DATASHEET
-Preliminary-

Surface Acoustic Wave Filter

- **Application : LTE BAND 3 Duplexer**
- **Model : SFXG47AYM02**
- **Center Frequency : 1747.5 / 1842.5 [MHz]**

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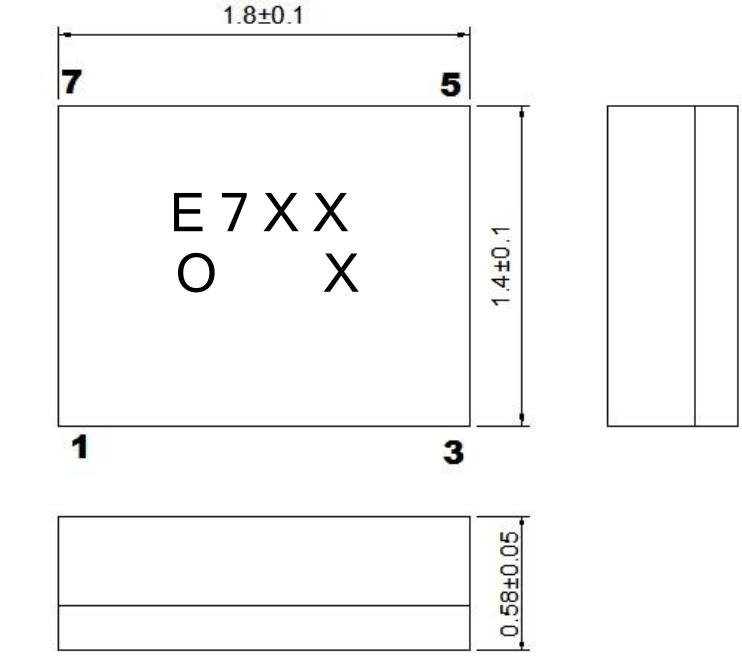
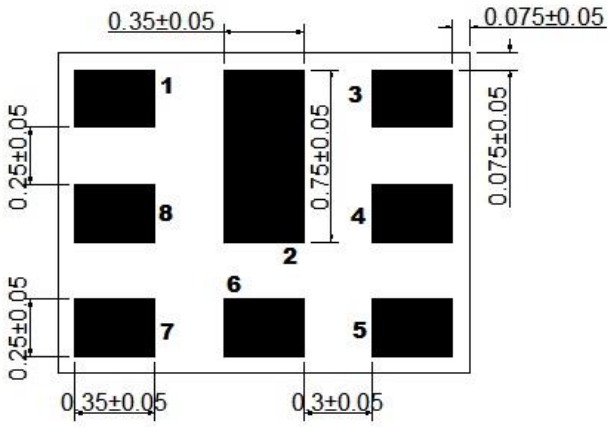
1. OUTLINE DRAWING & RECOMMENDED PCB

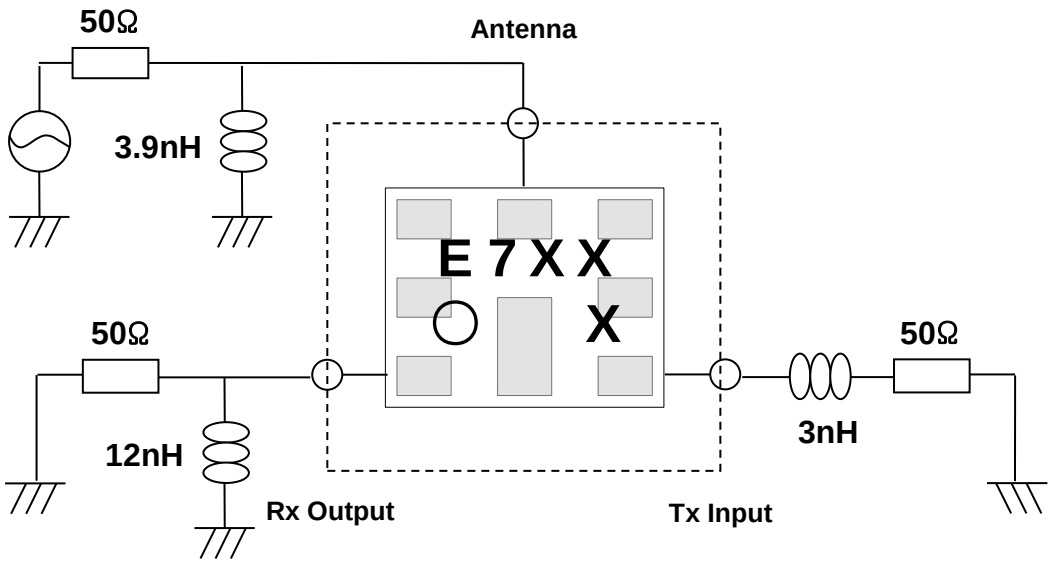
[Unit: mm]





No.	Function
1	Rx Output
3	Tx Input
6	Antenna
2, 4, 5, 7, 8	GND

2. TEST FIXTURE



3. PERFORMANCE

3-1. MAXIMUM RATINGS

CHARACTERISTICS	RATINGS	UNITS
DC Permissive Voltage	5	V
Maximum Input Power	0.8	W
Operating Temperature Range	−20 ~ +85	℃
Storage Temperature Range	−40 ~ +85	℃

