TAI-SAW TECHNOLOGY CO., LTD.
No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
Taoyuan, 324, Taiwan, R.O.C.
TEL: 886-3-4690038 FAX: 886-3-4697532
E-mail: tstsales@mail.taisaw.com Web: www.taisaw.com

Product Specifications Approval Sheet

Product Description: SAW DPX 897.5 / 942.5 MHz Band 8 SMD 1.8X1.4 mm (BW=35 MHz)

TST Part No.: TF0125DB

Customer Part No.:_____

Customer signature required

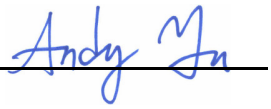
Company:_____

Division:_____

Approved by :_____

Date:_____

Checked by:_____ Anne Chen 

Approved by:_____ Andy Yu 

Date:_____ 01, 02, 2020 _____

1. Customer signed back is required before TST can proceed with sample build and receive orders.
2. Orders received without customer signed back will be regarded as agreement on the specifications.
3. Any specifications changes must be approved upon by both parties and a new revision of specifications shall be released to reflect the change

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SAW DPX 897.5 / 942.5 MHz Band 8 SMD 1.8X1.4 mm (BW=35 MHz)

MODEL NO.:TF0125DB REV.1.0

RoHS Compliant

Lead-free soldering

Electrostatic **S**ensitive **D**evice (**ESD**)

A. MAXIMUM RATING:

1. Operating temperature range: -40 ℃ to +85 ℃
2. Storage temperature range: -40 ℃ to +85 ℃
3. Tx Input power : 29dBm (Ta=+50℃,50000h,CW)

3.1Rx Input power : 15dBm (Ta=+50℃, 50000h,CW)

4. Maximum DC Voltage: 0 V
5. Moisture Sensitivity Level: Level 1 (MSL 1)
6. ESD 100V(MM) 200V(HBM)

B. ELECTRICAL CHARACTERISTICS:

Terminating impedance (Tx Port): 50 Ω (Single-ended)

Terminating impedance (Rx Port): 50 Ω (Single-ended)

Terminating impedance (Ant Port): 50 Ω (Single-ended)

Tx to ANT (f_{T0}=897.5 MHz)

Parameters Description			Unit	Min	Typ	Max	Remarks
Insertion Loss		880.48 ~ 914.52 MHz	dB	-	2.7	4.2	
		882.4 ~ 912.6 MHz	dB		2.0	3.6	
Amplitude ripple		880 ~ 915 MHz	dB_{p-p}	-	2.0	3.2	
VSWR	ANT	880 ~ 915 MHz	-	-	1.5	2.1	
	Tx	880 ~ 915 MHz	-	-	1.5	2.1	
Attenuation:							
10 ~ 716 MHz			dB	30	37	-	
716 ~ 728 MHz			dB	33	38	-	
728 ~ 793 MHz			dB	33	38	-	
832 ~ 862 MHz			dB	26	33	-	
927 ~ 957.6 MHz			dB	39	44	-	
1559 ~ 1563 MHz			dB	35	45	-	
1565.42 ~ 1573.37 MHz			dB	35	45	-	
1573.37 ~ 1577.47 MHz			dB	35	45	-	
1577.47 ~ 1585.42 MHz			dB	35	44	-	
1597.55 ~ 1605.89 MHz			dB	35	44	-	
1710 ~ 1785 MHz			dB	30	40	-	
1760 ~ 1840 MHz			dB	30	40	-	
1840 ~ 1880 MHz			dB	30	39	-	
1920 ~ 1980 MHz			dB	30	38	-	

TST DCC
Release document

2110 ~ 2170 MHz	dB	28	36	-	
2400 ~ 2500 MHz	dB	25	34	-	
2434 ~ 2494 MHz	dB	25	34	-	
2620 ~ 2745 MHz	dB	25	33	-	
3520 ~ 3660 MHz	dB	15	29	-	
4400 ~ 4575 MHz	dB	10	23	-	
4900 ~ 5950 MHz	dB	10	21	-	
6160 ~ 6405 MHz	dB	15	38	-	
7040 ~ 7320 MHz	dB	15	29	-	

ANT to Rx (f_{T0}=942.5 MHz)

