



HANGZHOU SAPPLAND MICROELECTRONICS TECHNOLOGY CO., LTD

SAW Device Data Sheet

Band 28A Duplexer / Unbalanced /1814

PN: [SPSD28AU11A](#)

Rev: 1.1

Feature:

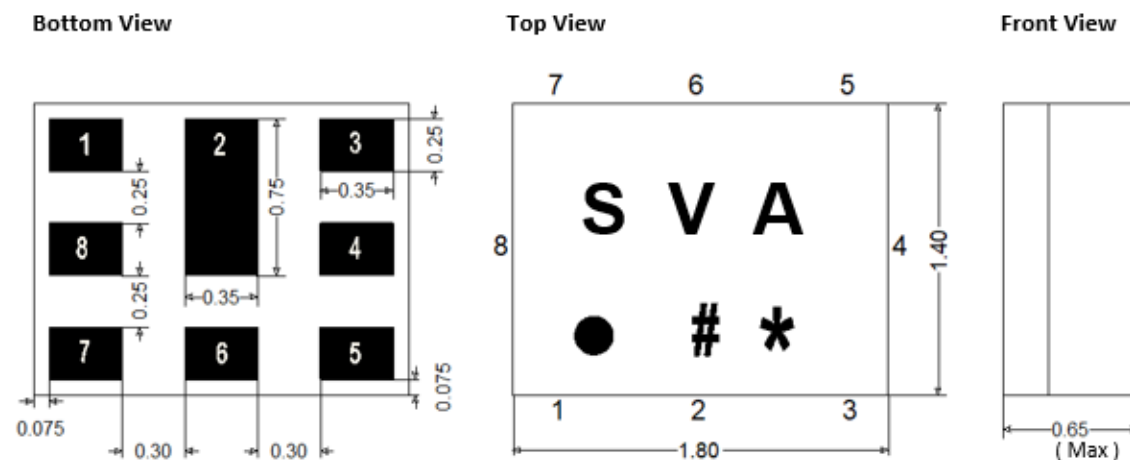
- low insertion loss
- high isolation between Tx and Rx

1.Revision History

Revision	Date	Comments
1.0	Jun-06-2024	Initial release
1.1	Aug-30-2024	Update Reeling Qty'

2.Package and Pin map

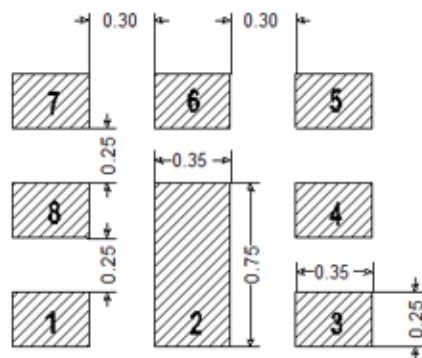
Package Dimensions(Unit: mm)



Pin No.	Pin definition
1	Rx Port
3	Tx Port
6	Ant Port
2,4,5,7,8	GND

Mark	Mark definition
S V A	Product Code
●	Pin 1
# *	Date code

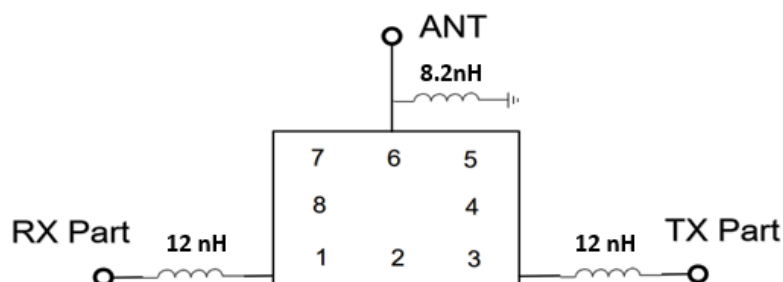
Recommended Land Pattern(Unit: mm)



Notes:

- 1, All dimensions are in millimeters
- 2, This drawing specifies the mounting pattern modification may be necessary to suit end user used on the Sappland evaluation board for this assembly material and process.

