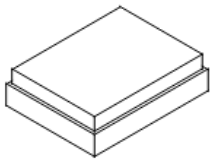
RFMi
BRAND OF AKOUSTIS

RoHS compliant

SF2600NM

1455.4/1503.4 MHz Filter Duplexer



SM1814

MAXIMUM RATING:

- Input Power Level (Tx to ANT 1447.9~1462.9 MHz):
  29 dBm, CW , +50 ℃, 10000 h
  29 dBm, LTE 5 MHz 1RB, +50 ℃, 10000 h
  30 dBm, CW , +50 ℃, 5000 h
  30 dBm, LTE 5 MHz 1RB, +50 ℃, 5000 h
- DC Voltage : +/-5 V
- Operating Temperature: -40 °C to +85 °C
- Storage Temperature: -40 °C to +85 °C
- Moisture Sensitive Level: Level 1 (MSL1)
- ESD: 50 V(MM), 100 V(HBM)

ELECTRICAL CHARACTERISTICS:

Terminating impedance (Tx port): 50 Ω
Terminating impedance (Rx port): 50 Ω
Terminating impedance (Ant port): 50//8.5nH Ω

Tx to Ant

Item	Unit	Min.	Typ.	Max.	Note
Insertion Loss (1447.9~1462.9 MHz)	dB(*1)	-	1.3	1.8	-
Amplitude Ripple (1447.9~1462.9 MHz)	dB	-	0.4	1.0	-
VSWR Tx (1447.9~1462.9 MHz)	-	-	1.3	2.0	-
VSWR Ant (1447.9~1462.9 MHz)	-	-	1.3	2.0	-
Attenuation (Reference level from 0 dB)					
1475.9 ~ 1495.9 MHz	dB	5	9	-	+15~+70 ℃
1495.9 ~ 1510.9 MHz	dB	50	60	-	-
1559 ~ 1563 MHz	dB	35	43	-	-
1565.42 ~ 1573.38 MHz	dB	36	50	-	-
1573.37 ~ 1577.47 MHz	dB	40	55	-	-
1577.46 ~ 1585.42 MHz	dB	37	50	-	-
1597.55 ~ 1605.89 MHz	dB	40	45	-	-
2400 ~ 2500 MHz	dB	38	49	-	-
2895.8 ~ 2925.8 MHz	dB	33	40	-	-
4343.7 ~ 4388.7 MHz	dB	22	30	-	-

Ant to Rx

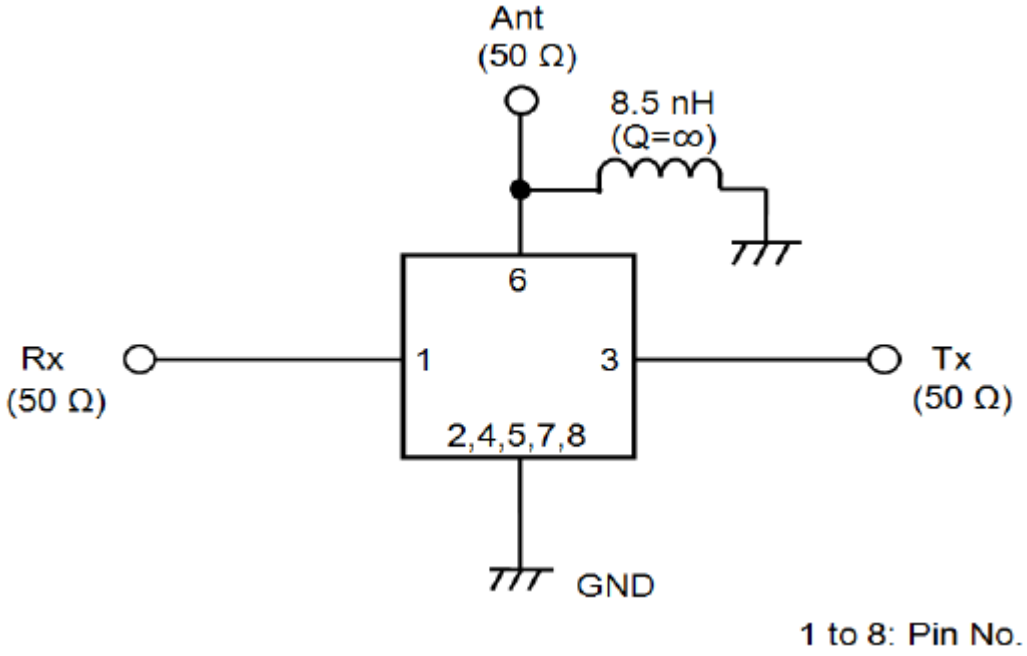
Item	Unit	Min.	Typ.	Max.
Insertion Loss (1495.9~1510.9 MHz)	dB(*1)	-	1.3	1.9
Amplitude Ripple (1495.9~1510.9 MHz)	dB	-	0.3	1.1
VSWR Ant (1495.9~1510.9 MHz)	-	-	1.4	2.1
VSWR Rx (1495.9~1510.9 MHz)	-	-	1.4	2.1
Attenuation (Reference level from 0 dB)				
1447.9 ~ 1462.9 MHz	dB	52	58	-
2400 ~ 2500 MHz	dB	38	42	-
2991.8 ~ 3021.8 MHz	dB	40	45	-
4487.7 ~ 4532.7 MHz	dB	45	53	-

Tx to Rx

Item		Unit	Min.	Typ.	Max.	Note
Isolation (Reference level from 0 dB)	1447.9 ~ 1462.9 MHz	dB	55	60	-	-
	1495.9 ~ 1510.9 MHz	dB	54	60	-	-40~+65 ℃
		dB	53	-	-	+65~+85 ℃

(*1)Specification of insertion loss excludes loss that comes from test board.

