



HANGZHOU SAPPLAND MICROELECTRONICS TECHNOLOGY CO., LTD

SAW Device Data Sheet

Band 1 Duplexer / Unbalanced /1814

PN: [SPSD001U03A](#)

Rev: 1.2

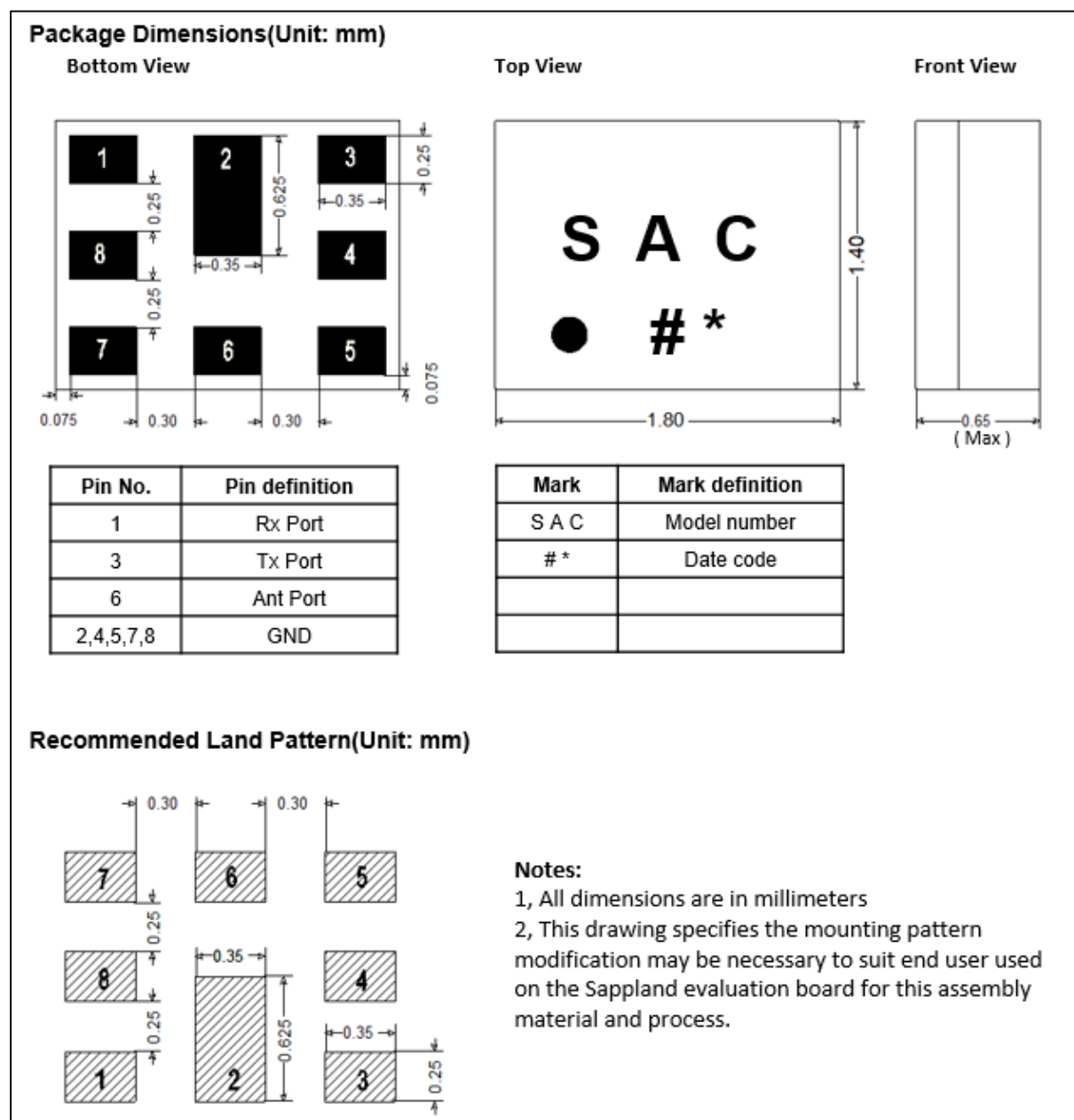
Feature:

- unbalanced
- low insertion loss
- high isolation between Tx and Rx

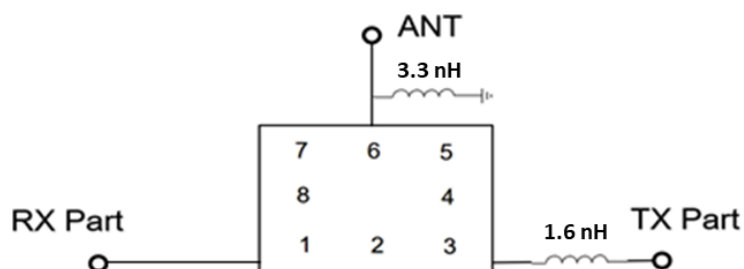
1.Revision History

Revision	Date	Comments
1.0	Feb-18-2019	Initial release
1.1	Dec-05-2023	Update DS format , Typo error , Marking Descriptions
1.2	Oct-29-2024	Change packing Qty' to 5000pcs/reel

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	-20 ~ 85 °C	
Input Power Max	29 dBm	5000h, 50 °C
D.C Voltage between the terminals	3 V	25±2deg.C

3.2 Electrical specification

Tx Electrical specification (-20 to +85 °C)

TX to ANT		Characteristics			Unit	Note
		min	Typ. ¹	max		
Center Frequency		-	1950.00	-	MHz	
Insertion Loss	1920.48 ~ 1979.52 MHz		2.0	2.5	dB	
Amplitude ripple	1920.48 ~ 1979.52 MHz		0.8	1.4	dBp-p	
VSWR	1920.48 ~ 1979.52 MHz		1.9	2.1	-	Tx
	1920.48 ~ 1979.52 MHz		1.8	2.0	-	ANT
Absolute attenuation	10.00 ~ 1574.00 MHz	30	35		dB	
	1559.00 ~ 1563.00 MHz	30	35		dB	
	1565.00 ~ 1606.00 MHz	30	35		dB	
	1805.00 ~ 1880.00 MHz	10	25		dB	
	2110.00 ~ 2170.00 MHz	40	44		dB	
	2400.00 ~ 2500.00 MHz	33	40		dB	
	3840.00 ~ 3960.00 MHz	20	24		dB	
	4900.00 ~ 5950.00 MHz	17	21		dB	

1) Typical value at 25±2deg.C

Rx Electrical specification (-20 to +85 °C)

ANT to RX		Characteristics			Unit	Note
		min	Typ. ¹	max		
Center Frequency		-	2140.00	-	MHz	
Insertion Loss	2110.48 ~ 2169.52 MHz		2.4	2.8	dB	
Amplitude ripple	2110.48 ~ 2169.52 MHz		0.9	1.4	dBp-p	
VSWR	2110.48 ~ 2169.52 MHz		1.9	2.2	-	Rx
	2110.48 ~ 2169.52 MHz		1.5	2.0	-	ANT
Absolute attenuation	100.00 ~ 1920.00 MHz	35	40		dB	
	1730.00 ~ 1790.00 MHz	38	41		dB	
	1920.00 ~ 1980.00 MHz	45	51		dB	
	1980.00 ~ 2015.00 MHz	35	46			
	2015.00 ~ 2075.00 MHz	7	14		dB	
	2400.00 ~ 2500.00 MHz	40	46		dB	
	4030.00 ~ 4150.00 MHz	42	53		dB	
	5950.00 ~ 6000.00 MHz	38	42		dB	

1) Typical value at 25±2deg.C

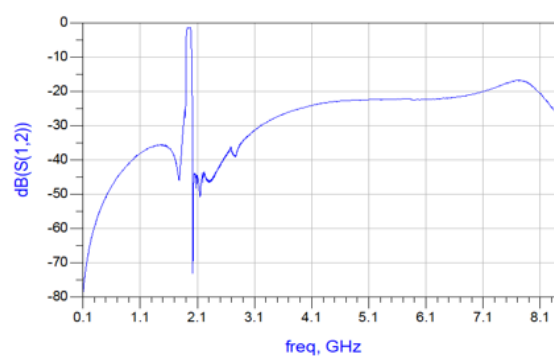
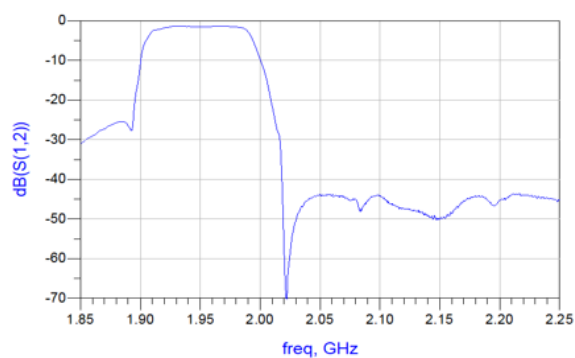
Tx/Rx Electrical specification (-20 to +85 °C)

