



HANGZHOU SAPPLAND MICROELECTRONICS TECHNOLOGY CO., LTD

SAW Device Data Sheet

Band 7 Duplexer / Unbalanced /1612

PN: [SPSD007U11F](#)

Rev: 1.1

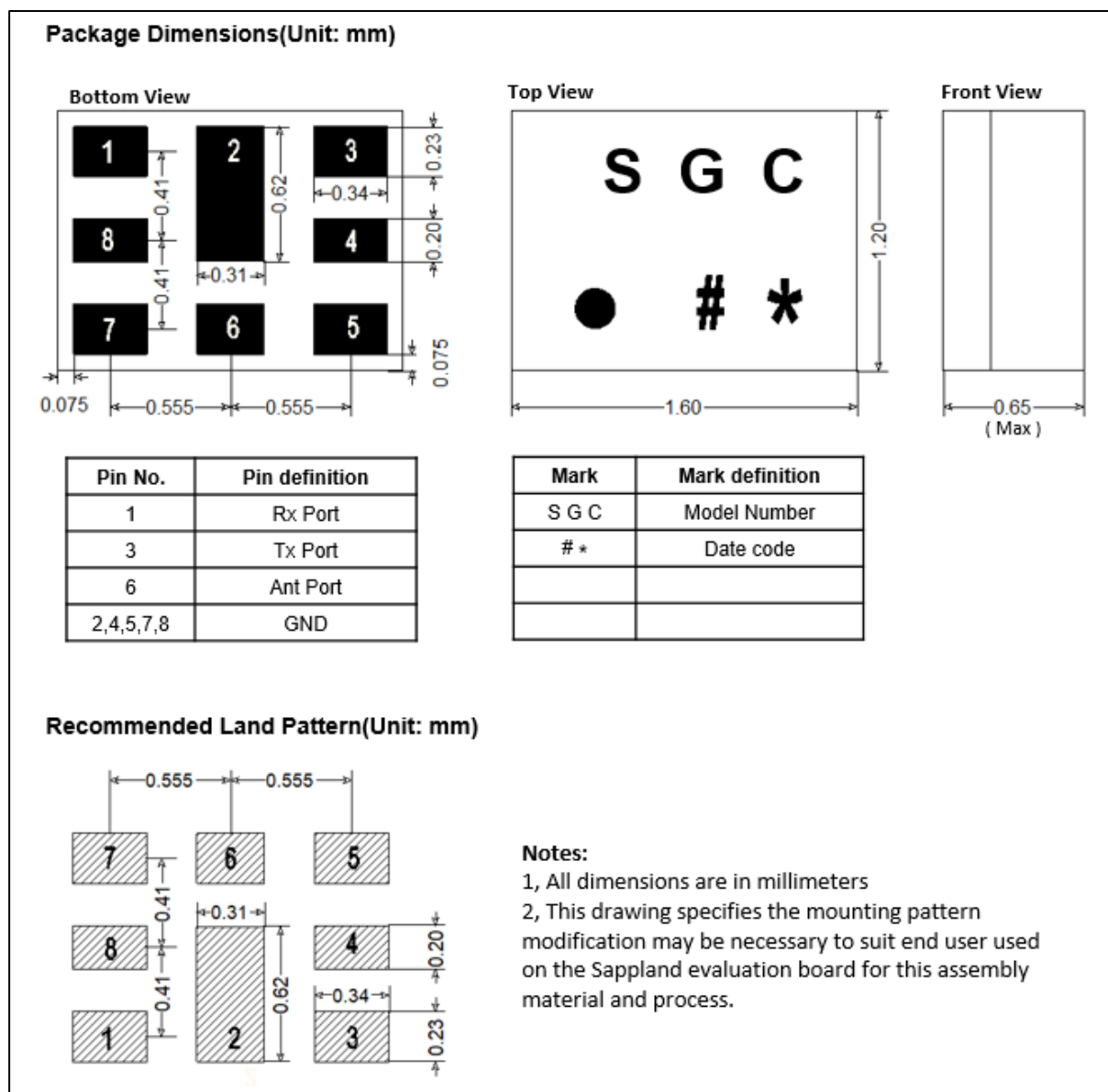
Feature:

- low insertion loss
- high isolation between Tx and Rx

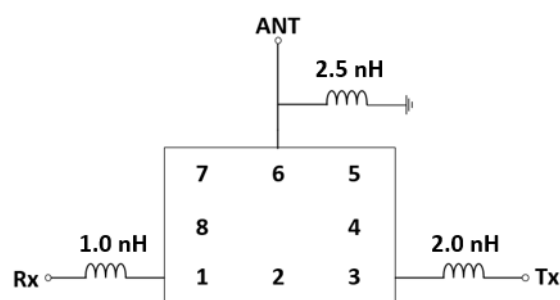
1.Revision History

Revision	Date	Comments
1.0	Oct-30-2023	Initial release
1.1	Mar-15-2024	Update specification table

2.Package and Pin map



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	30 dBm	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		-	2535.00	-	MHz	
Insertion Loss	2500.00 ~ 2570.00 MHz		2.3	3.3	dB	
Amplitude ripple	2500.00 ~ 2570.00 MHz		0.7	2.0	dB	
VSWR	2500.00 ~ 2570.00 MHz		1.5	2.0	-	Tx
	2500.00 ~ 2570.00 MHz		1.5	2.0	-	ANT
Absolute attenuation	10.00 ~ 1559.00 MHz	25	31		dB	
	791.00 ~ 821.00 MHz	35	45		dB	
	1166.00 ~ 1254.00 MHz	30	36		dB	
	1559.00 ~ 1607.00 MHz	25	32		dB	
	1710.00 ~ 1785.00 MHz	25	30		dB	
	1805.00 ~ 1880.00 MHz	25	30		dB	
	2010.00 ~ 2025.00 MHz	25	30		dB	
	2110.00 ~ 2200.00 MHz	25	29		dB	
	2400.00 ~ 2466.00 MHz	30	36		dBint	
	2453.00 ~ 2471.00 MHz	25	35		dBint	
	2458.00 ~ 2476.00 MHz	20	32		dBint	
	2463.00 ~ 2481.00 MHz	10	20		dBint	
	2620.00 ~ 2690.00 MHz	40	54		dB	
	3300.00 ~ 3800.00 MHz	30	37		dB	
	3800.00 ~ 4200.00 MHz	30	38		dB	
	4900.00 ~ 5950.00 MHz	15	21		dB	
	5000.00 ~ 5140.00 MHz	25	33		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		-	2655.00	-	MHz	
Insertion Loss	2620.00 ~ 2690.00 MHz		2.4	3.4	dB	
Amplitude ripple	2620.00 ~ 2690.00 MHz		0.5	1.7	dB	
VSWR	2620.00 ~ 2690.00 MHz		1.6	2.2	-	Rx
	2620.00 ~ 2690.00 MHz		1.5	2.2	-	ANT
Absolute attenuation	120.00 MHz	45	54		dB	
	10.00 ~ 2500.00 MHz	33	38		dB	
	718.00 ~ 748.00 MHz	40	53		dB	
	832.00 ~ 862.00 MHz	40	50		dB	
	880.00 ~ 915.00 MHz	40	49		dB	
	1710.00 ~ 1785.00 MHz	35	39		dB	
	1850.00 ~ 1915.00 MHz	35	38		dB	
	1920.00 ~ 1980.00 MHz	35	38		dB	
	2300.00 ~ 2400.00 MHz	35	41		dB	
	2500.00 ~ 2570.00 MHz	40	52		dB	
	3300.00 ~ 3800.00 MHz	30	41		dB	
	3300.00 ~ 4200.00 MHz	30	36		dB	
	4900.00 ~ 5950.00 MHz	20	28		dB	

1) Typical value at 25±2deg.C

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

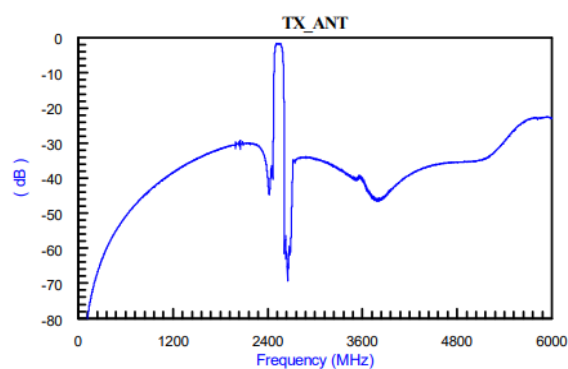
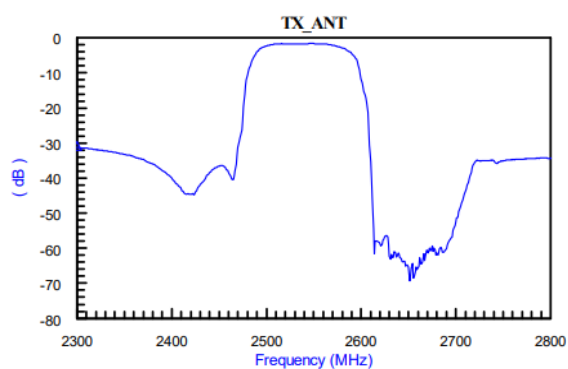
TX / RX		Characteristics			Unit	Note
		min	Typ. ¹	max		
Isolation	2500.00 ~ 2570.00 MHz	50	55		dB	
	2500.00 ~ 2570.00 MHz	51 ²⁾	55		dB	
	2620.00 ~ 2690.00 MHz	50	57		dB	
	2620.00 ~ 2690.00 MHz	52 ²⁾	57		dB	