MEASUREMENT CIRCUIT:



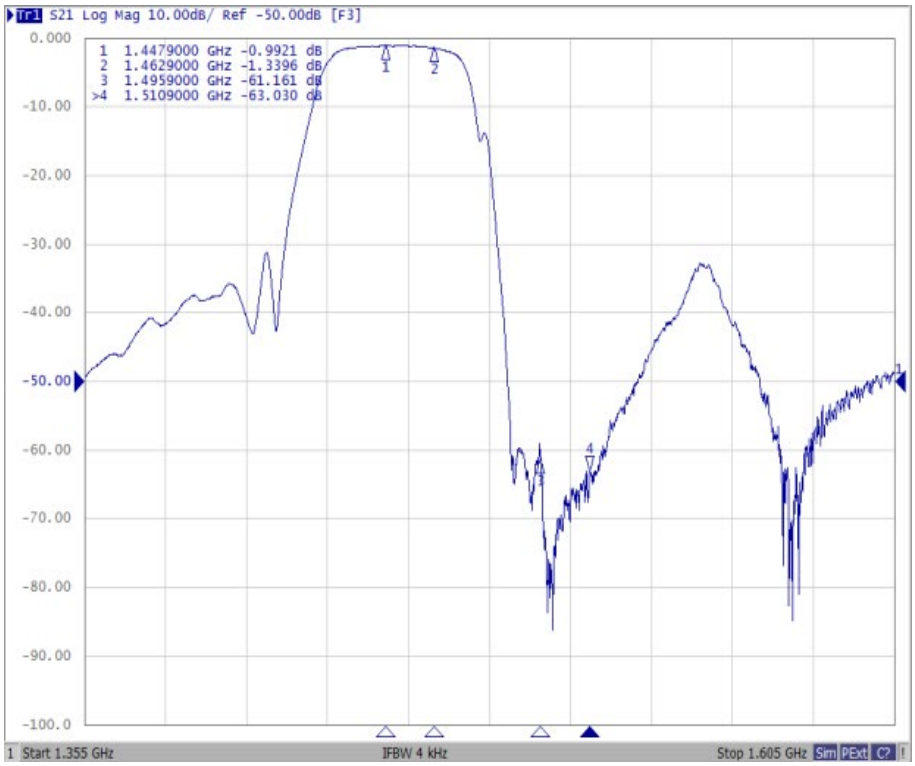
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

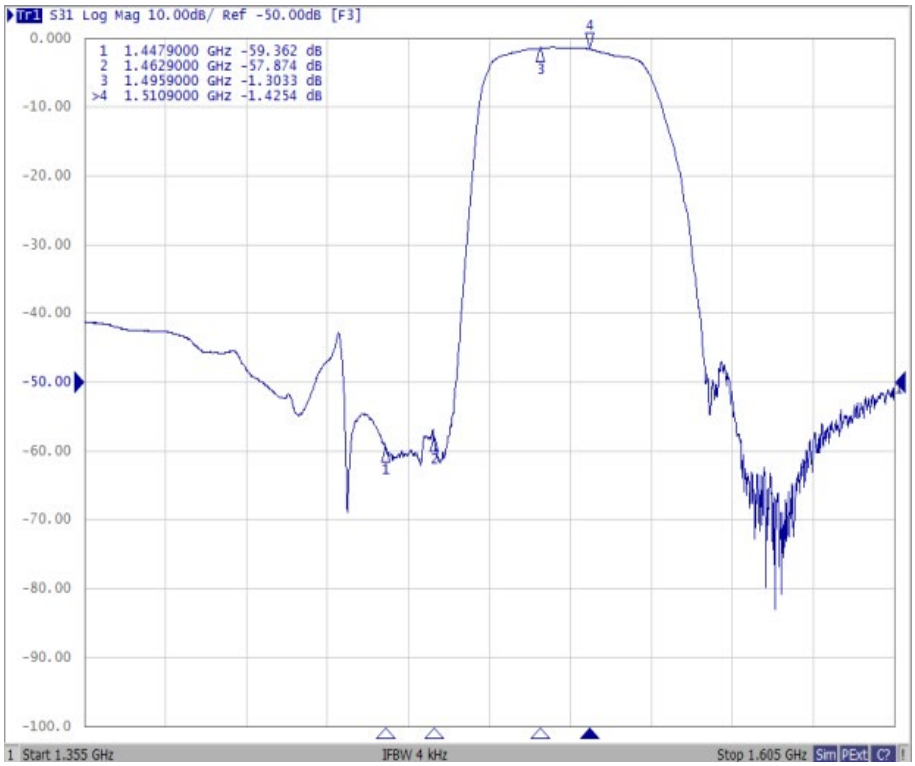
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

FREQUENCY CHARACTERISTICS:

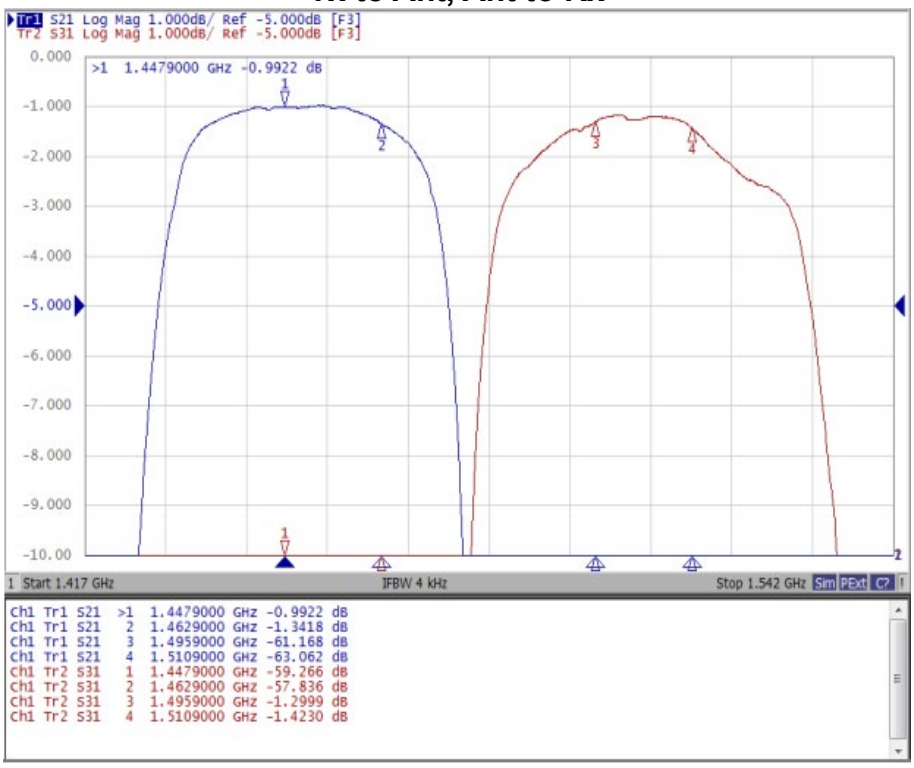
Tx to Ant



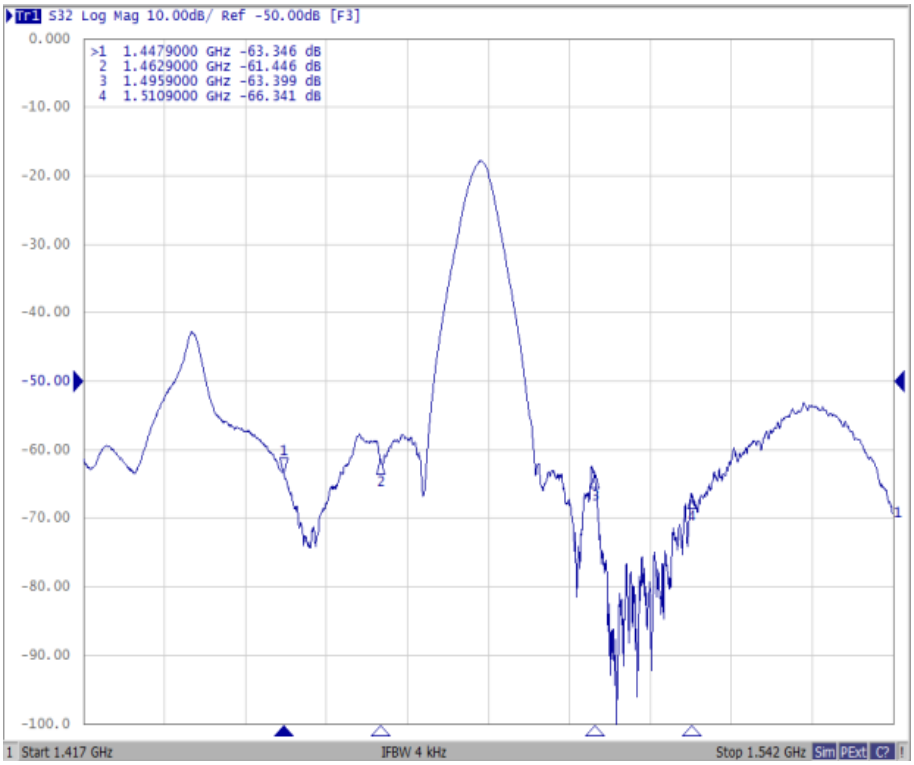
Ant to Rx



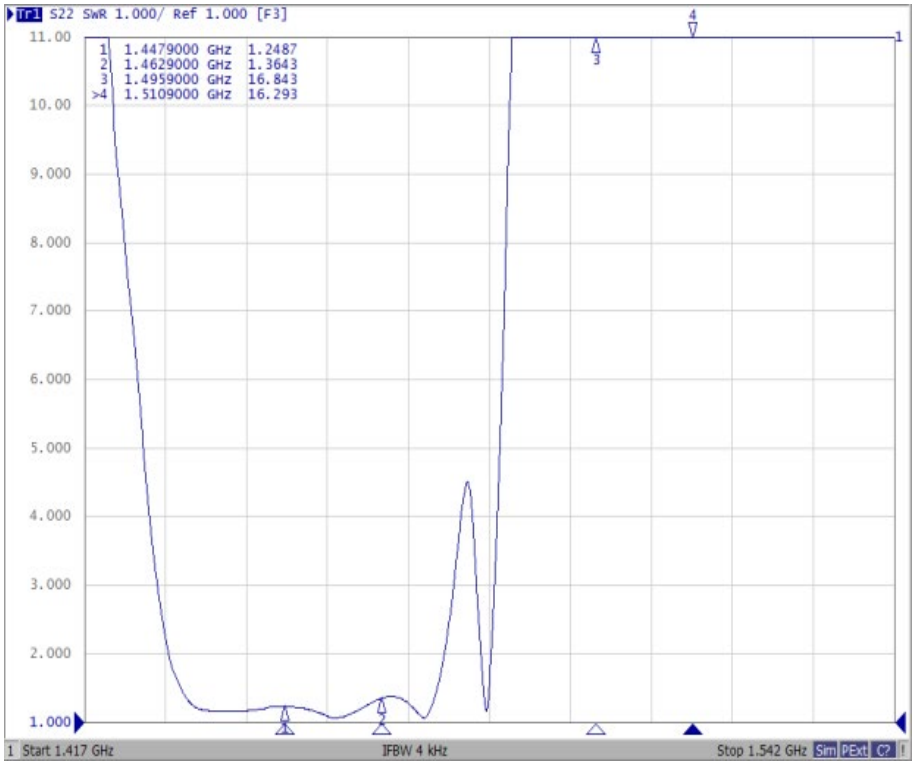
Tx to Ant, Ant to Rx

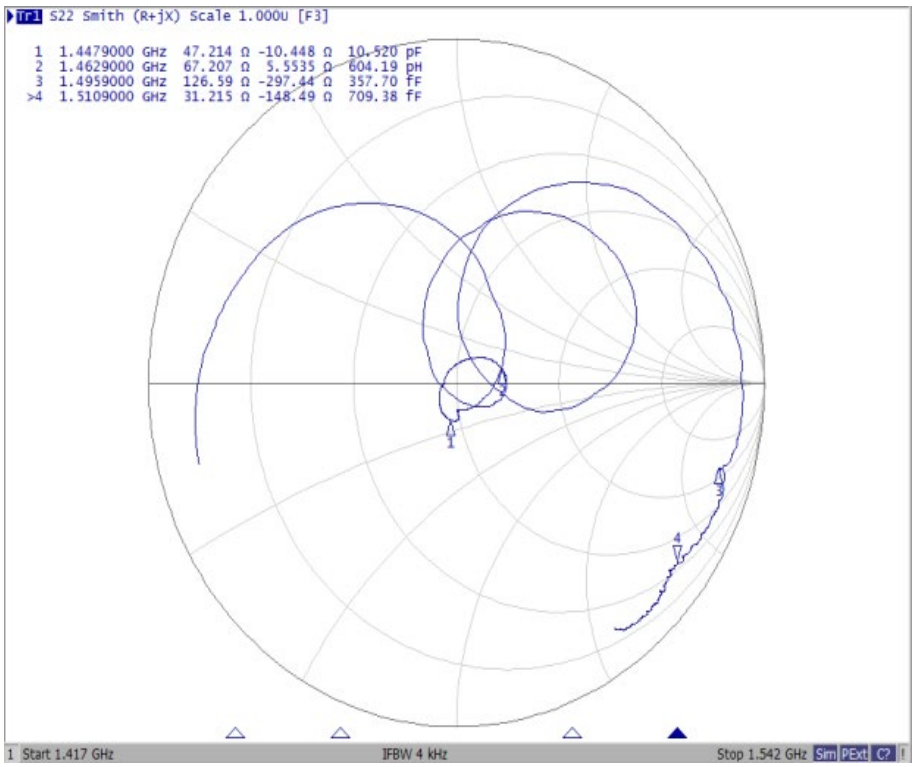


Tx to Rx Isolation

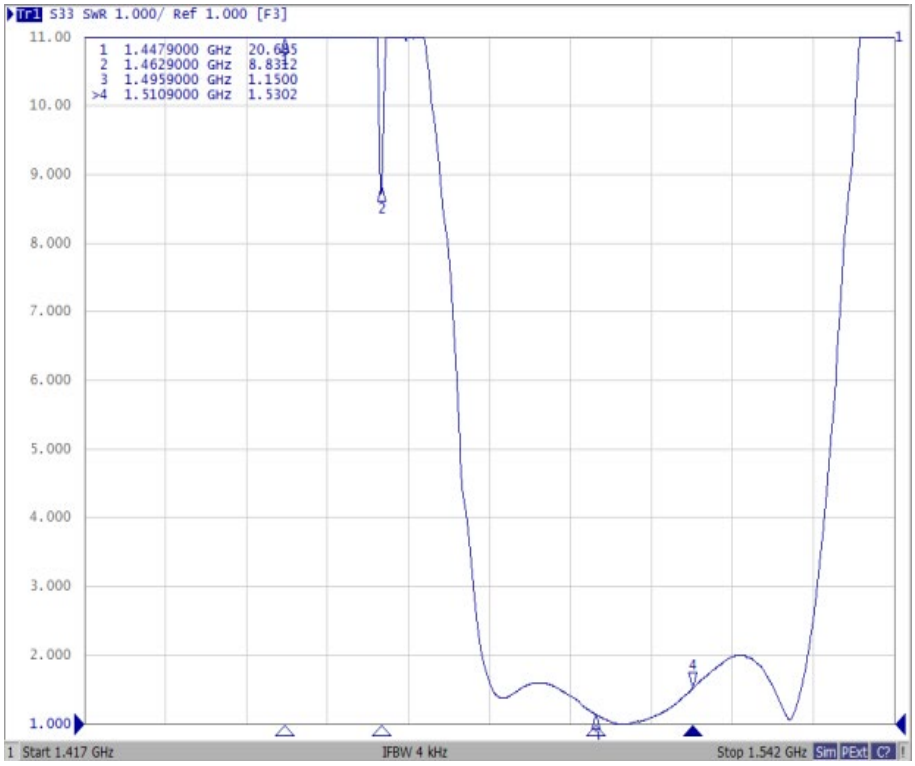