3-2. ELECTRICAL CHARACTERISTICS

3-2-1. TABLE

Ta = −20 ~ +85℃

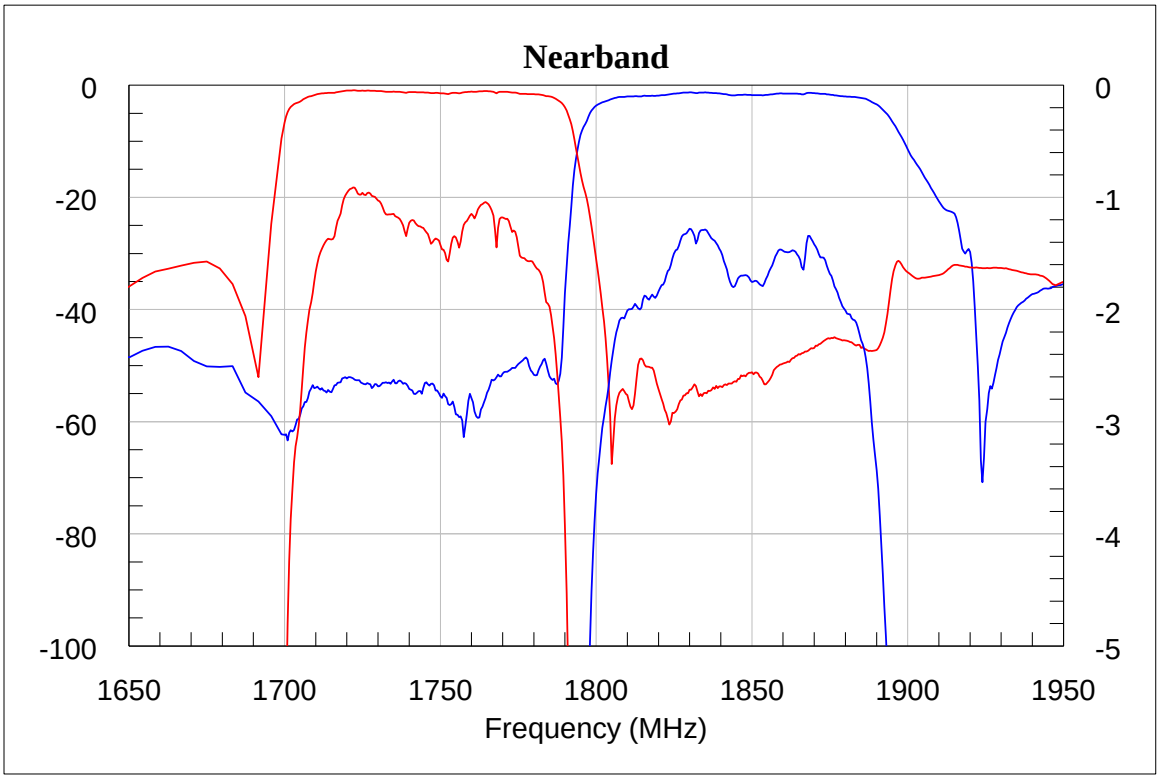
*1. PCB loss is de-embedded.

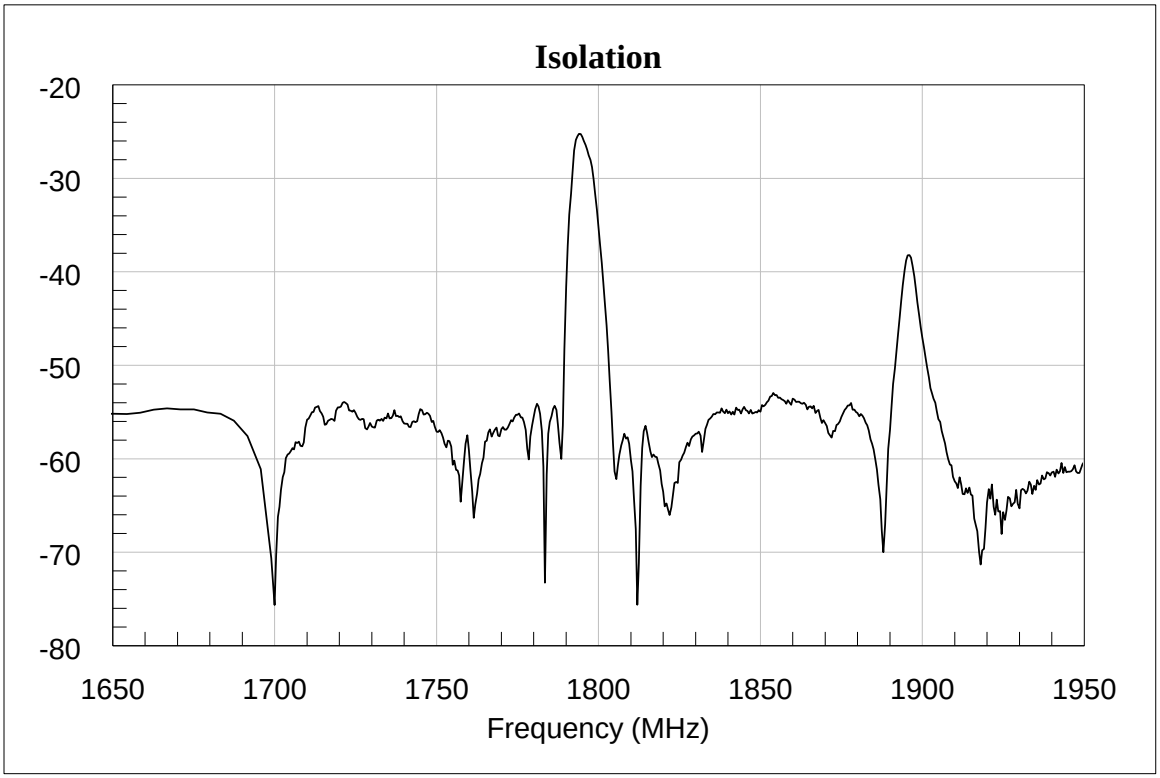
*2. Averaged value of linear s-parameter over 5MHz