Parameters Description			Unit	Min	Typ	Max	Remarks
Insertion Loss		925.48 ~ 959.52 MHz	dB	-	2.6	4.2	
		927.4 ~ 957.6 MHz	dB	-	2.0	3.0	
Amplitude ripple		925 ~ 960 MHz	dB_{p-p}		1.8	3.2	
VSWR	ANT	925 ~ 960 MHz			1.5	2.3	
	Rx		-		1.5	2.3	
Attenuation:							
0.3~ 880 MHz			dB	32	36	-	
45 MHz			dB	50	84	-	
835 ~ 870 MHz			dB	31	37		
882.4 ~ 912.6 MHz			dB	45	52		
902.5 ~ 910 MHz			dB	45	67	-	
980 ~ 1045 MHz			dB	32	38	-	
1045 ~ 6000 MHz			dB	17	29		
1427 ~ 1448 MHz			dB	30	37		
1710 ~ 1785 MHz			dB	30	38		
1805 ~ 1980 MHz			dB	30	39		
2400 ~ 2500 MHz			dB	30	41		
2500 ~ 2570 MHz			dB	30	41		
2685 ~ 2790 MHz			dB	30	41		
2775 ~ 2880 MHz			dB	30	41		
2880 ~ 3700 MHz			dB	30	39		
3700 ~ 3840 MHz			dB	30	39		
4625 ~ 4800 MHz			dB	15	30		
4900 ~ 5950 MHz			dB	15	29		
6475 ~ 6720 MHz			dB	10	30		
7400 ~ 7680 MHz			dB	5	23		