1) Typical value at 25±2deg.C

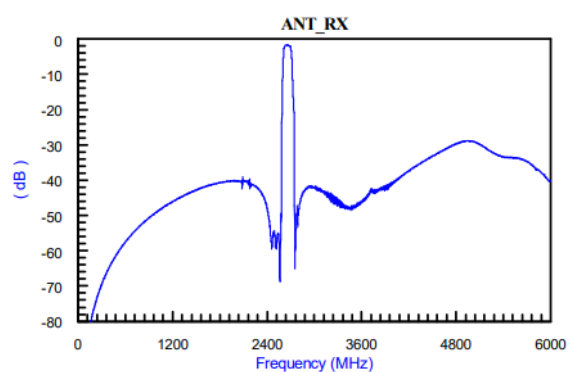
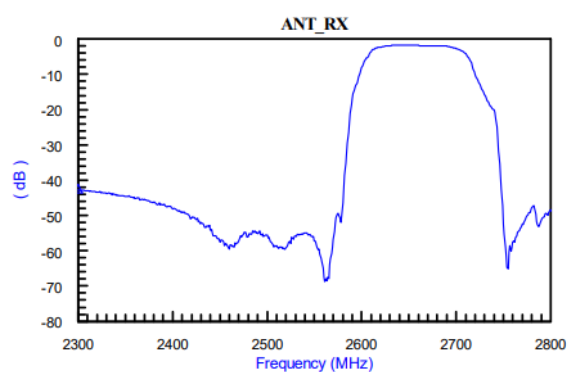
2) Valid for typical temperature 25 deg.C

3.3 Plots

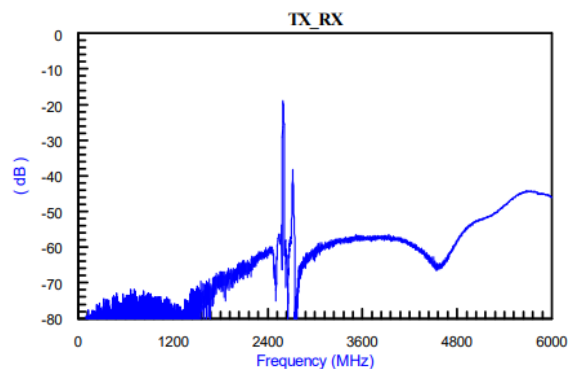
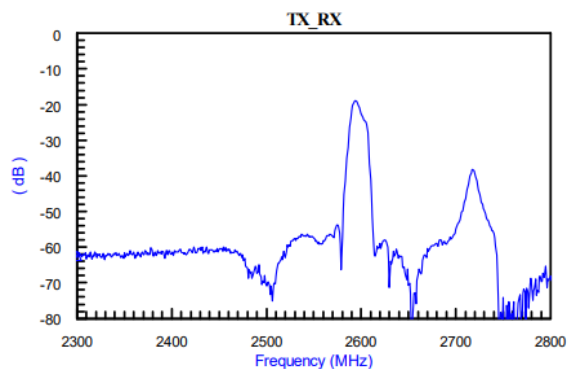
Tx-Ant