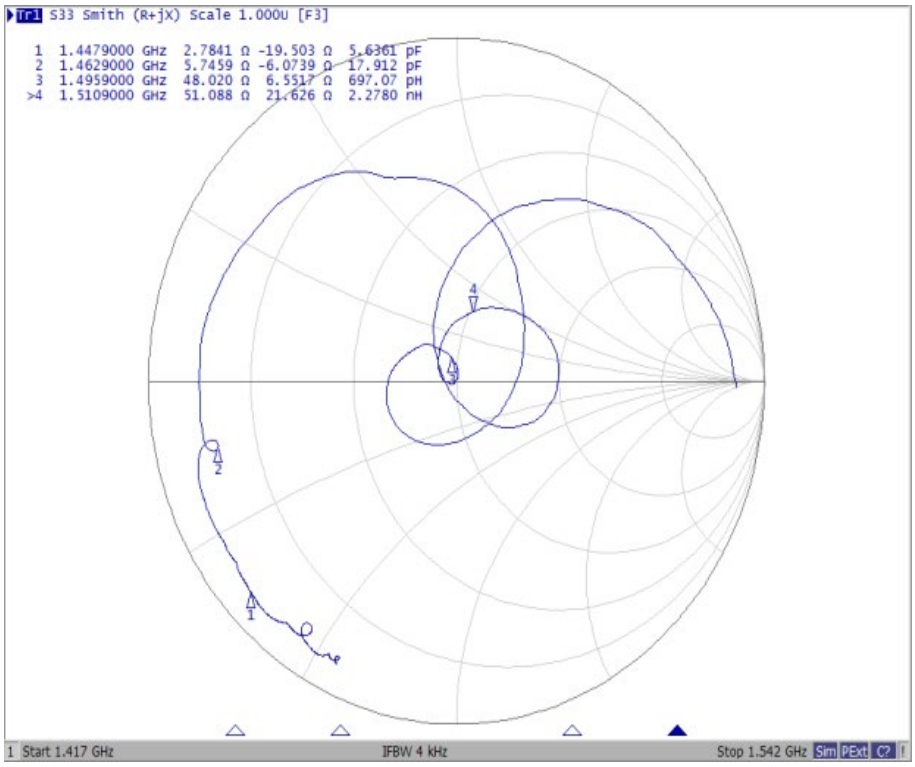
Tx Port


Tr1 S22 SWR 1.000/ Ref 1.000 [F3]
1 1.4479000 GHz 1.2487
2 1.4629000 GHz 1.3643
3 1.4959000 GHz 16.843
>4 1.5109000 GHz 16.293
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
1 Start 1.417 GHz
IFBW 4 kHz
Stop 1.542 GHz