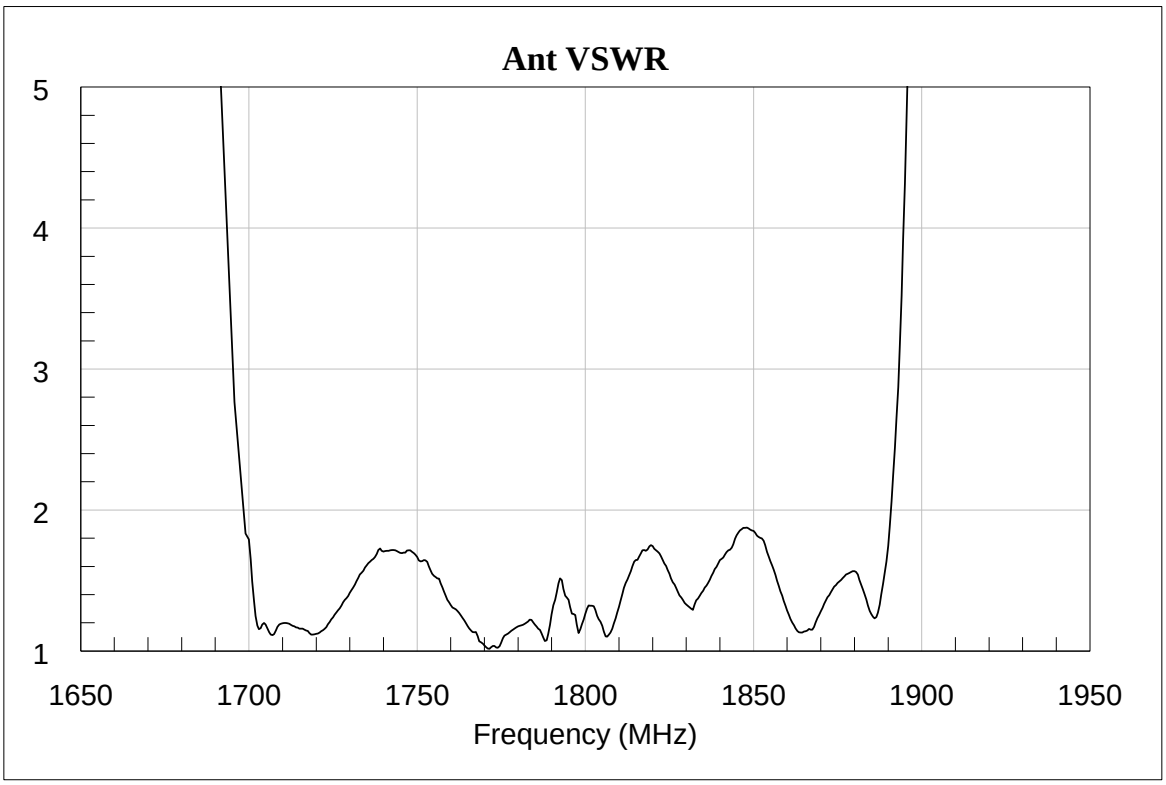
Item	CONDITION [MHz]	UNIT	RATING			
			Min.	Typ.(25℃)	Max.	
TX → ANTENNA						
Insertion Loss(*1)	1710.24 ~ 1784.76	dB	-	2.2	3.2	
	1712.5 ~ 1782.5	dB_{INT}	-	1.9	2.8	α_{LTE} (*2)
VSWR	1710.24 ~ 1784.76	-	-	1.7	2.3	
Absolute Attenuation	10 ~ 1565.5	dB	26	30	-	
	1565.42 ~ 1585.42	dB	30	34	-	
	1597.55 ~ 1605.89	dB	33	37	-	
	1805.24 ~ 1879.76	dB	35	45	-	
	1807.5 ~ 1877.5	dB_{INT}	40	45	-	α_{LTE} (*2)
	1920 ~ 1980	dB	25	32	-	
	2110 ~ 2170	dB	27	34	-	
	2400 ~ 2500	dB	27	35	-	
	2620 ~ 2690	dB	27	36	-	
	3420 ~ 3570	dB	20	29	-	
	5130 ~ 5355	dB	15	22	-	
Termination Impedance : INPUT / ANTENNA			50Ω + 3[nH] /50Ω // 3.9[nH]			
ANTENNA → RX						
Insertion Loss(*1)	1805.24 ~ 1879.76	dB	-	2.5	3.5	
	1807.5 ~ 1877.5	dB_{INT}	-	2.2	3.3	α_{LTE} (*2)