TX / RX		Characteristics			Unit	Note
		min	Typ. ¹	max		
Isolation	1920.48 ~ 1989.52 MHz	50	54		dB	
	2110.48 ~ 2169.52 MHz	47	50		dB	

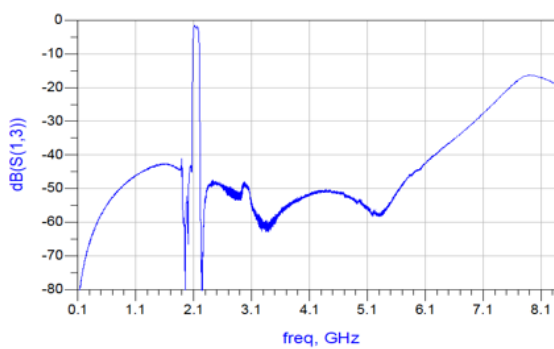
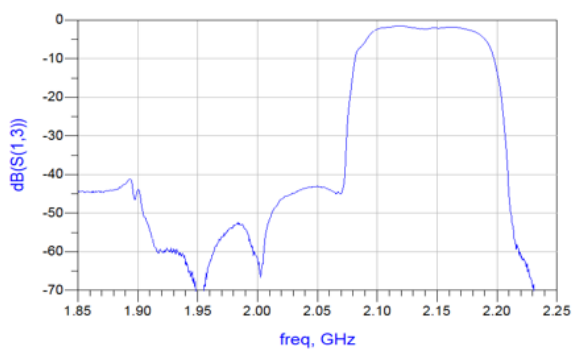
1) Typical value at 25±2deg.C

3.3 Plots

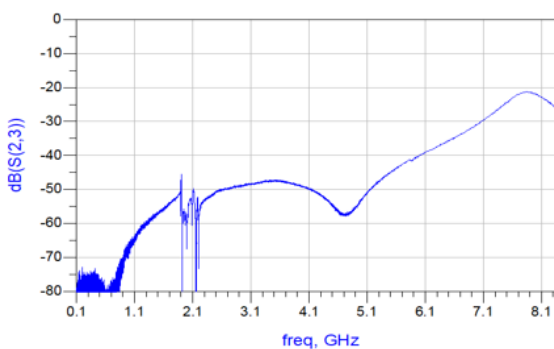
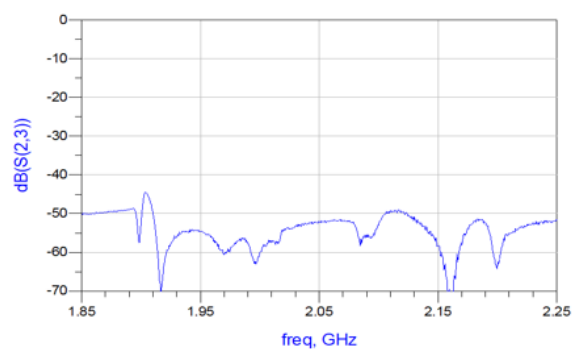
Tx-Ant