Application circuit (with ideal components)



3. Performance

3.1 Absolute maximum ratings

Item	Rating	Note
Storage Temperature	-40 ~ 85 °C	
Operating Temperature	-30 ~ 85 °C	
Input Power Max	29 dBm	LTE, 5000h, 50°C
D.C Voltage between the terminals	3 V	25±2deg.C

3.2 Electrical specification

Tx Electrical specification (-30 to +85 °C)

TX to ANT		Characteristics			Unit	Note
		min	Typ. ¹	max		
Center Frequency		-	718	-	MHz	
Insertion Loss	705.50~ 730.50 MHz		2.0	2.9	dB	
	703.00~ 733.00 MHz		2.2	3.2	dB	
Amplitude ripple	703.00 ~ 733.00 MHz		1.2	2.5	dB	
VSWR	703.00 ~ 733.00 MHz		1.7	2.2	-	Tx
	703.00 ~ 733.00 MHz		1.7	2.2	-	ANT
Absolute attenuation	10.00 ~ 670.00 MHz	25	30		dB	
	670.00 ~ 694.00 MHz	25	35		dB	
	694.00 ~ 698.00 MHz	4	10		dB	
	758.00 ~ 788.00 MHz	45	50		dB	
	788.00 ~ 803.00 MHz	15	20		dB	
	859.00 ~ 894.00 MHz	25	32		dB	
	1225.00 ~ 1250.00 MHz	30	36		dB	
	1406.00 ~ 1466.00 MHz	30	34		dB	
	1559.00 ~ 1607.00 MHz	30	34		dB	
	1805.00 ~ 1880.00 MHz	30	35		dB	
	1930.00 ~ 1990.00 MHz	30	35		dB	
	2010.00 ~ 2025.00 MHz	30	35		dB	
	2109.00 ~ 2199.00 MHz	25	35		dB	
	2400.00 ~ 2484.00 MHz	18	21		dB	
	2570.00 ~ 2620.00 MHz	14	17		dB	
	2812.00 ~ 2932.00 MHz	15	18		dB	
	4900.00 ~ 5950.00 MHz	20	24		dB	

1) Typical value at 25±2deg.C

Rx Electrical specification (-30 to +85 °C)

ANT to RX		Characteristics			Unit	Note
		min	Typ. ¹	max		
Center Frequency		-	773	-	MHz	
Insertion Loss	760.50 ~ 785.50 MHz		1.9	2.8	dB	
	758.00 ~ 788.00 MHz		2.0	3.0	dB	
Amplitude ripple	758.00 ~ 788.00 MHz		0.7	1.2	dB	
VSWR	758.00 ~ 788.00 MHz		1.8	2.3	-	Rx
	758.00 ~ 788.00 MHz		1.7	2.1	-	ANT
Absolute attenuation	10.00 ~ 699.00 MHz	40	54		dB	
	45.00 ~ 65.00 MHz	45	60		dB	
	703.00 ~ 733.00 MHz	45	58		dB	
	733.00 ~ 748.00 MHz	15	36		dB	
	814.00 ~ 2400.00 MHz	20	31		dB	
	2400.00 ~ 2483.00 MHz	40	56		dB	
	2496.00 ~ 2690.00 MHz	40	56		dB	
	3300.00 ~ 4200.00 MHz	40	56		dB	
	4400.00 ~ 5000.00 MHz	35	56		dB	
	4900.00 ~ 5950.00 MHz	35	60		dB	