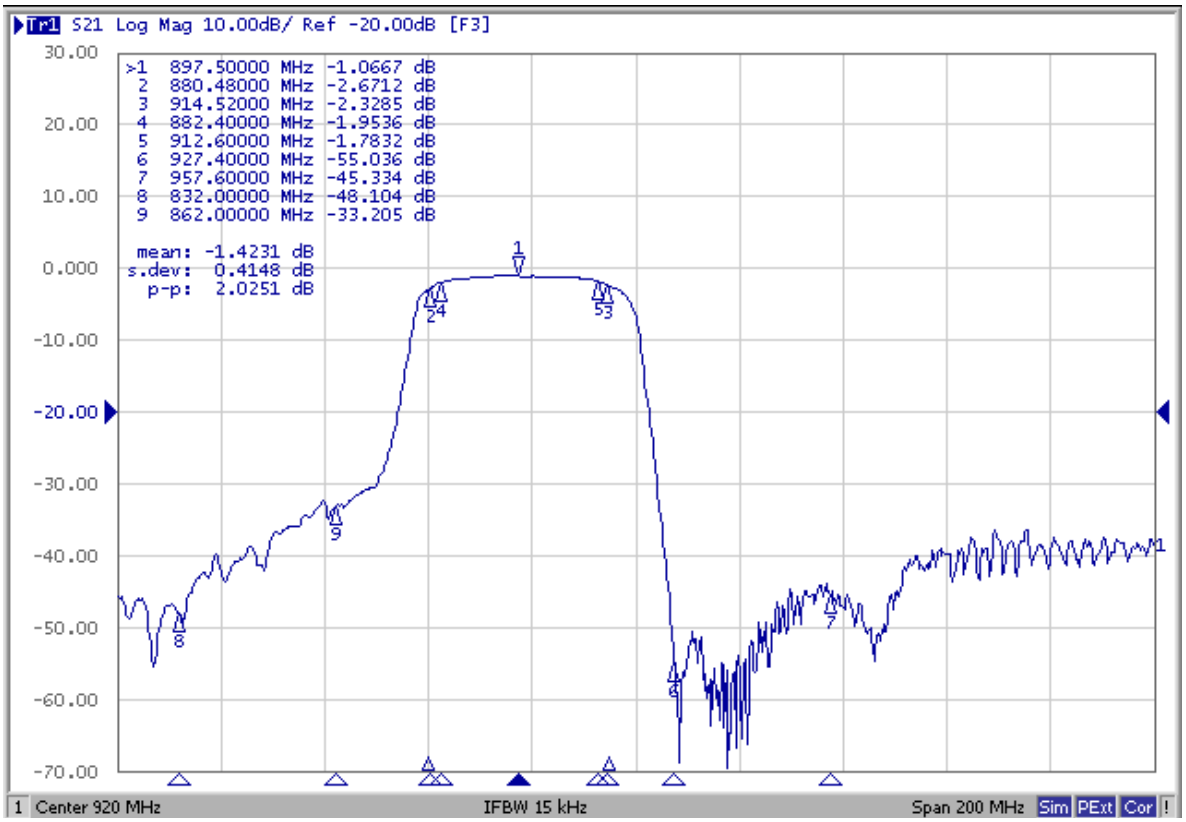
Tx to Rx

Isolation	882.4 ~ 912.6 MHz	dB	49	54	-	
	927.4 ~ 957.6 MHz	dB	43	47	-	