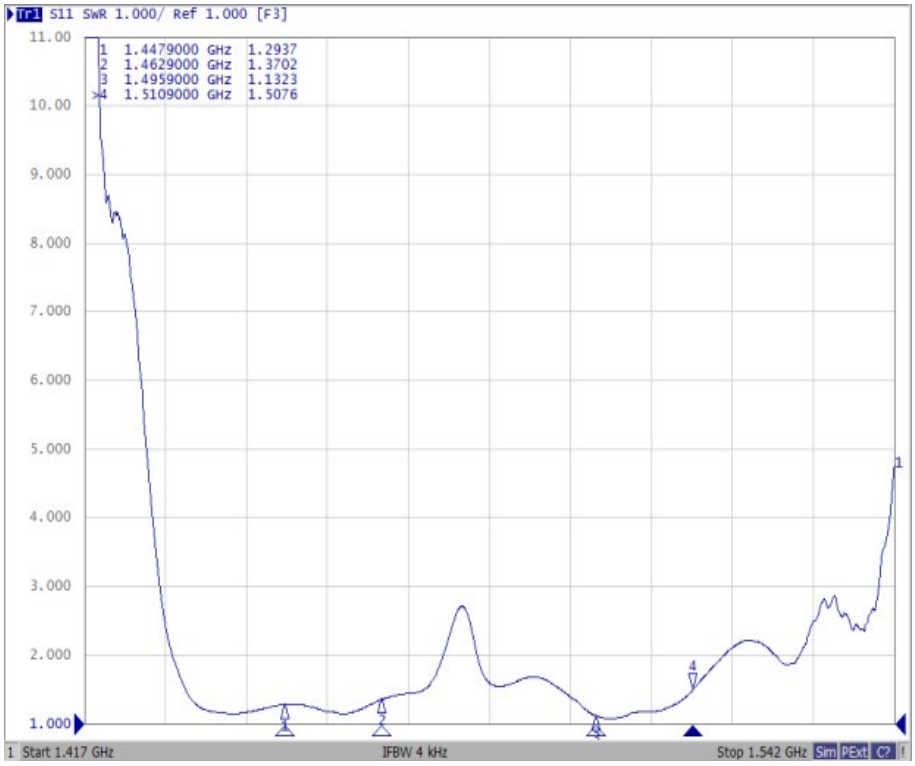

Tr1 S22 Smith (R+jX) Scale 1.000U [F3]
1 1.4479000 GHz 47.214 Ω -10.448 Ω 10.520 pF
2 1.4629000 GHz 67.207 Ω 5.5535 Ω 604.19 pH
3 1.4959000 GHz 126.59 Ω -297.44 Ω 357.70 fF
>4 1.5109000 GHz 31.215 Ω -148.49 Ω 709.38 fF
1 Start 1.417 GHz
IFBW 4 kHz
Stop 1.542 GHz