1) Typical value at 25±2deg.C

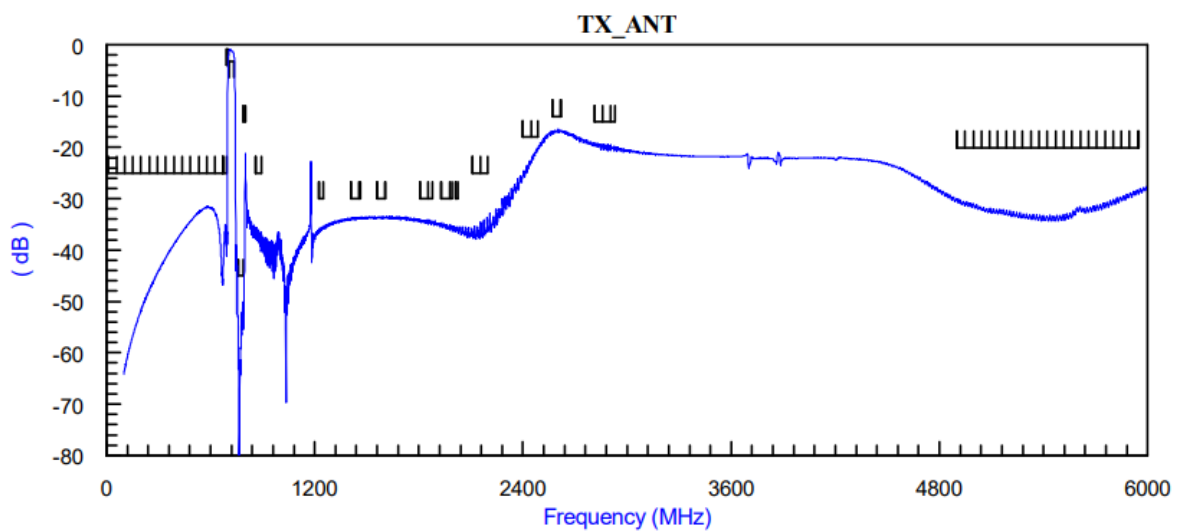
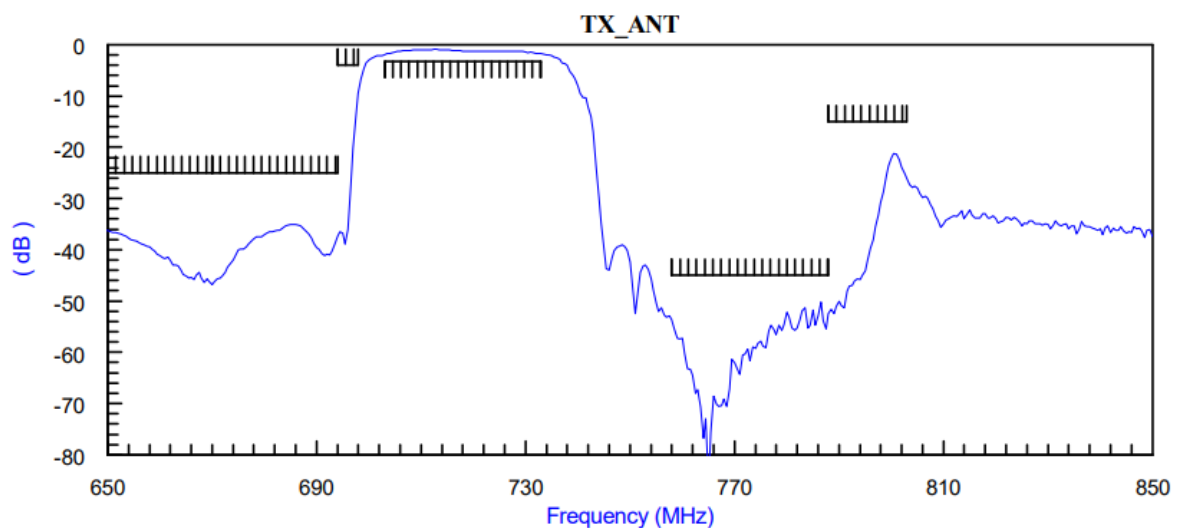
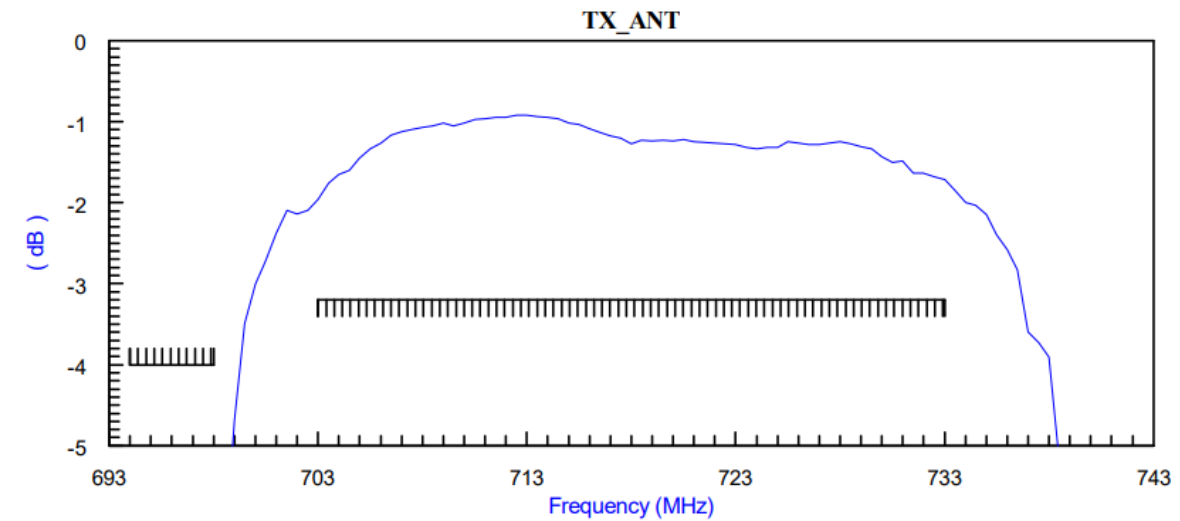
Tx/Rx Electrical specification (-30 to +85 °C)

