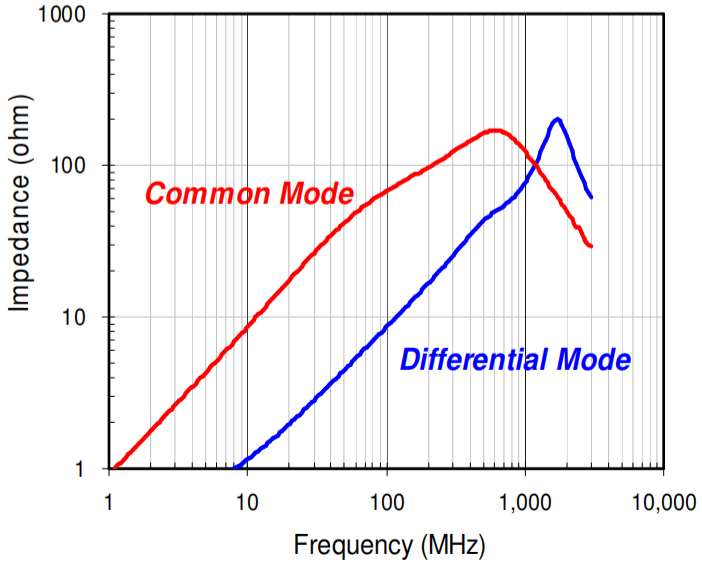
◆ Recommended soldering conditions



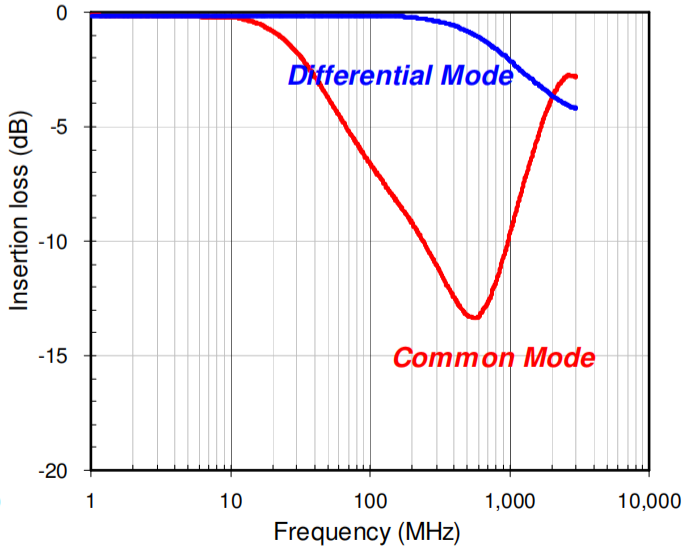
◆ Characteristics

SMM2012M670DTE

IMPEDANCE vs. FREUQENCY CHARACTERISTICS

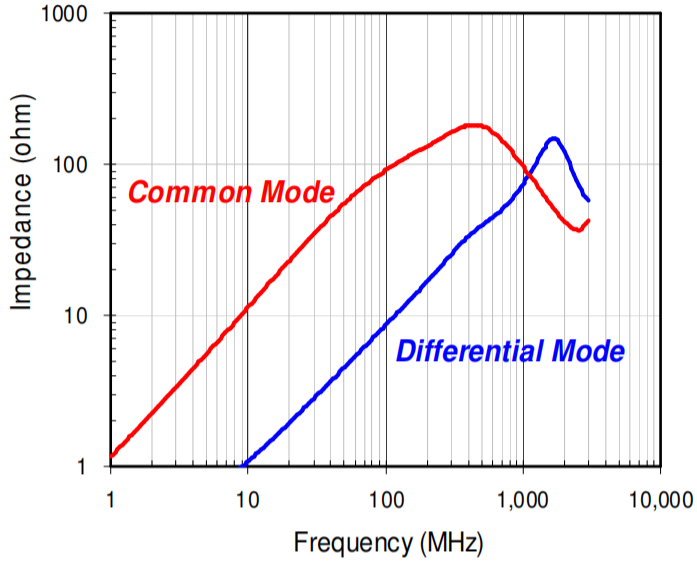


INSERTION LOSS vs. FREUQENCY CHARACTERISTICS

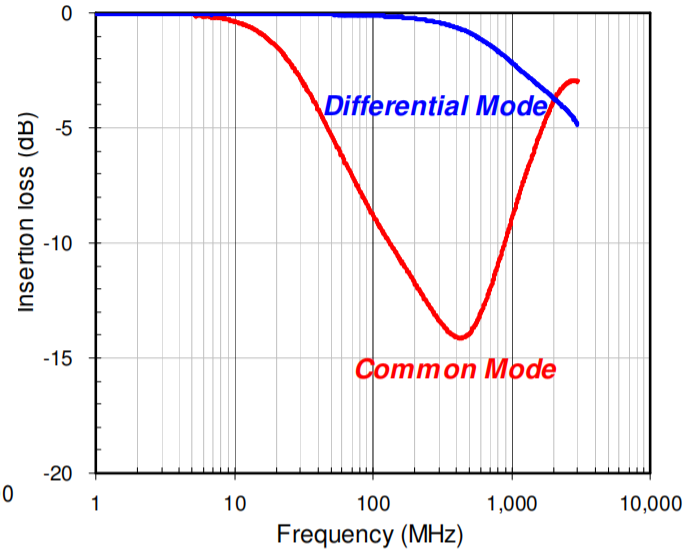