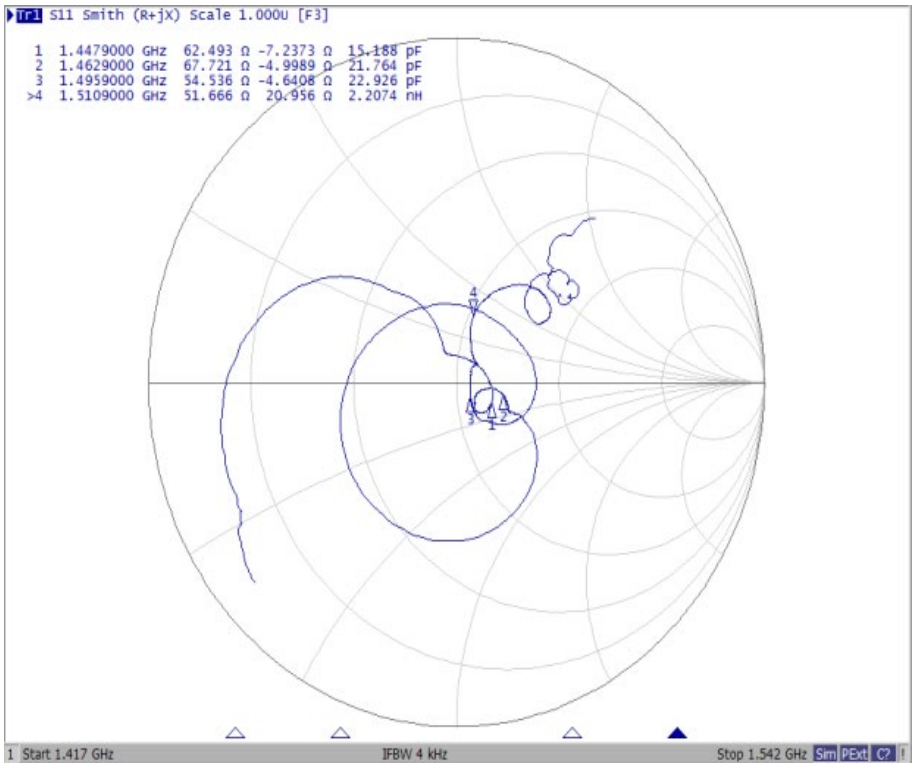
Rx Port



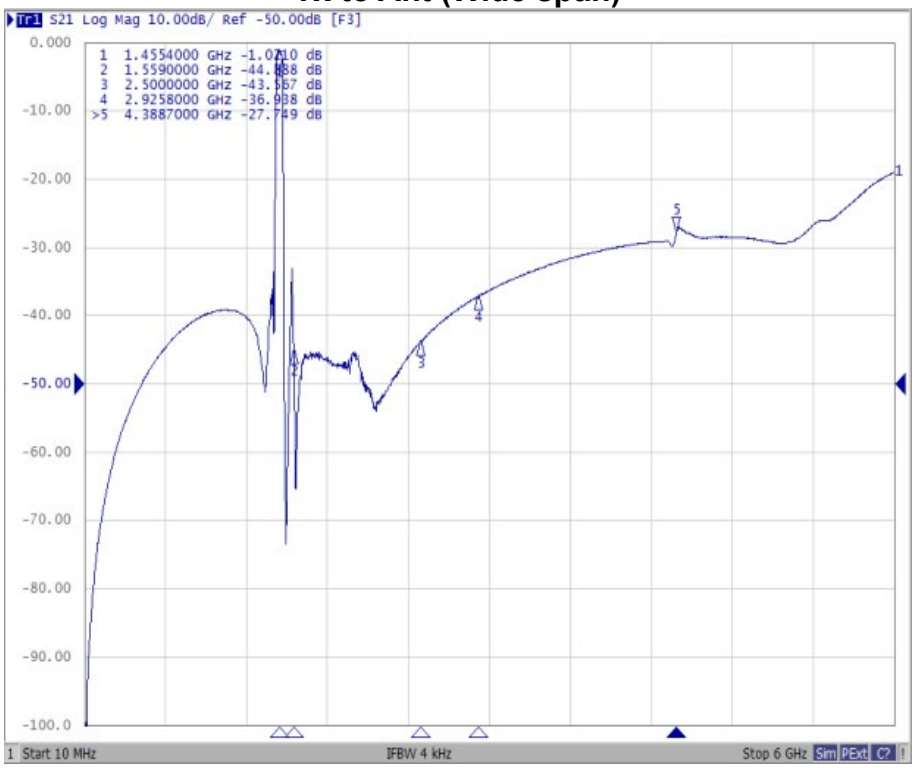


Ant Port

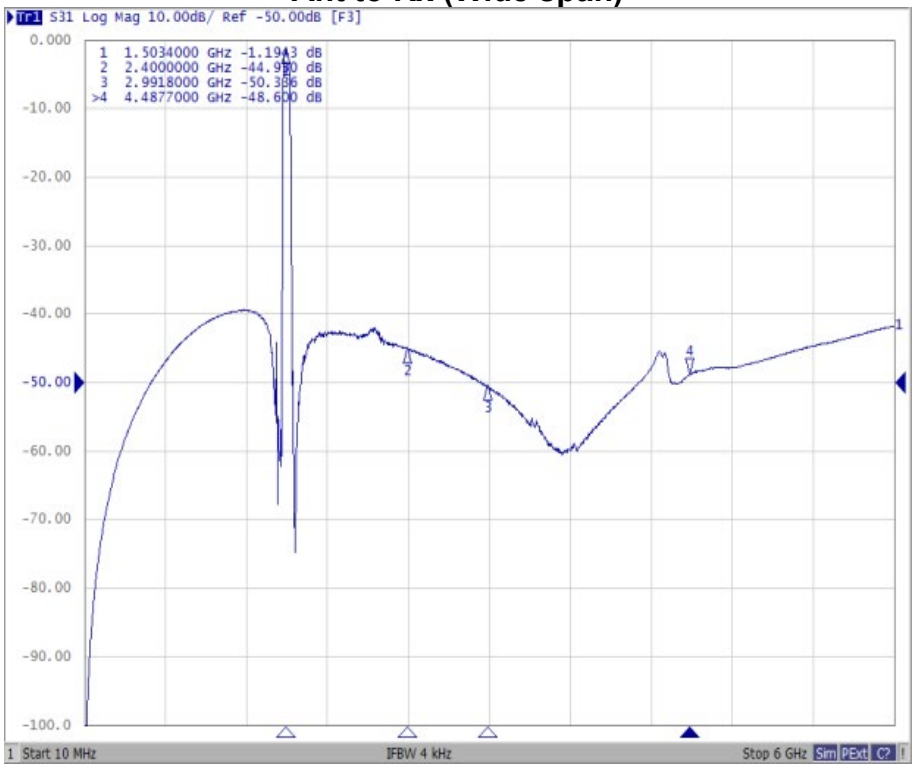




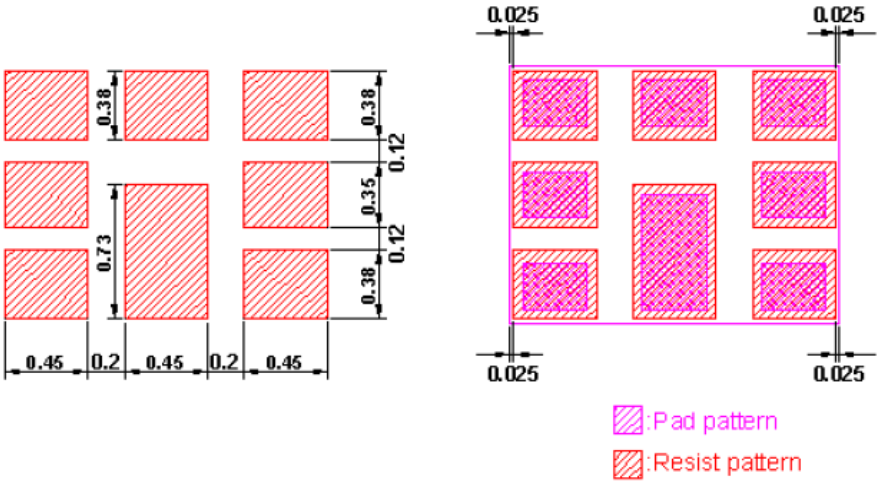
Tx to Ant (Wide span)



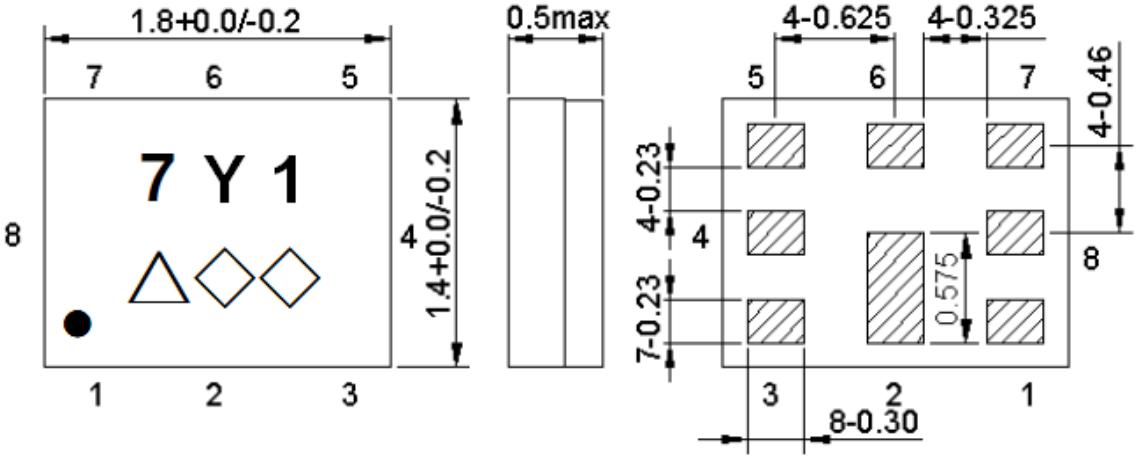
Ant to Rx (Wide span)



PCB Footprint:



OUTLINE DRAWING:



Marking name: 7Y1

△: Date Code (Fallow below table)

◇◇: Lot No. (Indicated by 0~9 or A to Z and a to z, except I, O, i, o and l)

Date Code table:

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2017	A	B	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019	a	b	c	d	e	f	g	h	j	k	l	m
2020	n	p	q	r	s	t	u	v	w	x	y	z