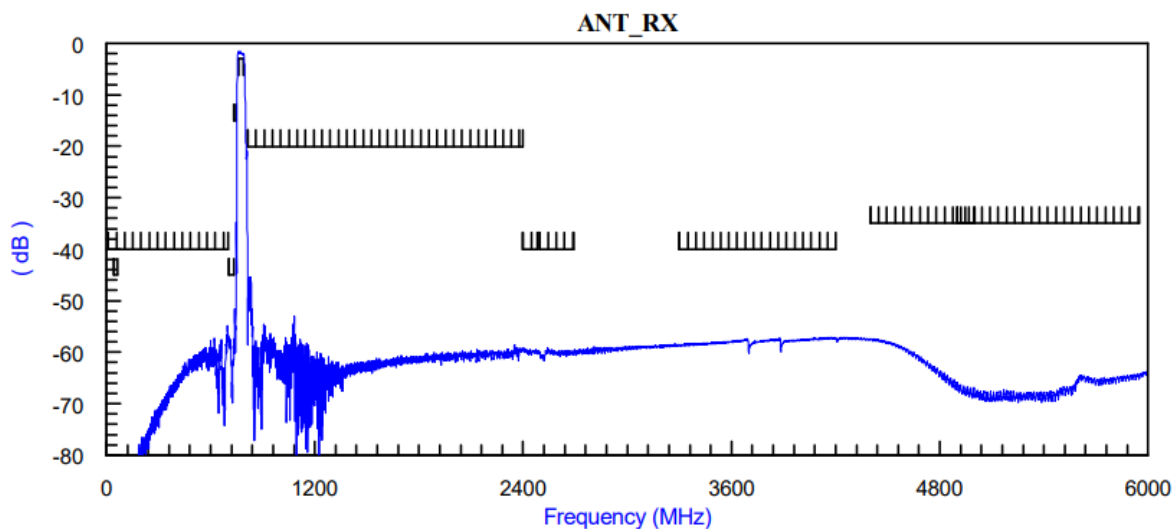
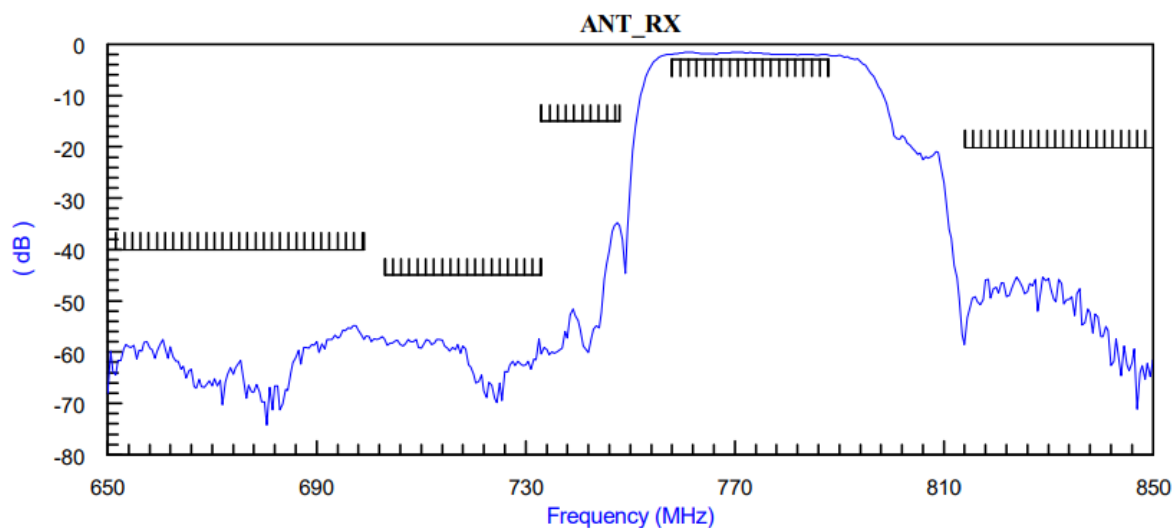
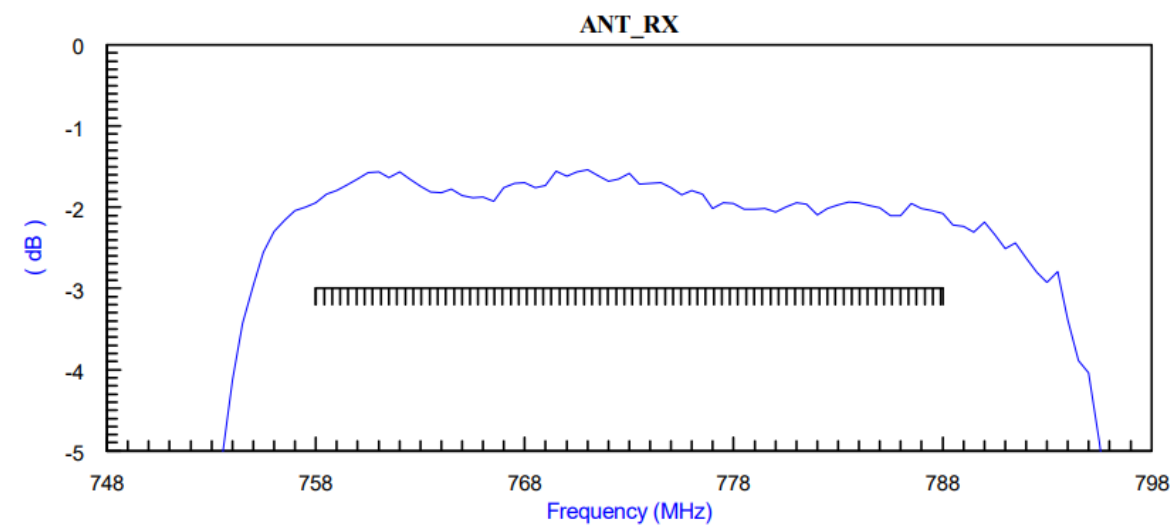
TX / RX		Characteristics			Unit	Note
		min	Typ. ¹	max		
Isolation	703.00 ~ 733.00 MHz	55	60		dB	
	758.00 ~ 788.00 MHz	52	55		dB	