SMM2012M900DTE

IMPEDANCE vs. FREUQENCY CHARACTERISTICS

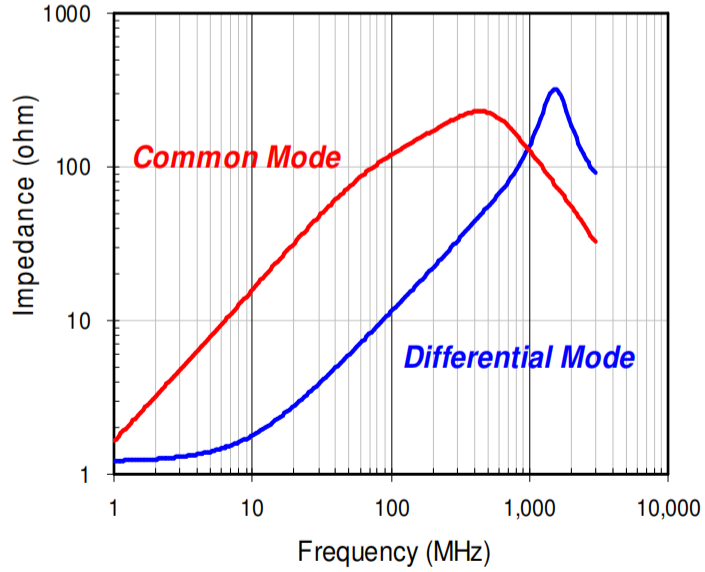


INSERTION LOSS vs. FREUQENCY CHARACTERISTICS

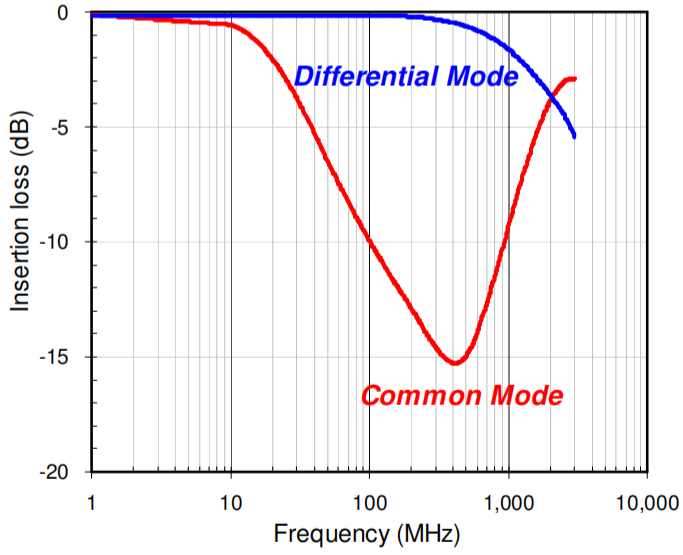


SMM2012M121DTE

IMPEDANCE vs. FREUQENCY CHARACTERISTICS

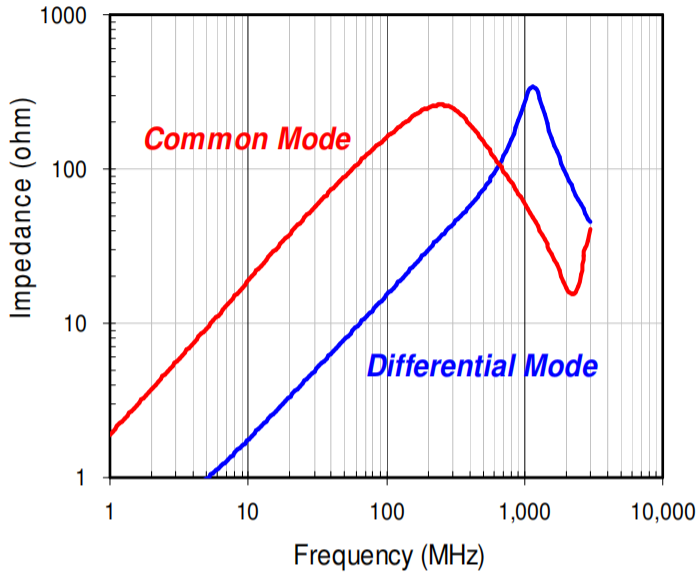


INSERTION LOSS vs. FREUQENCY CHARACTERISTICS