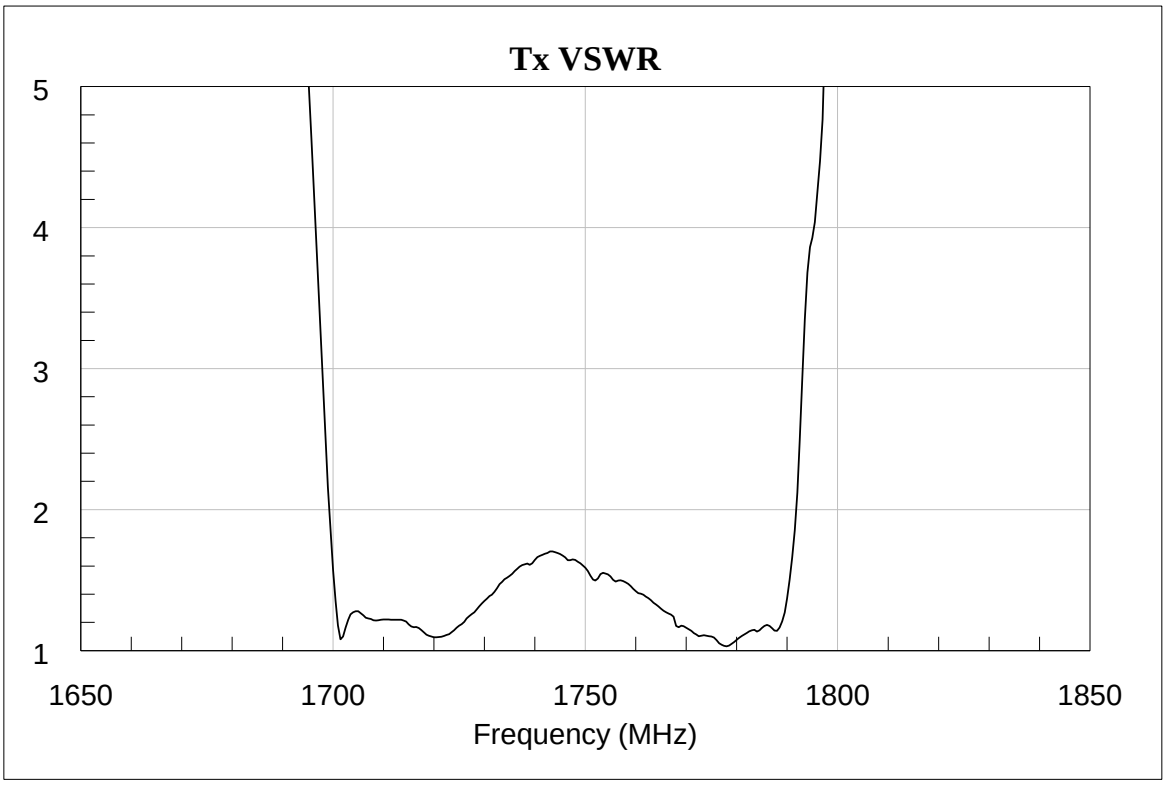
VSWR	1805.24 ~ 1879.76	-	-	1.8	2.3	
Absolute Attenuation	10 ~ 1710	dB	38	43	-	
	1615 ~ 1690	dB	38	45	-	
	1710.24 ~ 1784.76	dB	40	48	-	
	1712.5 ~ 1782.5	dB_{INT}	40	48	-	α_{LTE} (*2)
	2400 ~ 2500	dB	30	40	-	
	2500 ~ 2570	dB	30	40	-	
	2570 ~ 3515	dB	30	38	-	
	3515 ~ 3760	dB	30	45	-	
Termination Impedance : ANTENNA / OUTPUT			50Ω // 3.9[nH] /50Ω // 12[nH]			
TX → RX						
Isolation between Rx and Tx	1710.24 ~ 1784.76	dB	51	54	-	
	1712.5 ~ 1782.5	dB_{INT}	51	54	-	α_{LTE} (*2)
	1805.24 ~ 1879.76	dB	44	53	-	
	1807.5 ~ 1877.5	dB_{INT}	49	53	-	α_{LTE} (*2)