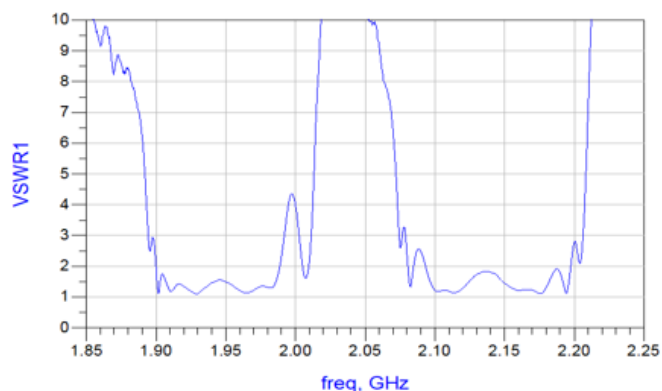
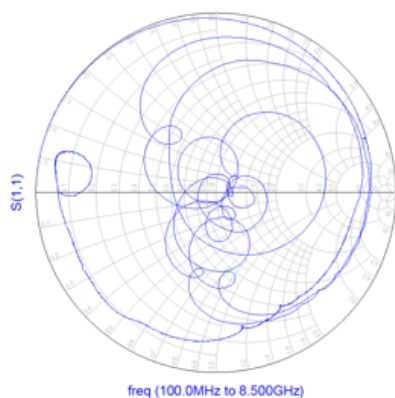
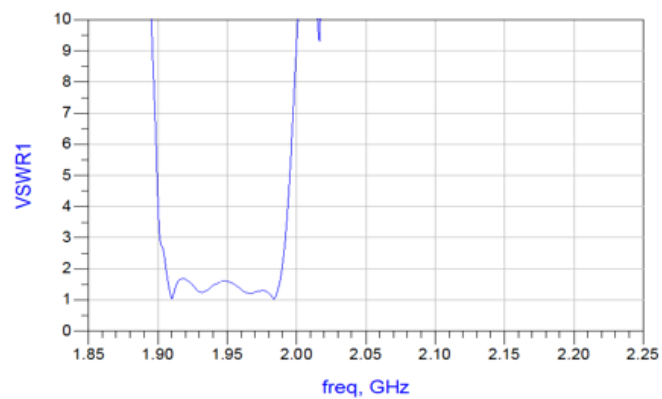
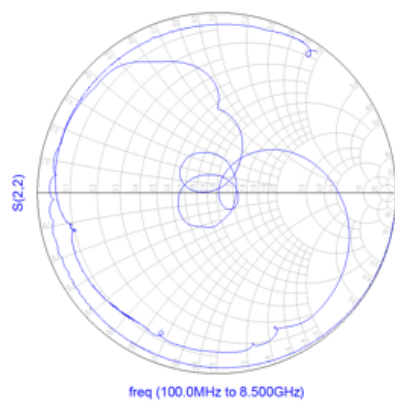
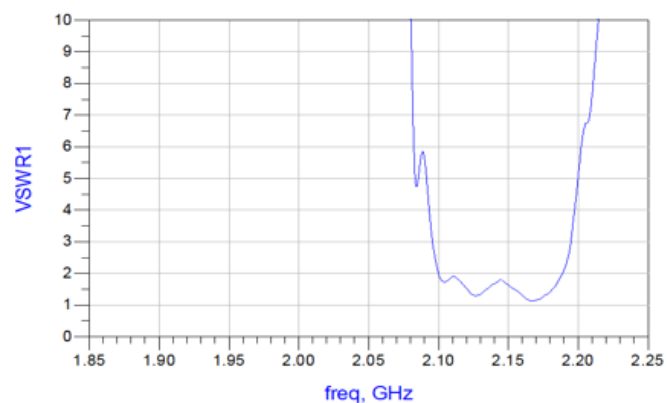
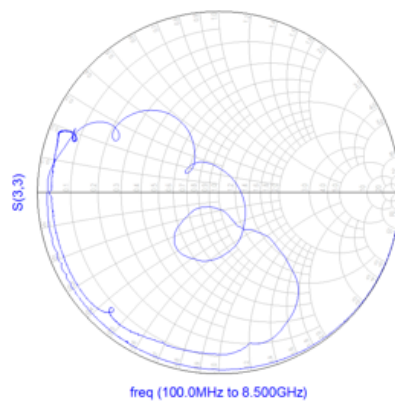


Ant-Rx



Tx-Rx



ANT Port Impedance / VSWR**Tx Port Impedance / VSWR****Rx Port Impedance / VSWR**