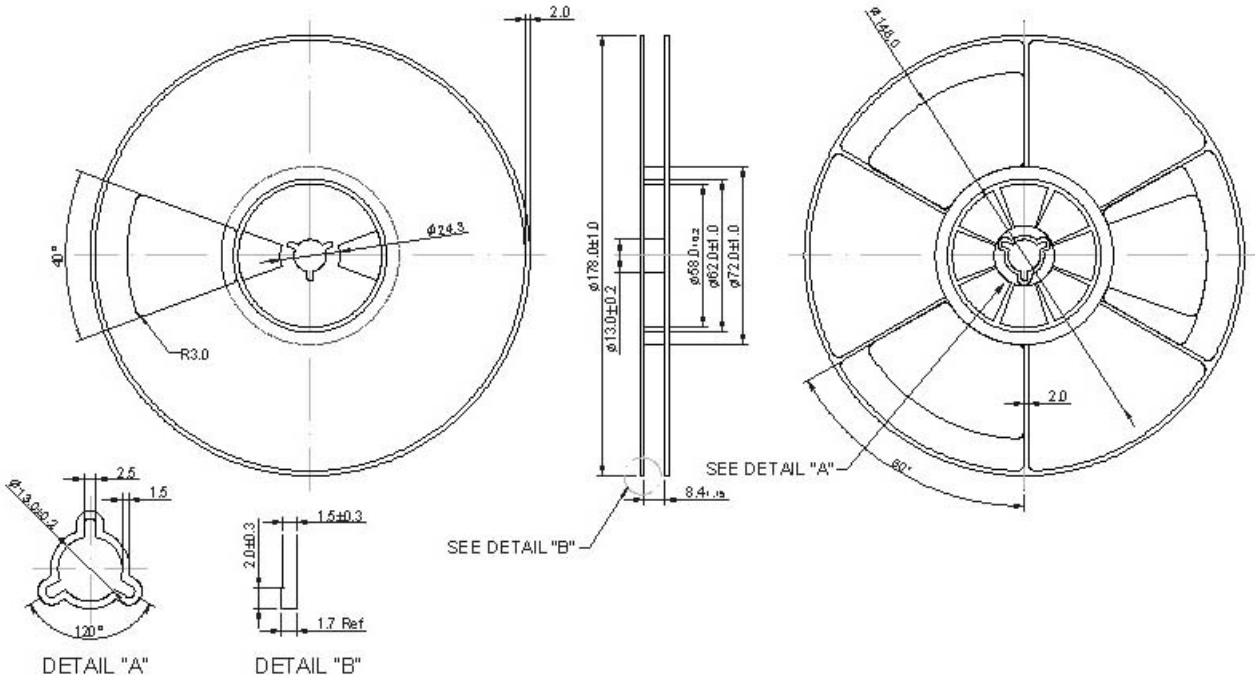
Pin Assignment

Pin No.	Pin name	Description
1	Rx	Receiver
2	GND	Ground
3	Tx	Transmitter
4	GND	Ground
5	GND	Ground
6	ANT	Antenna
7	GND	Ground
8	GND	Ground

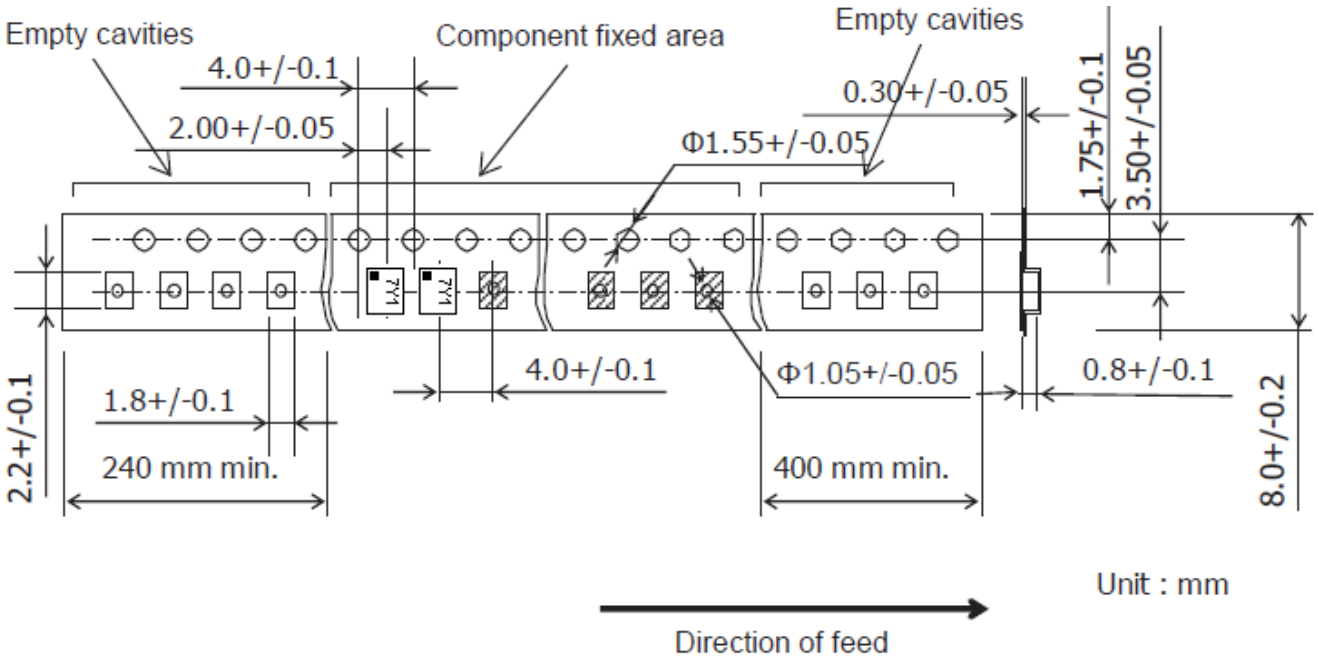
PACKING:

Reel Count:
7" = 3000
13" =10,000

REEL DIMENSION



TAPE DIMENSION



Recommended Reflow Profile:

1. Preheating shall be fixed at 150~180℃ for 60~90 seconds.
2. Ascending time to preheating temperature 150℃ shall be 30 seconds min.
3. Heating shall be fixed at 220℃ for 50~80 seconds and at 260℃+0/-5℃ peak (20~40sec).
4. Time: 2 times.