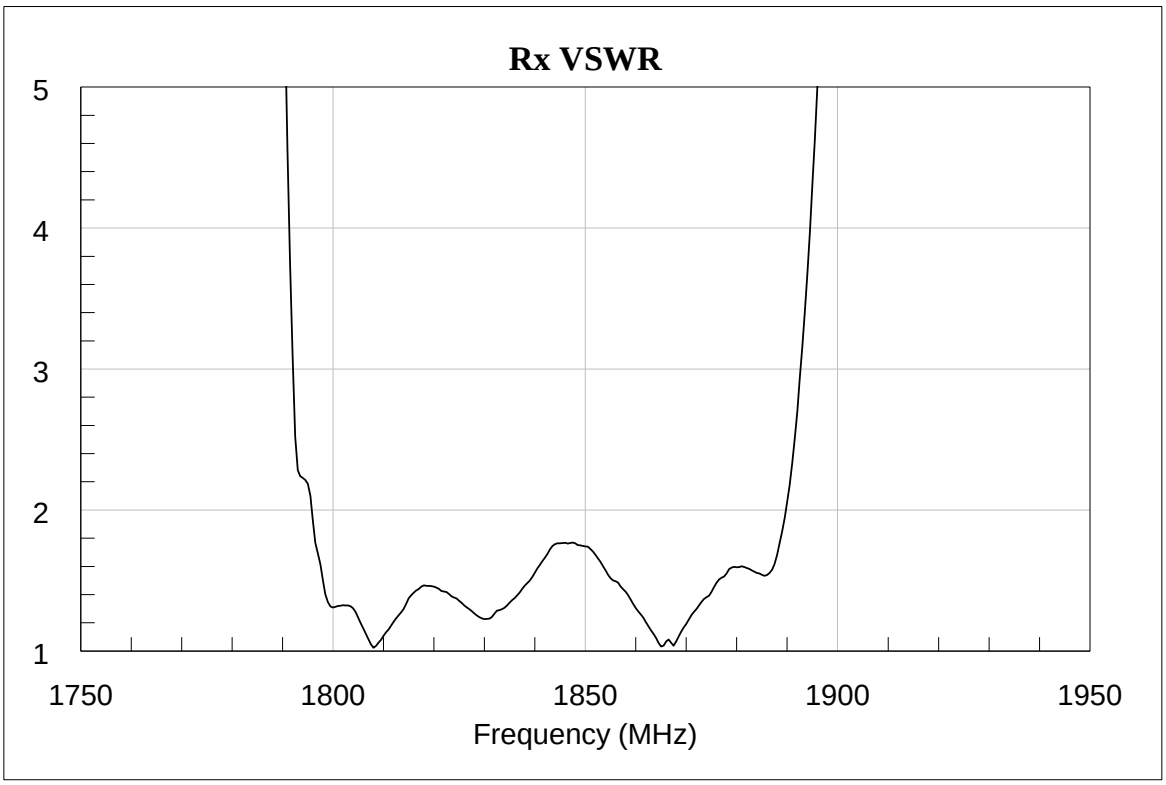
3-2-2. GRAPH

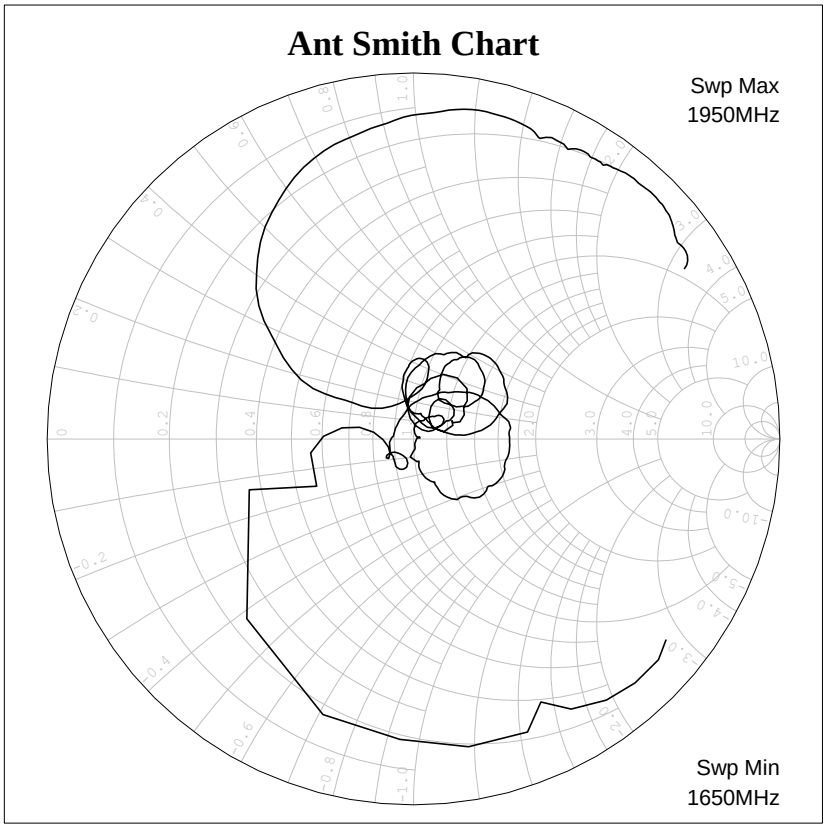

Nearband
0
-20
-40
-60
-80
-100
0
-1
-2
-3
-4
-5
1650
1700
1750
1800
1850
1900
1950
Frequency (MHz)

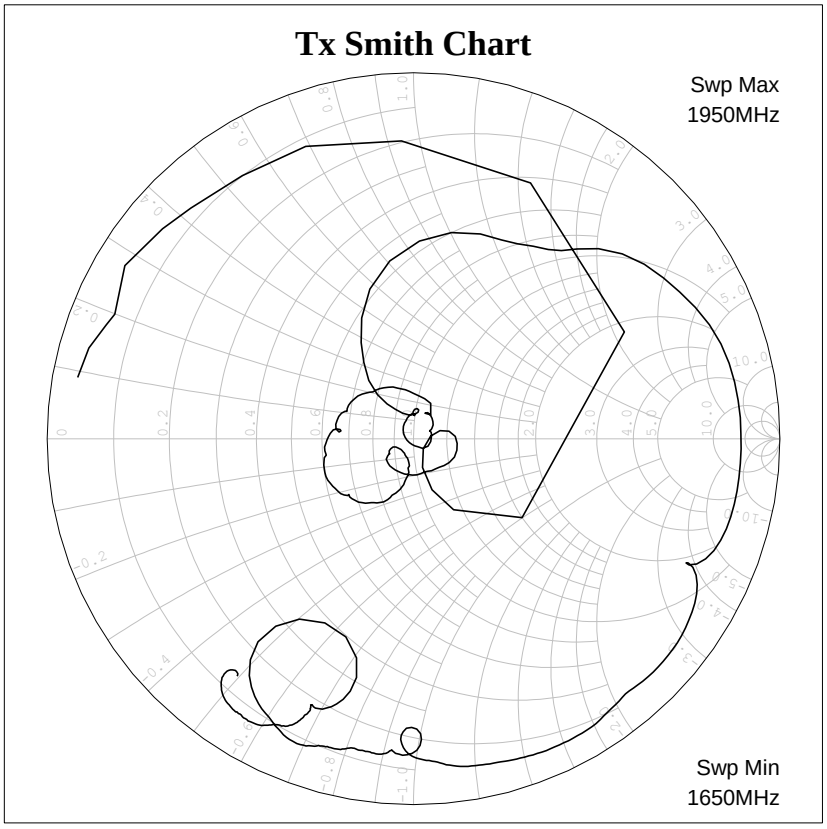

Isolation
-20
-30
-40
-50
-60
-70
-80
1650
1700
1750
1800
1850
1900
1950
Frequency (MHz)