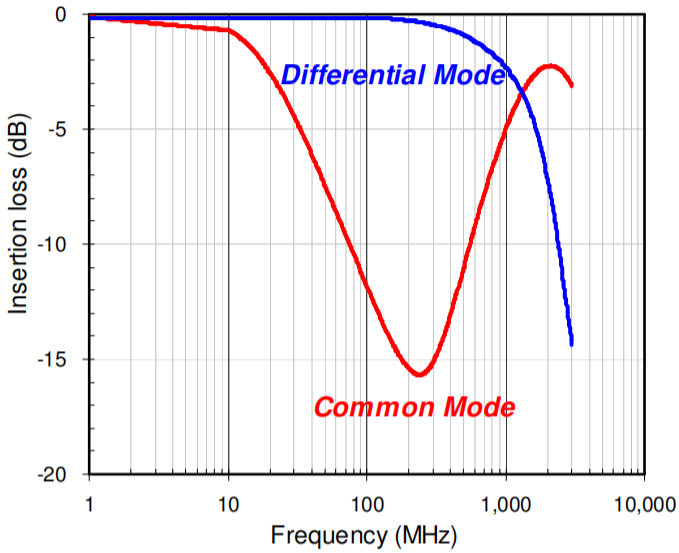


SMM2012M161DTE

IMPEDANCE vs. FREUQENCY CHARACTERISTICS

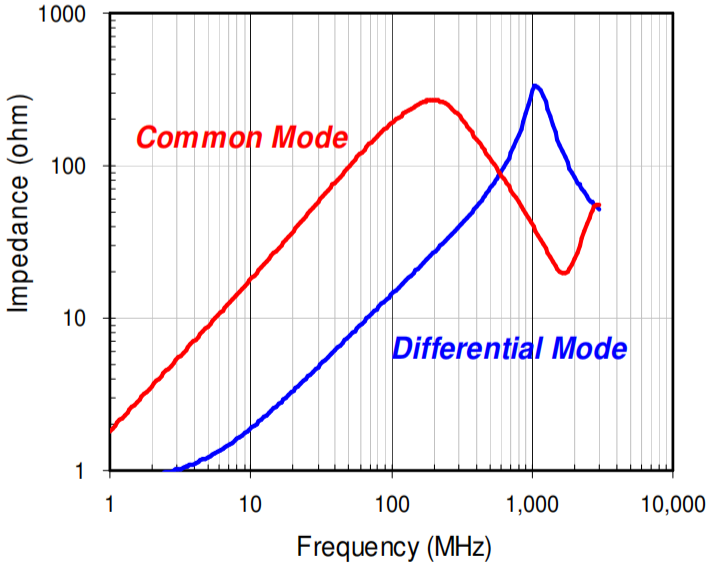


INSERTION LOSS vs. FREUQENCY CHARACTERISTICS

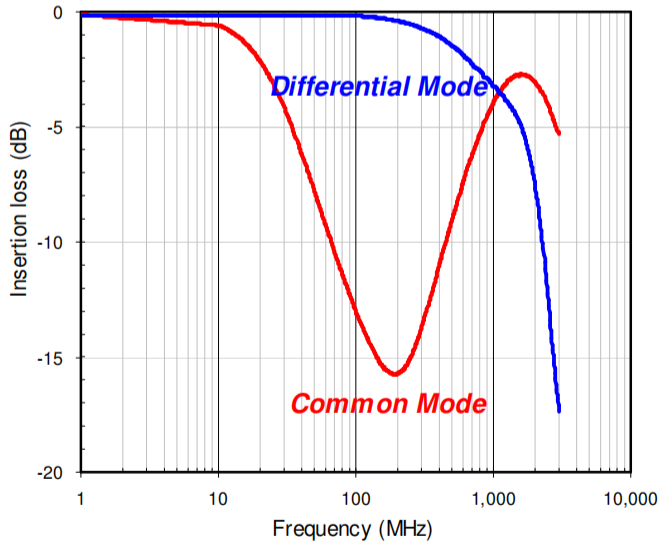


SMM2012M181DTE

IMPEDANCE vs. FREUQENCY CHARACTERISTICS

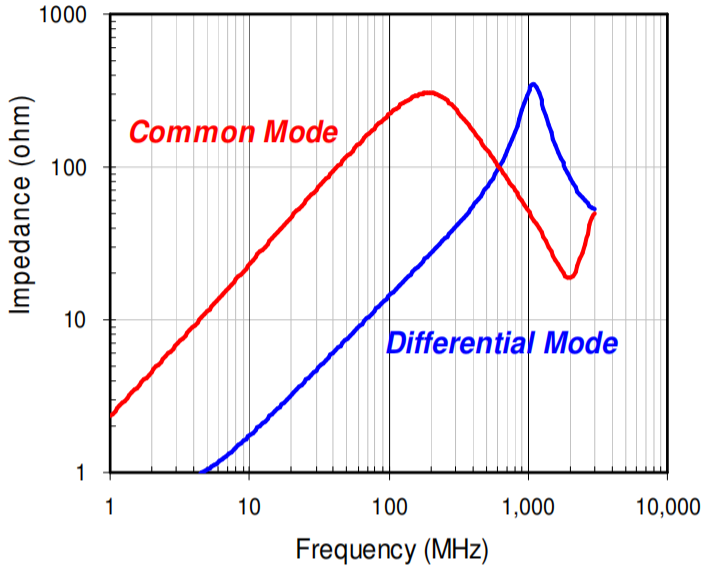