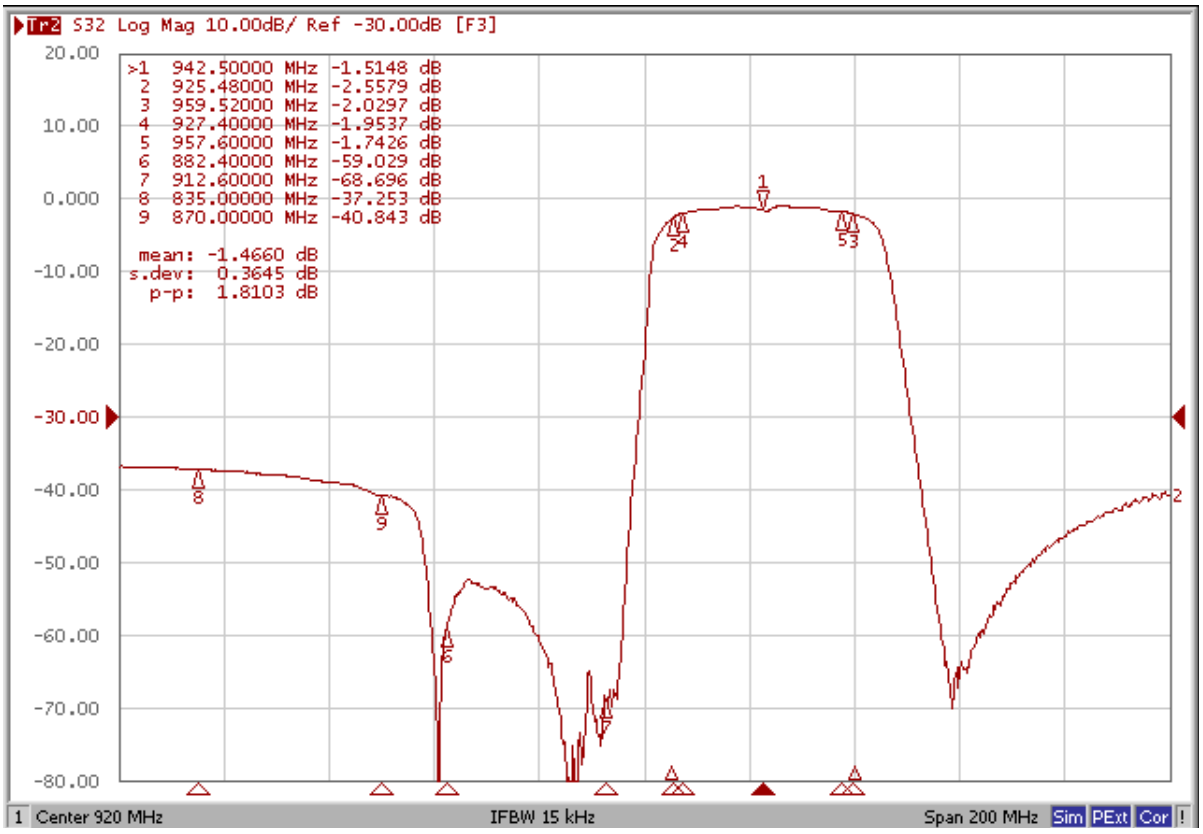
Notes : (1) With Matching Network

C. FREQUENCY CHARACTERISTICS:

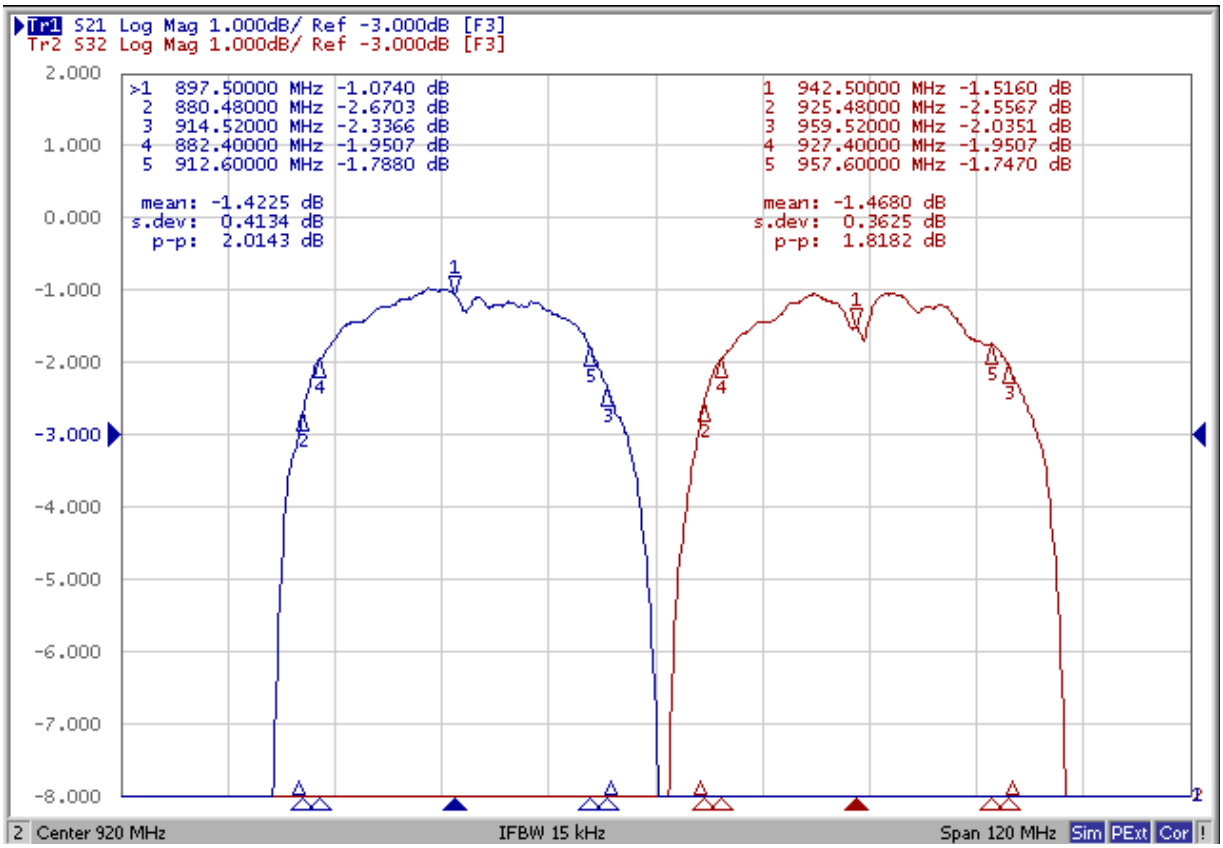
Tx to Ant



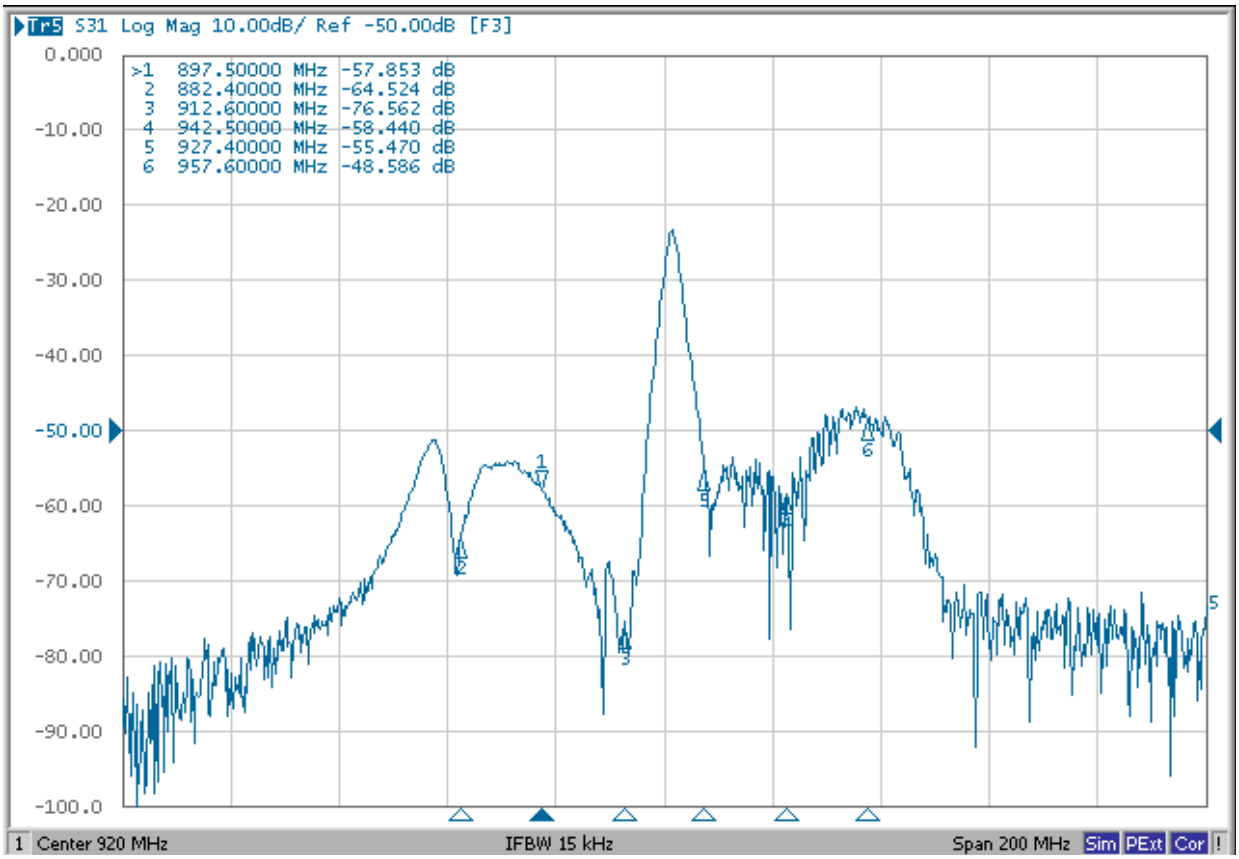
Ant to Rx