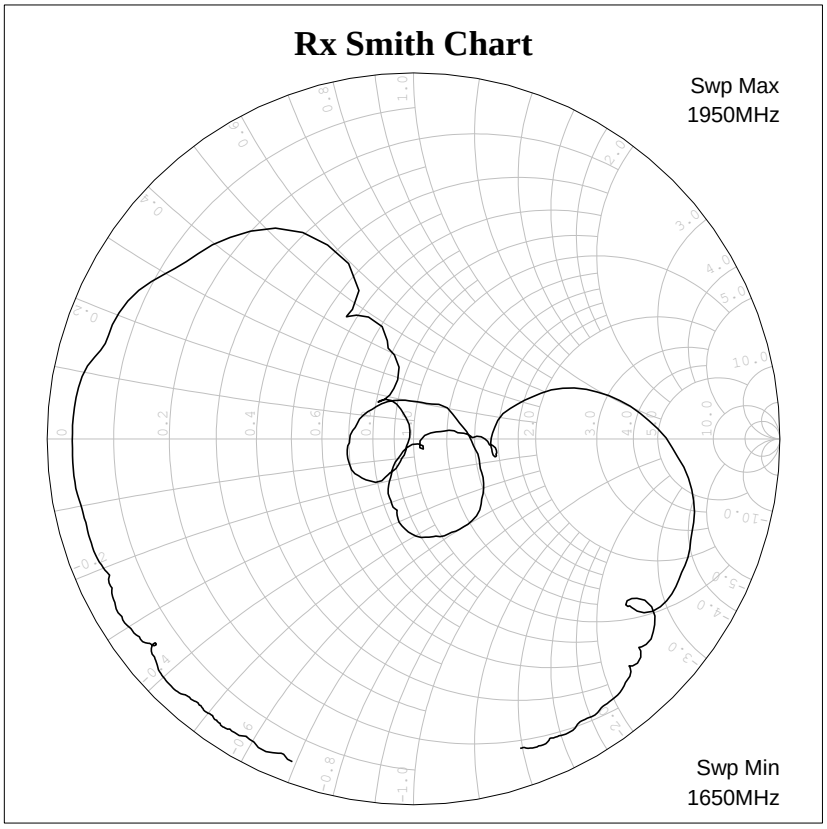

Ant VSWR
5
4
3
2
1
1650
1700
1750
1800
1850
1900
1950
Frequency (MHz)

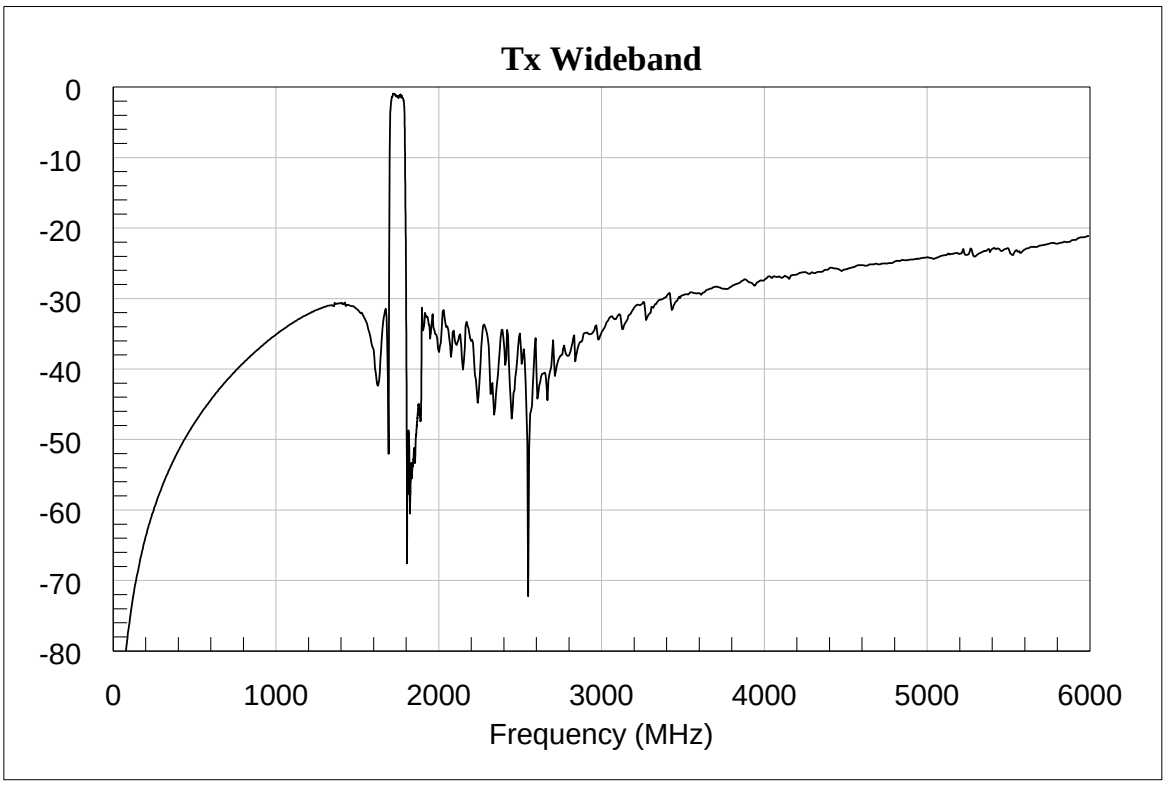

Tx VSWR
5
4
3
2
1
1650
1700
1750
1800
1850
Frequency (MHz)