INSERTION LOSS vs. FREUQENCY CHARACTERISTICS

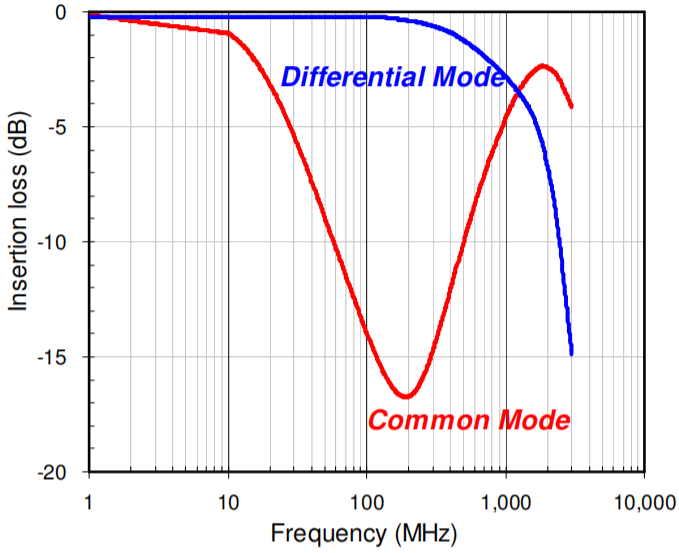


SMM2012M221BTE

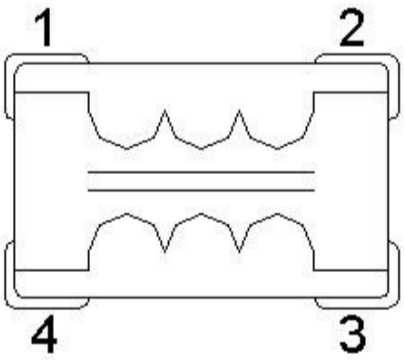
IMPEDANCE vs. FREUQENCY CHARACTERISTICS

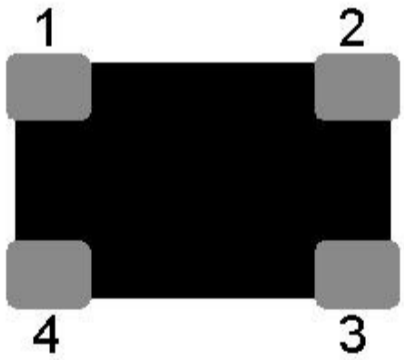


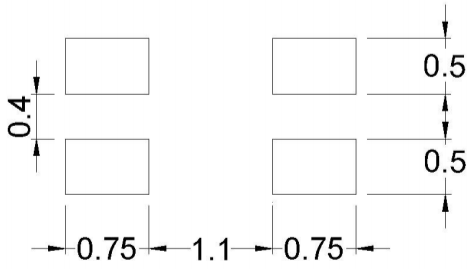
INSERTION LOSS vs. FREUQENCY CHARACTERISTICS