Ant-Rx

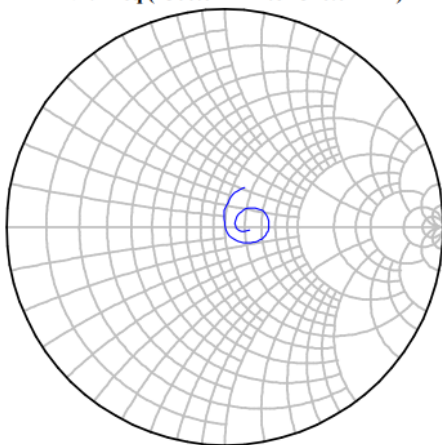


Tx-Rx

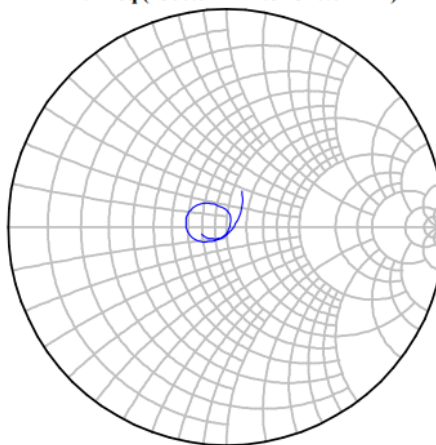


ANT – Tx Impedance

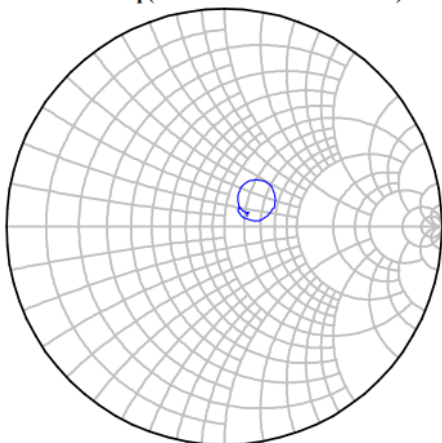
ANT: Freq (2500.0 MHz to 2570.0 MHz)



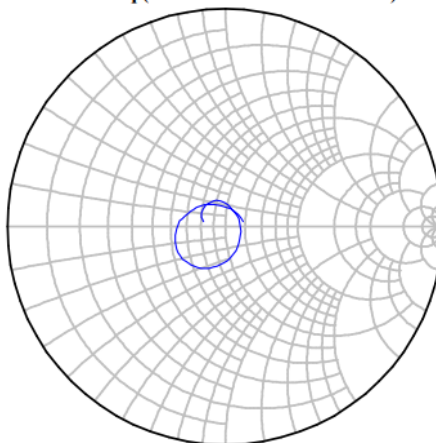
TX: Freq (2500.0 MHz to 2570.0 MHz)

**ANT- Rx Impedance**

ANT: Freq (2620.0 MHz to 2690.0 MHz)



RX: Freq (2620.0 MHz to 2690.0 MHz)