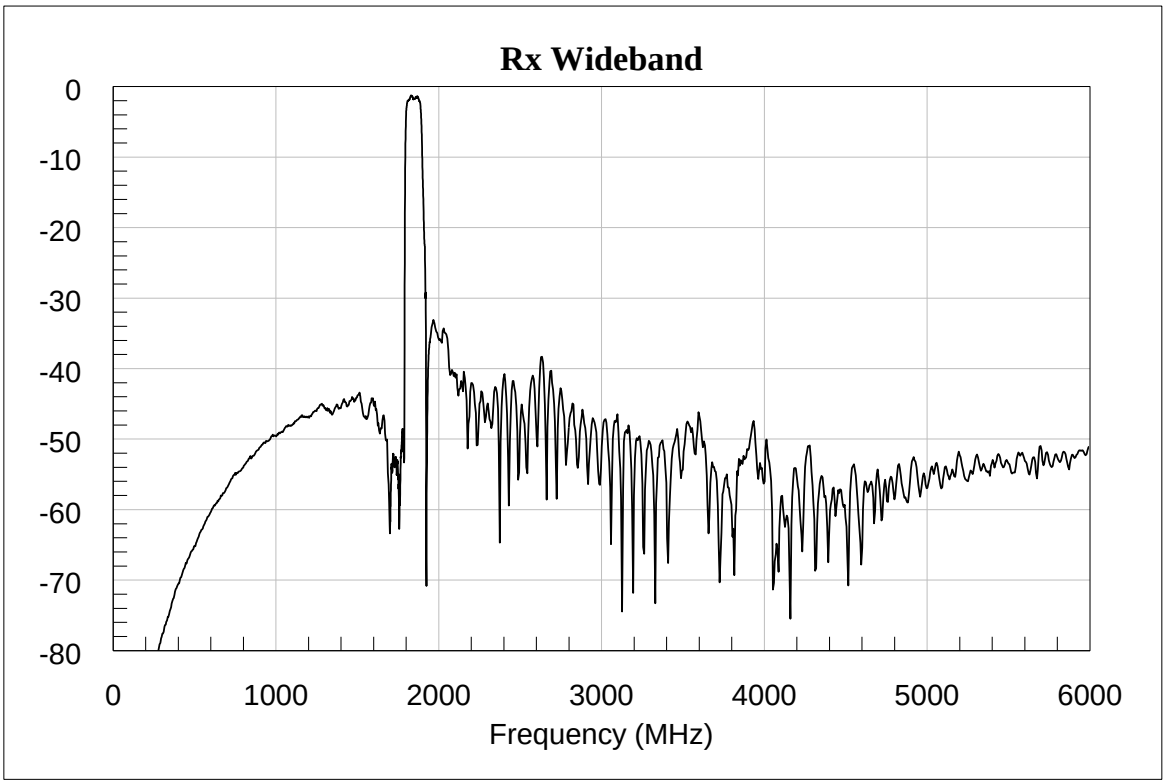

Rx VSWR
5
4
3
2
1
1750
1800
1850
1900
1950
Frequency (MHz)