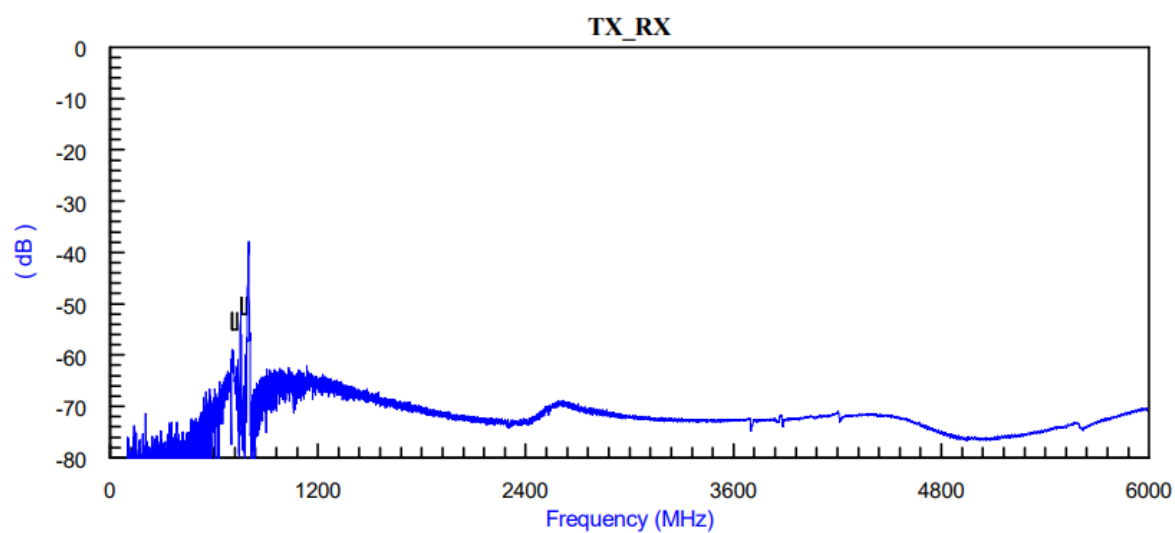
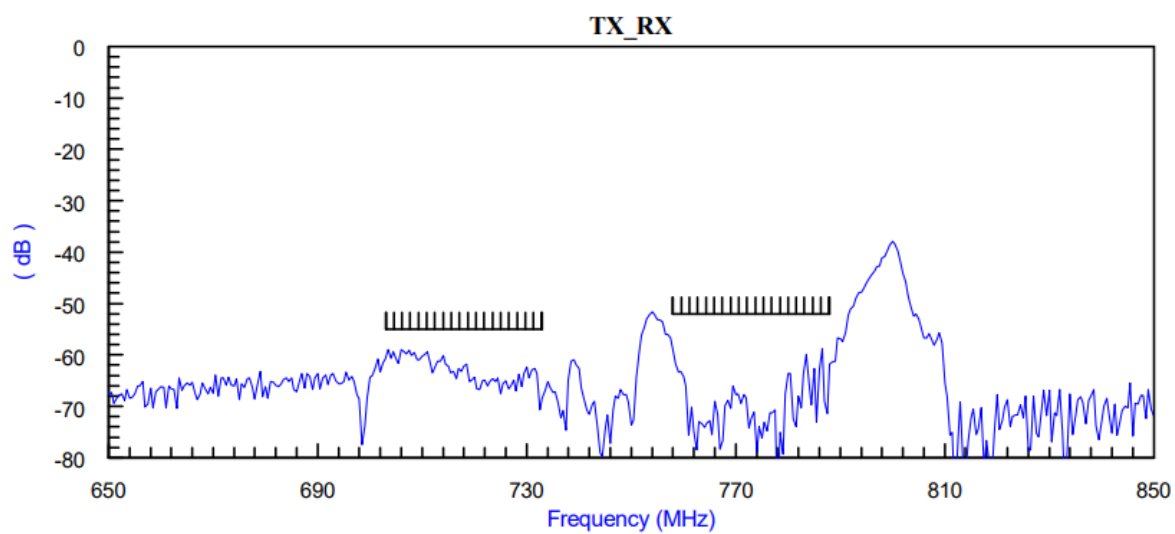
1) Typical value at 25±2deg.C