4. Packing Information

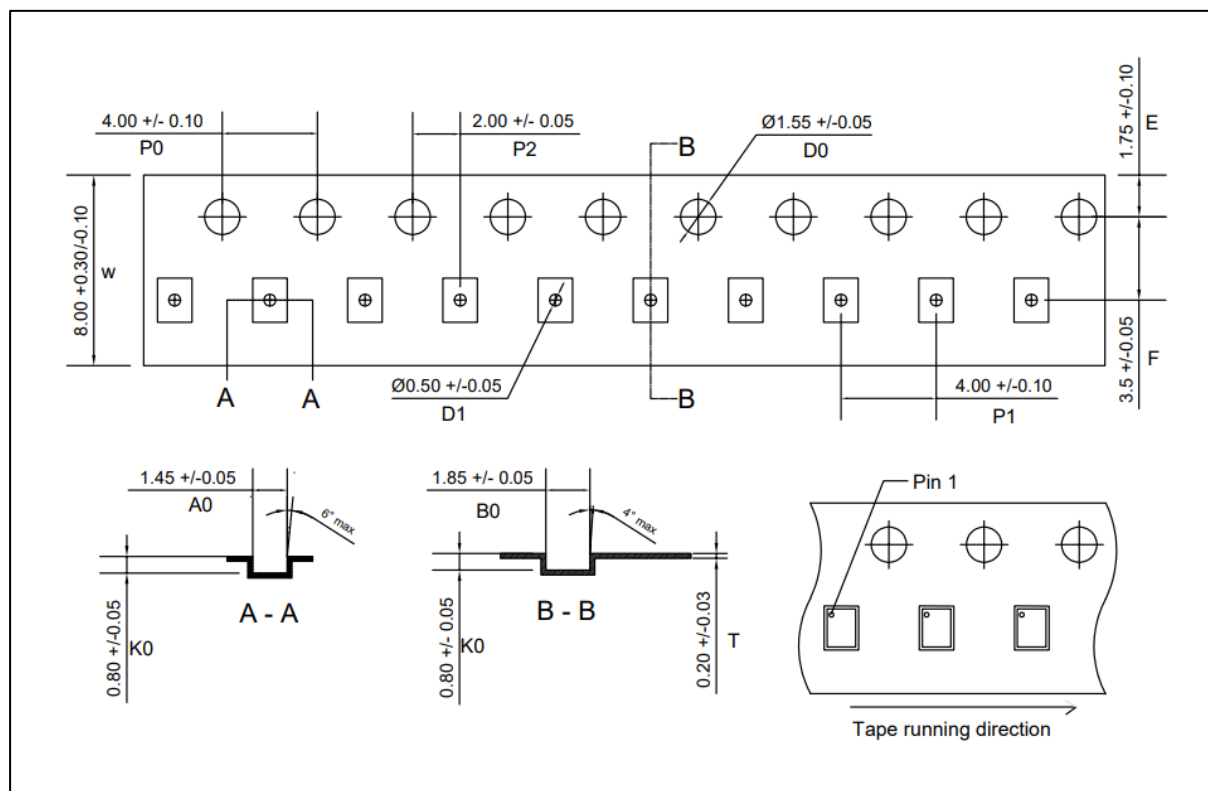


Figure 4-1 Carrier Tape Drawing (unit: mm)

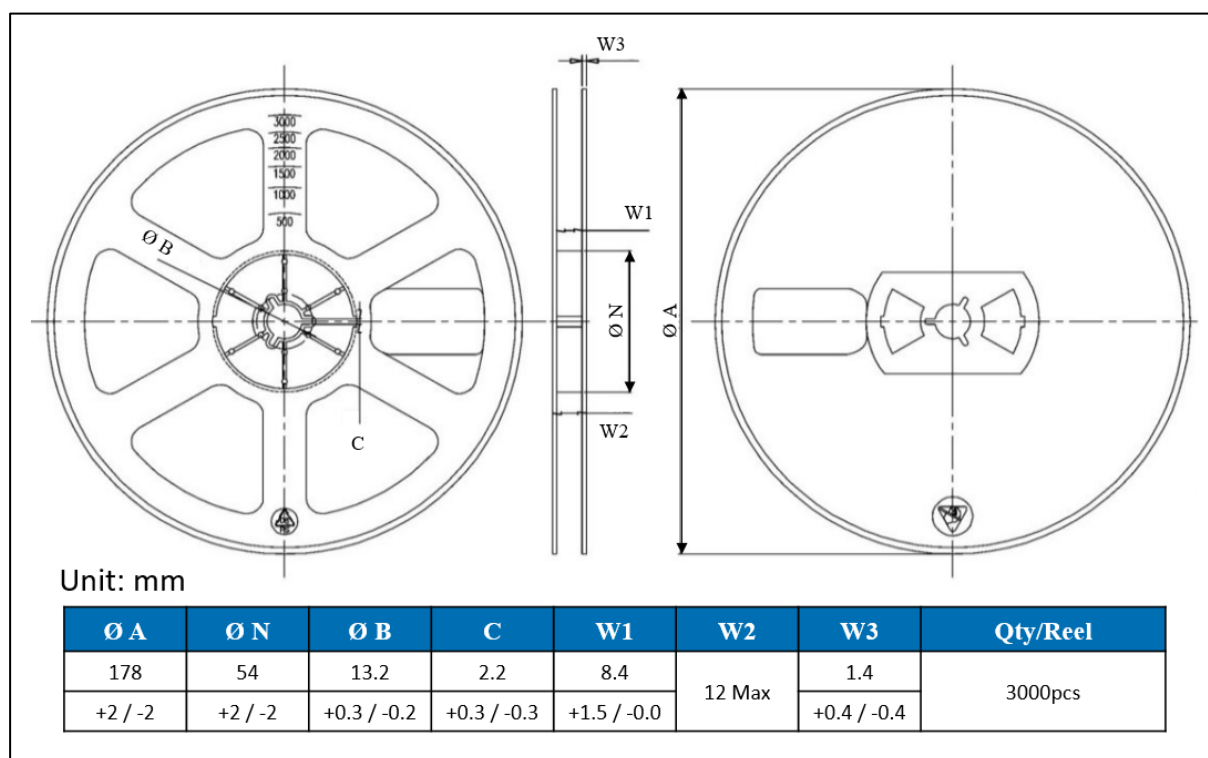


Figure 4-2 Reel Dimensions (Unit: mm) and Reeling Qty'