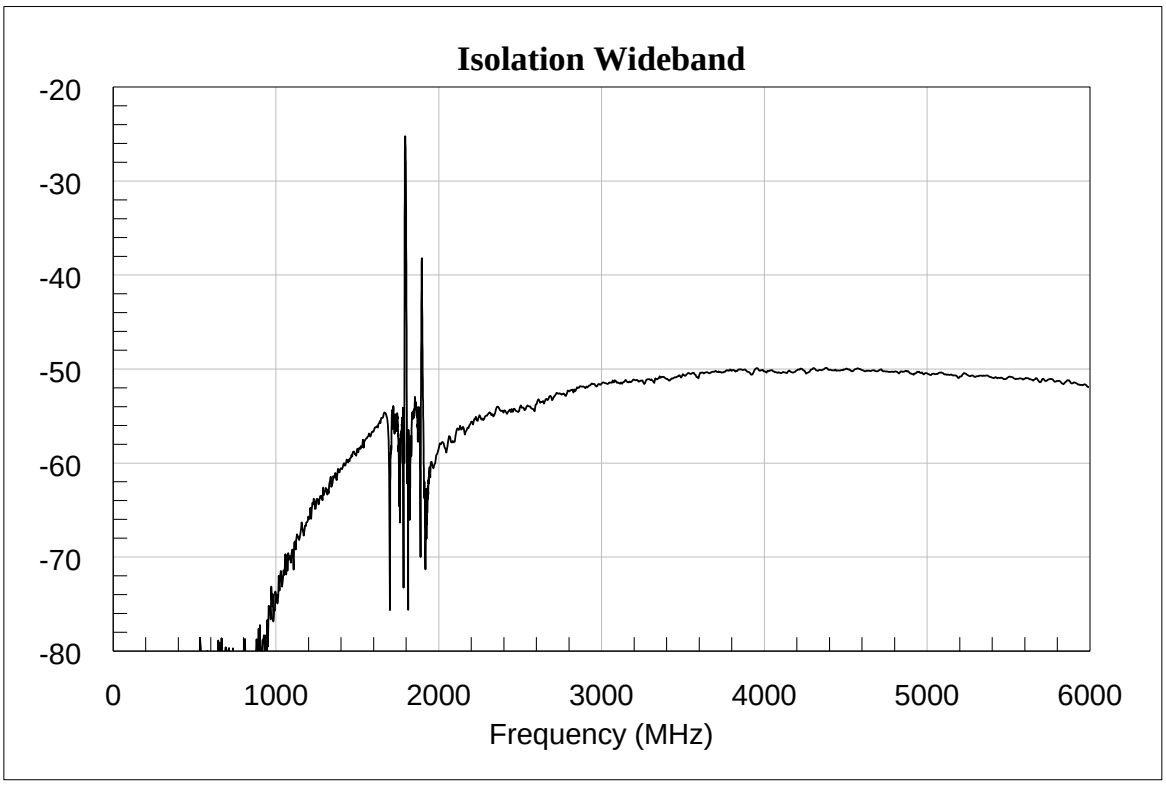

Ant Smith Chart
Swp Max
1950MHz
Swp Min
1650MHz


Tx Smith Chart
Swp Max
1950MHz
Swp Min
1650MHz


Rx Smith Chart
Swp Max
1950MHz
Swp Min
1650MHz


Tx Wideband
0
-10
-20
-30
-40
-50
-60
-70
-80
0
1000
2000
3000
4000
5000
6000
Frequency (MHz)

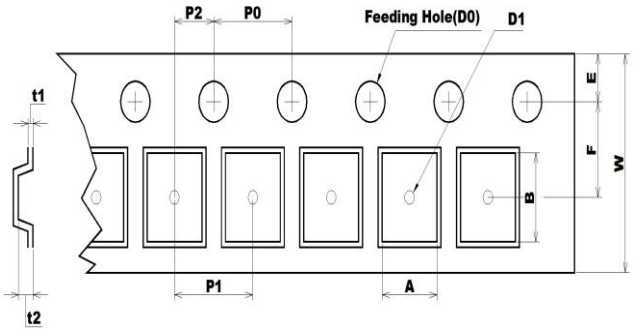

Rx Wideband
0
-10
-20
-30
-40
-50
-60
-70
-80
0
1000
2000
3000
4000
5000
6000
Frequency (MHz)


Isolation Wideband
-20
-30
-40
-50
-60
-70
-80
0
1000
2000
3000
4000
5000
6000
Frequency (MHz)

4. PACKING

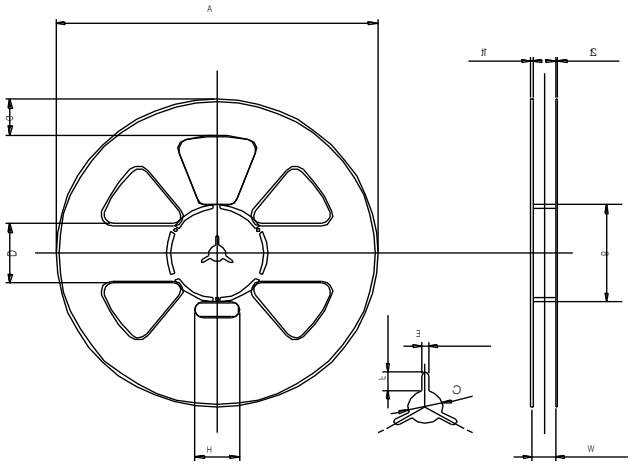
4-1. DIMENSIONS

- Carrier Tape [Unit: mm]



A	B	D0	D1
1.60 ± 0.05	2.00 ± 0.05	Ø1.55 ± 0.05	Ø1.00 MIN
E	F	P0	P1
1.75 +0.10 -0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10
P2	t1	t2	W
2.00 ± 0.05	0.25 +0.05 -0.05	0.80 +0.05 -0.05	8 +0.10 -0.10

- Reel [Unit: mm]



A	B	C	D
Ø258.0 +1.0 -0.5	Ø81.0 +1.0 -1.0	Ø13.0 +0.5 -0.5	50.0 +0.8 -0.8
E	F	G	H
2.2 +0.3 -0.3	7.0 +0.5 -0.5	30.0 +0.8 -0.8	35.0 +1.0 -1.0
t1	t2	W	
1.8 +0.5 -0.5	1.5 +0.5 -0.5	9.0 +1.0 -0.5	

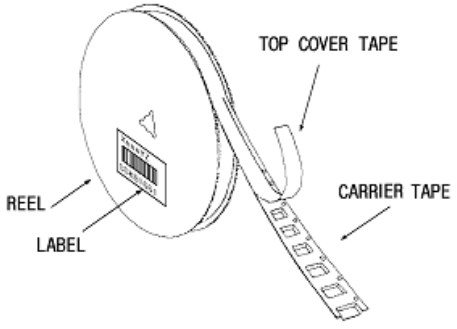
- The product shall be packed properly not to be damaged during transportation and storage.

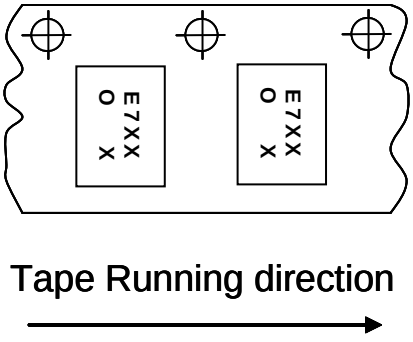
4-2. REELING QUANTITY

10 inch reel: 8,000 pcs/reel

4-3. TAPING STRUCTURE

The tape shall be wound around the reel in direction shown below.





Tape Running direction