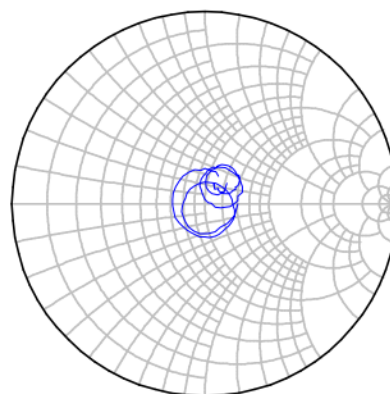
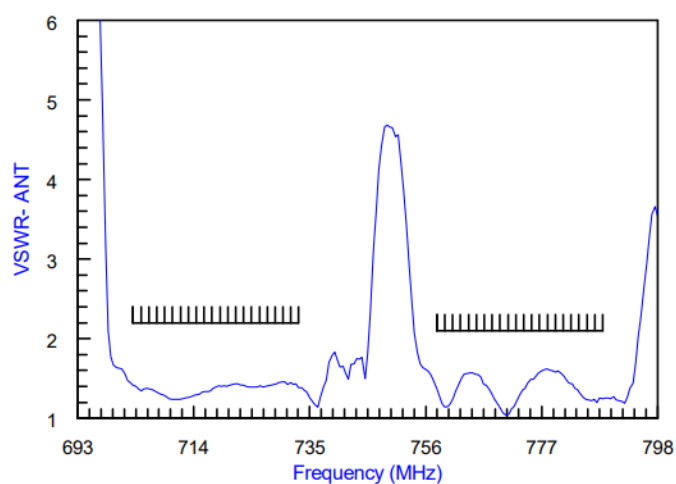
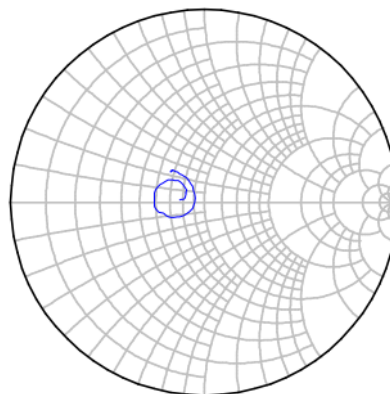
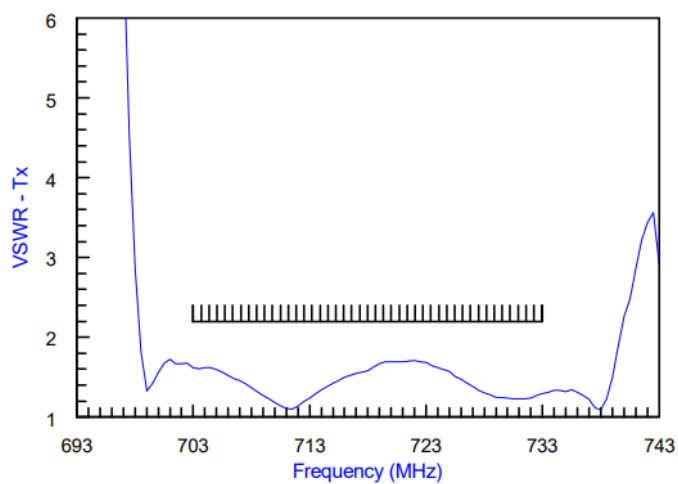
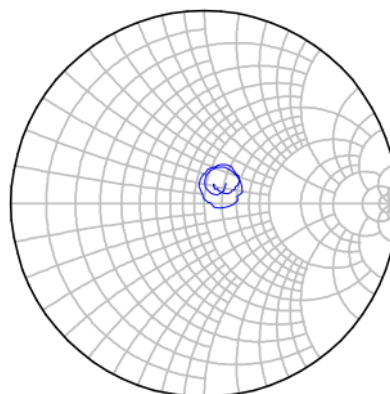
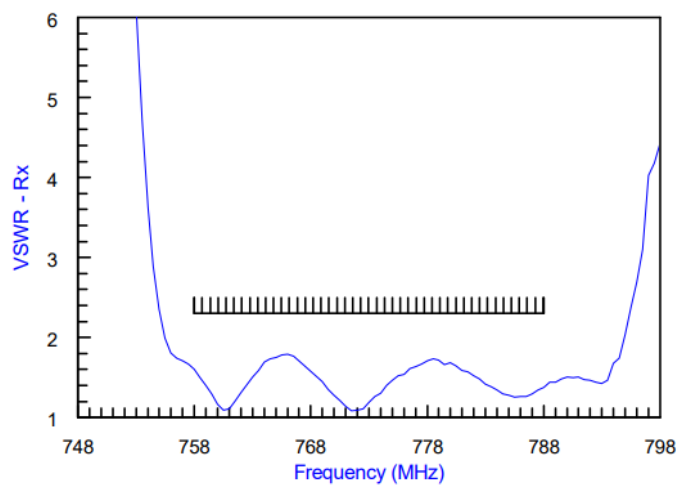
3.3 Plots