4.Packing Information

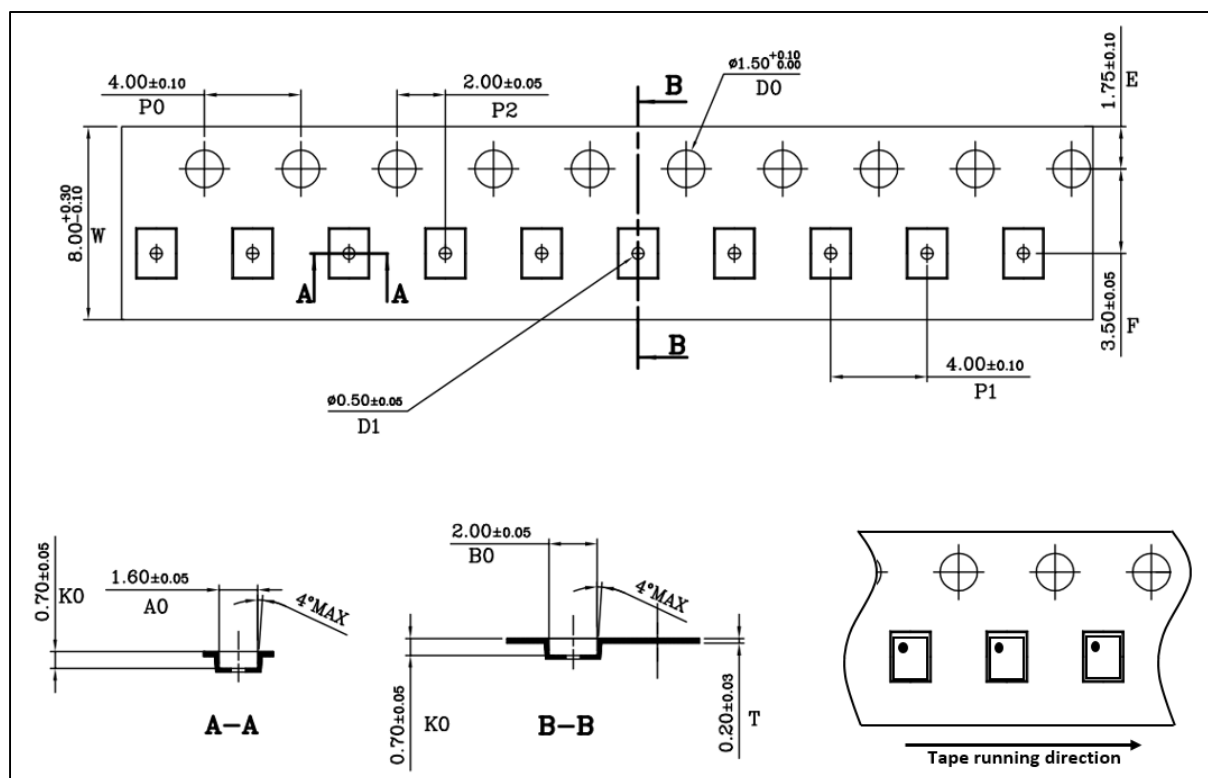


Figure 4-1 Carrier Tape Drawing (unit: mm)

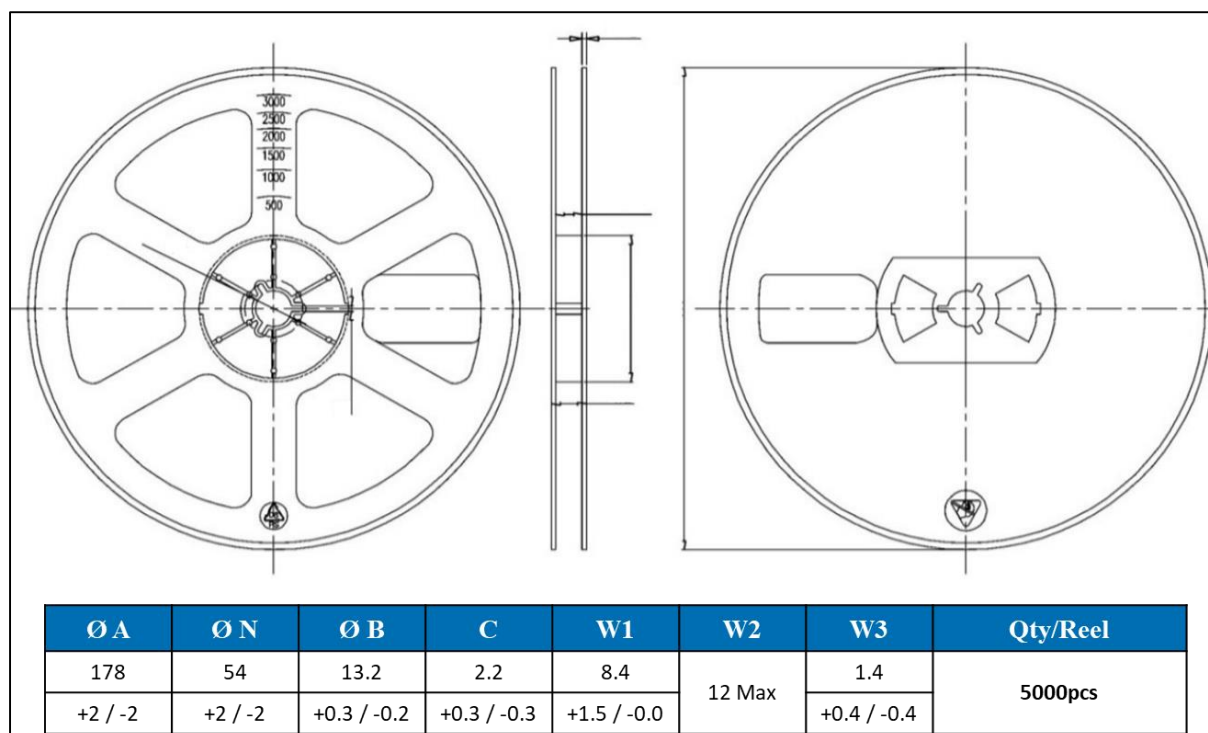


Figure 4-2 Reel Dimensions (Unit: mm) and Reeling Qty'