◆ CIRCUIT CONFIGURATION & LAYOUT PAD



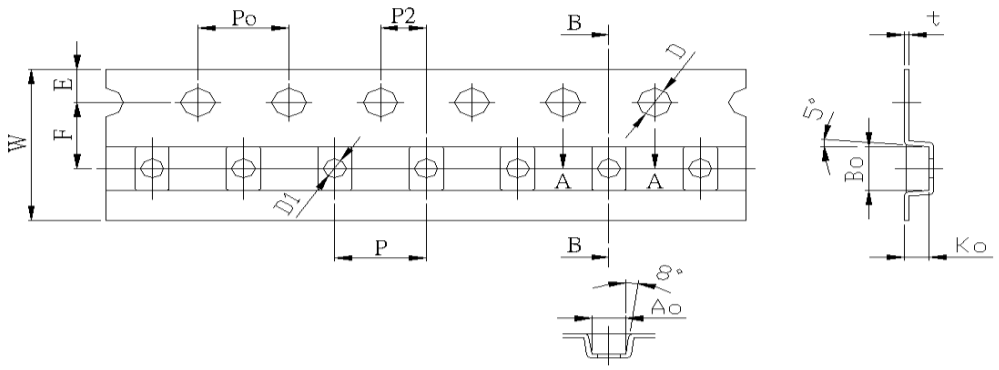




◆ Package

TAPE AND REEL SPECIFICATIONS

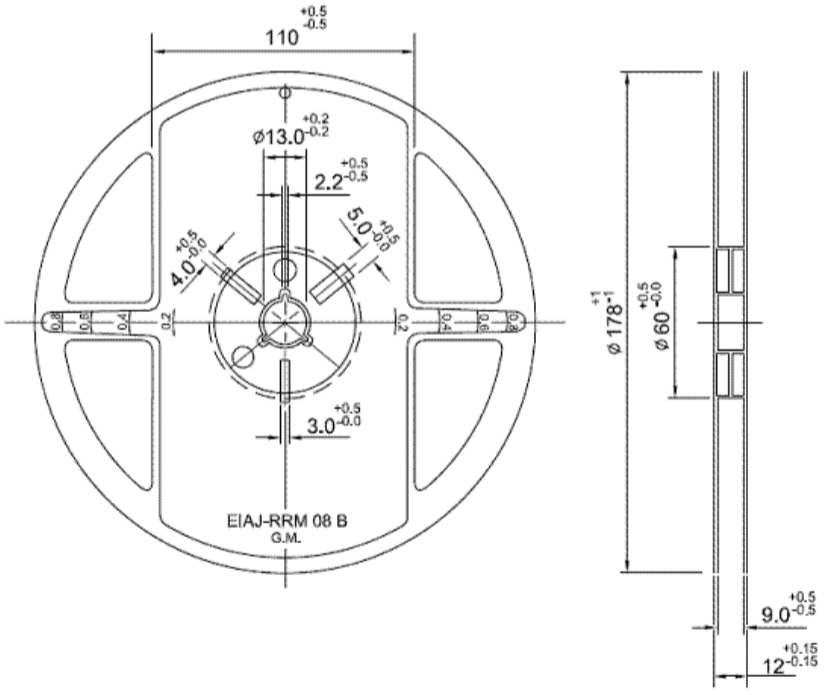
Type：Plastic Carrier



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

REEL DIMENSIONS



STANDARD QUANTITY FOR PACKAGING

Reel packaging quantity： 3000 pcs/reel