Tx-Ant



Ant-Rx

Tx-Rx

ANT – VSWR / Impedance**Tx – VSWR / Impedance****Rx – VSWR / Impedance**

4.Packing Information

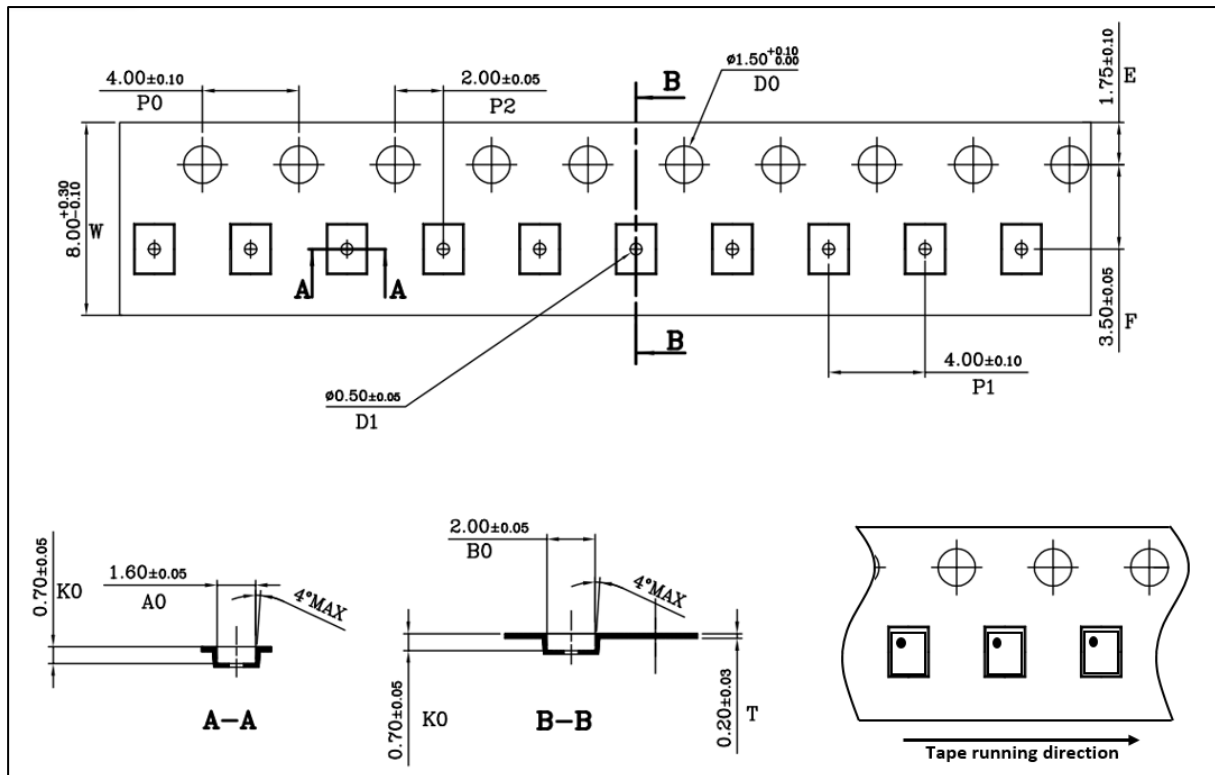