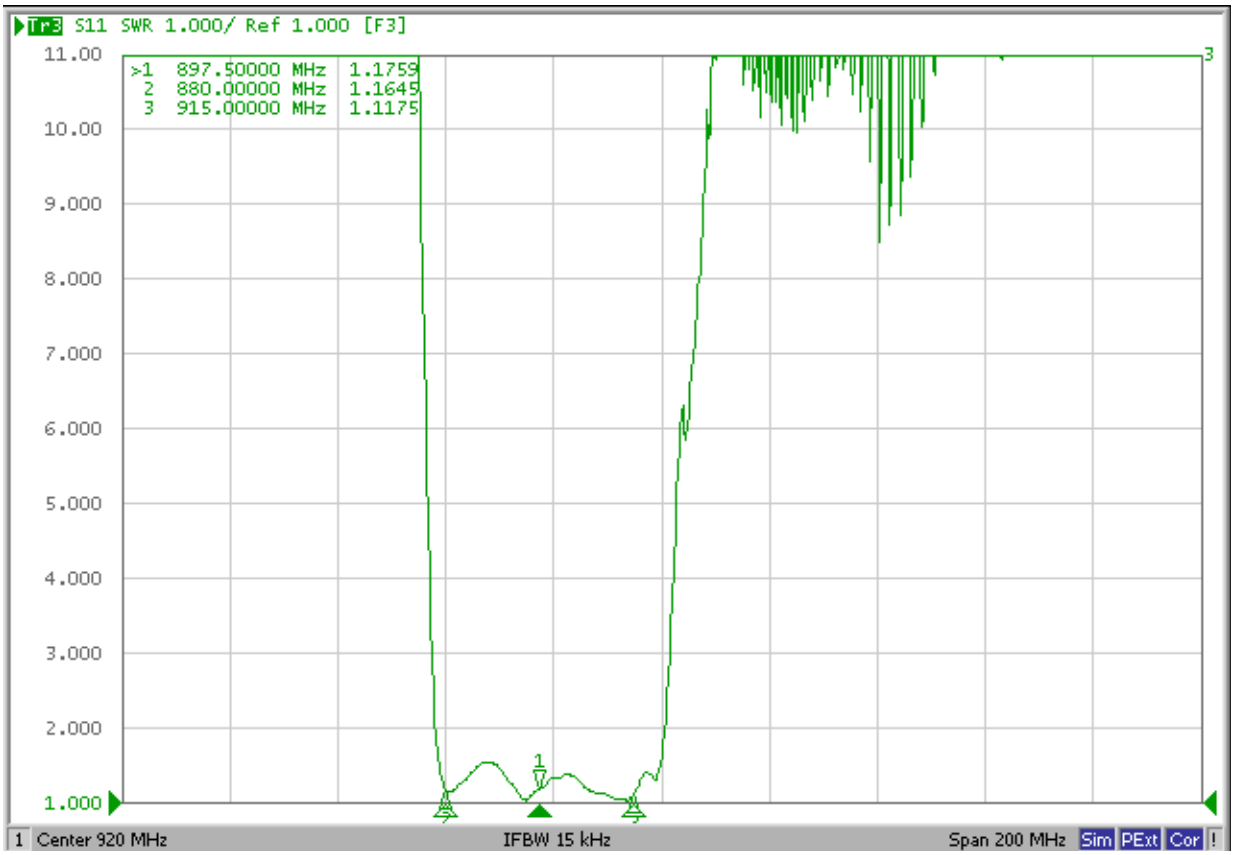
Ripple Deviation



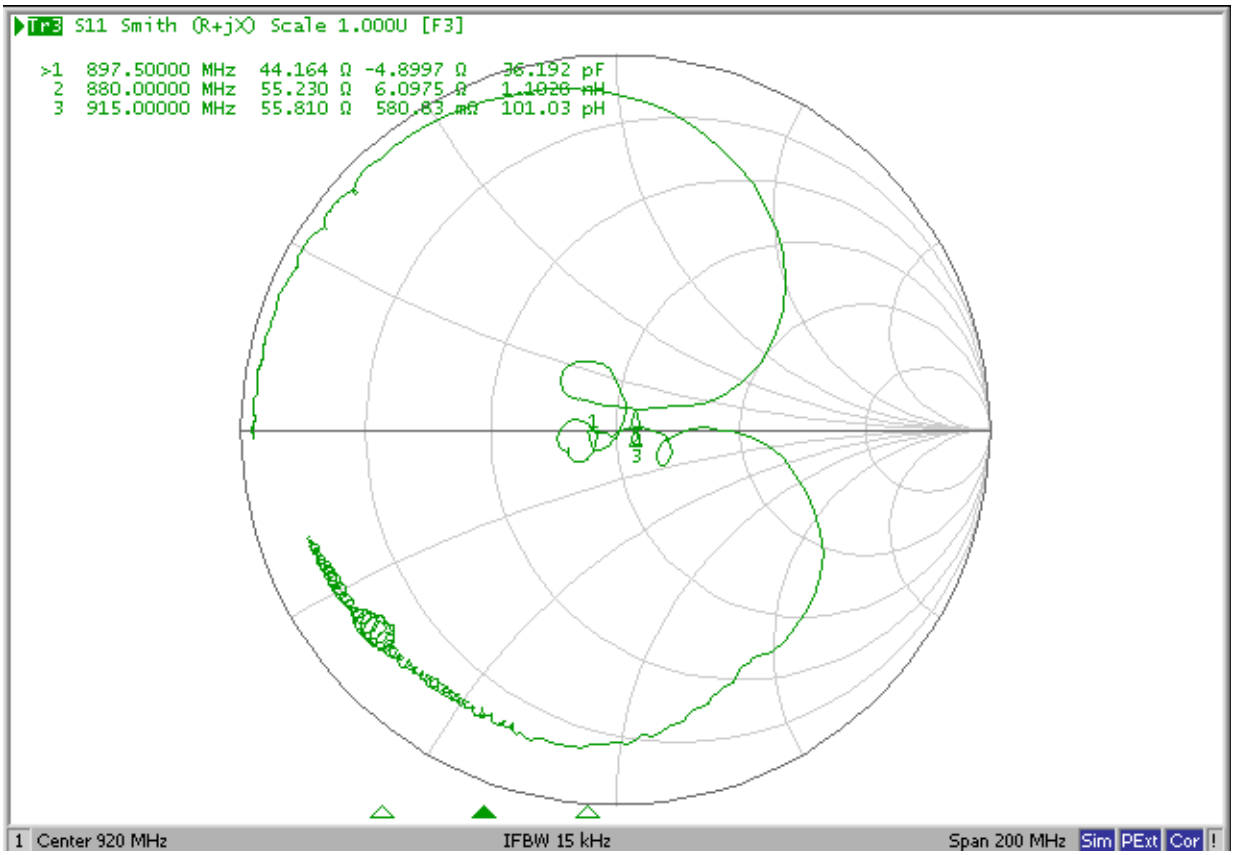
Isolation



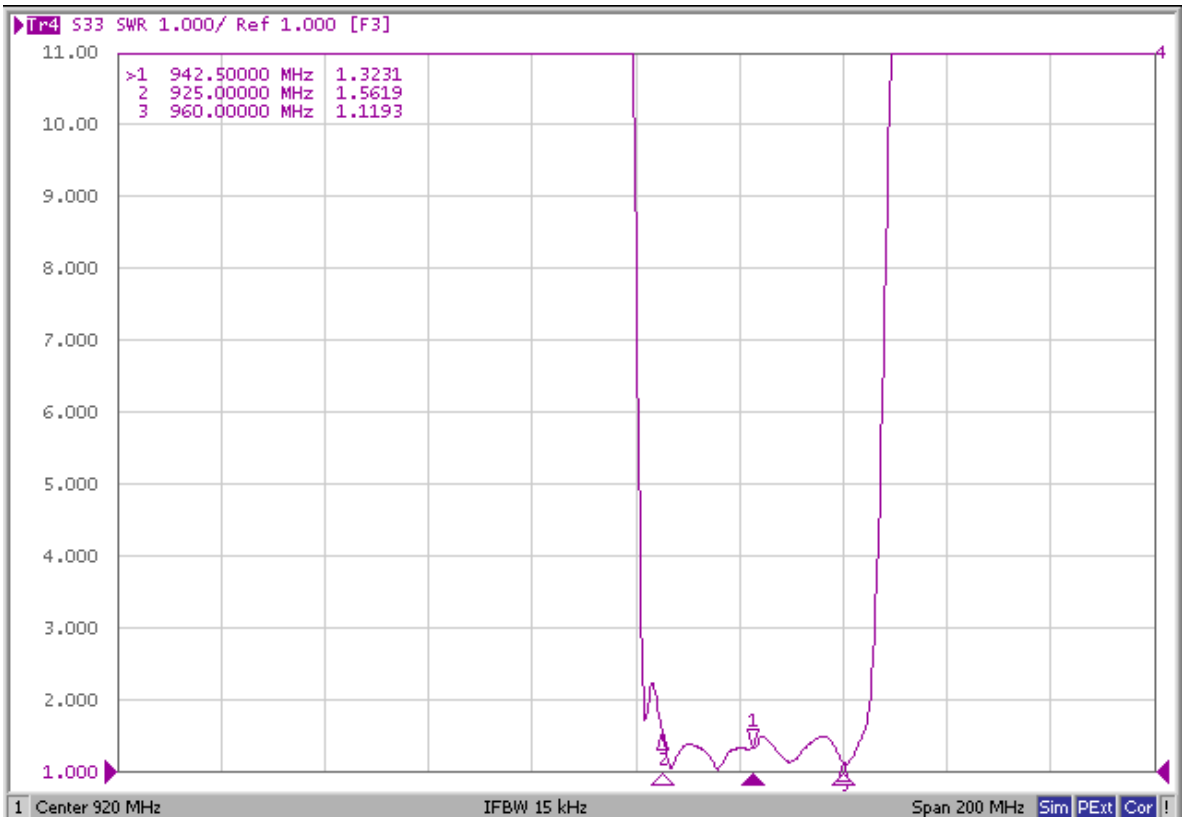
VSWR (Tx Port)



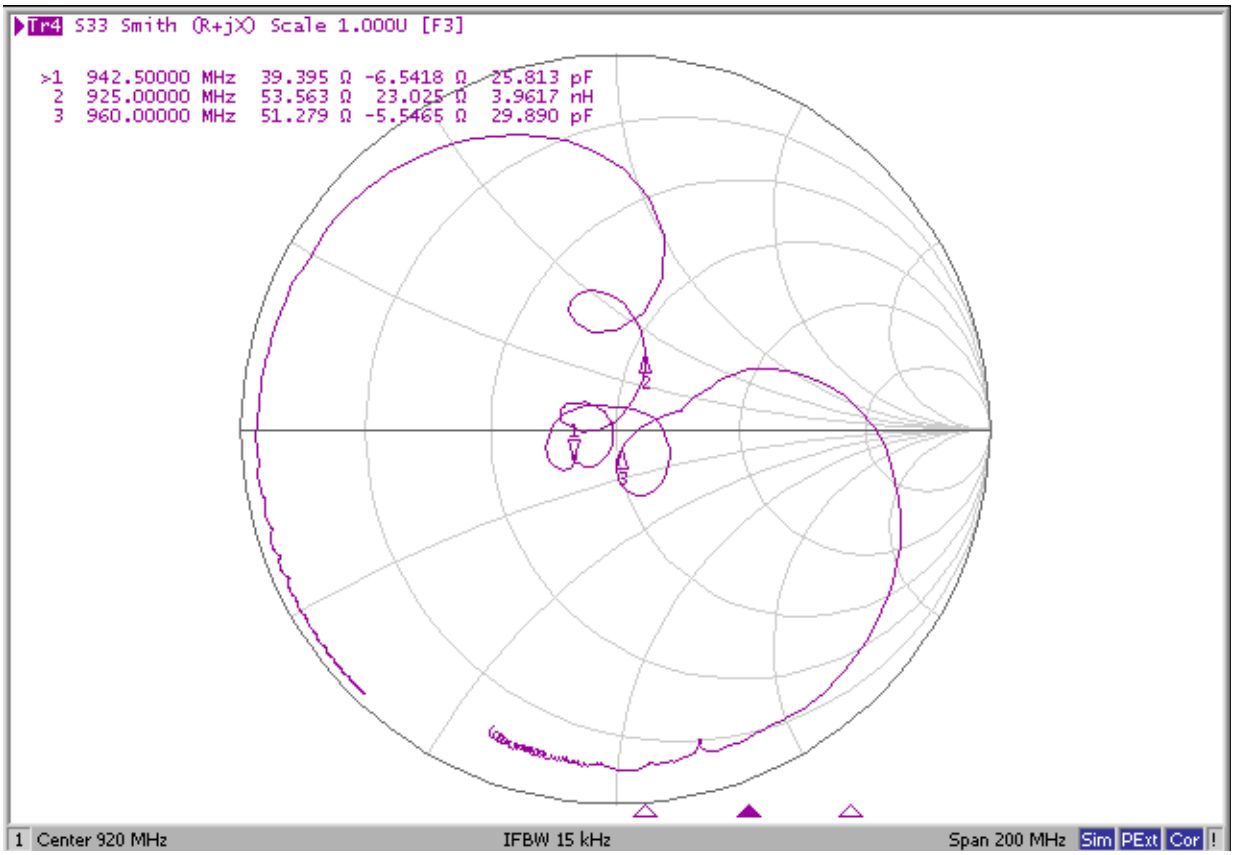
Smith Chart (Tx Port)