Figure 4-1 Carrier Tape Drawing (unit: mm)

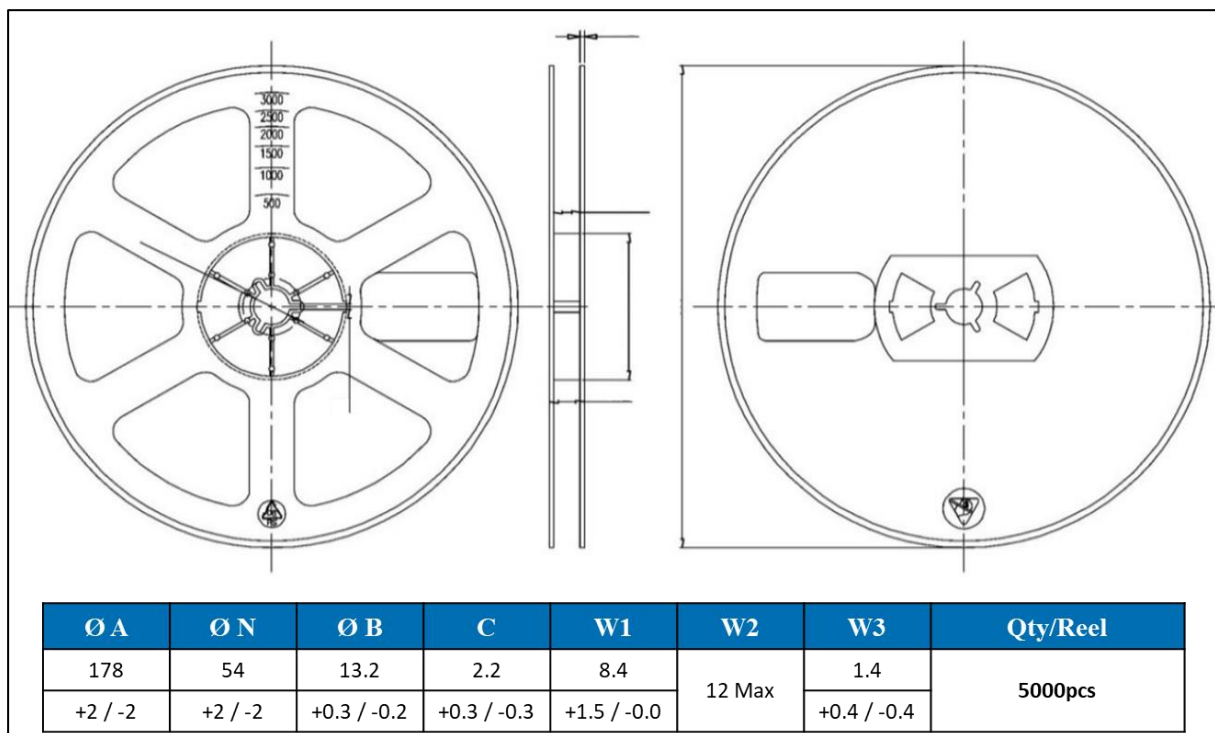


Figure 4-2 Reel Dimensions (Unit: mm) and Reeling Qty'