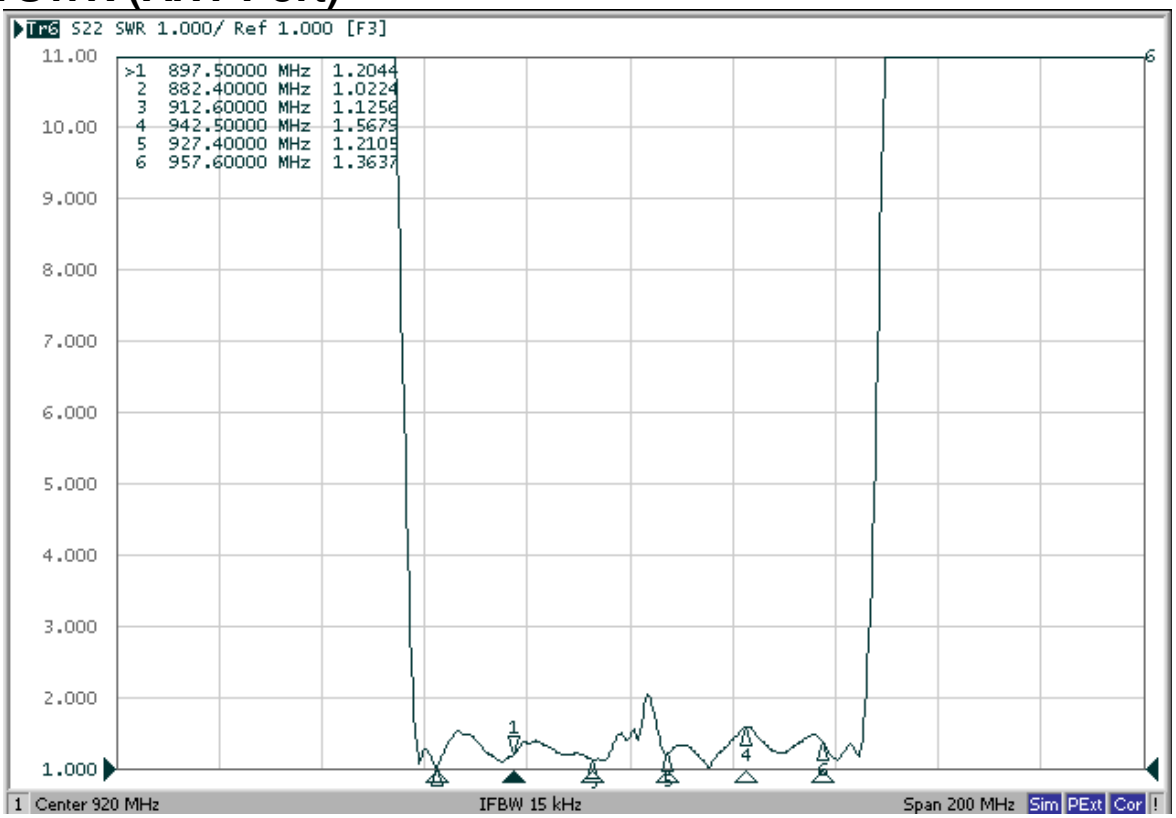
VSWR (Rx Port)



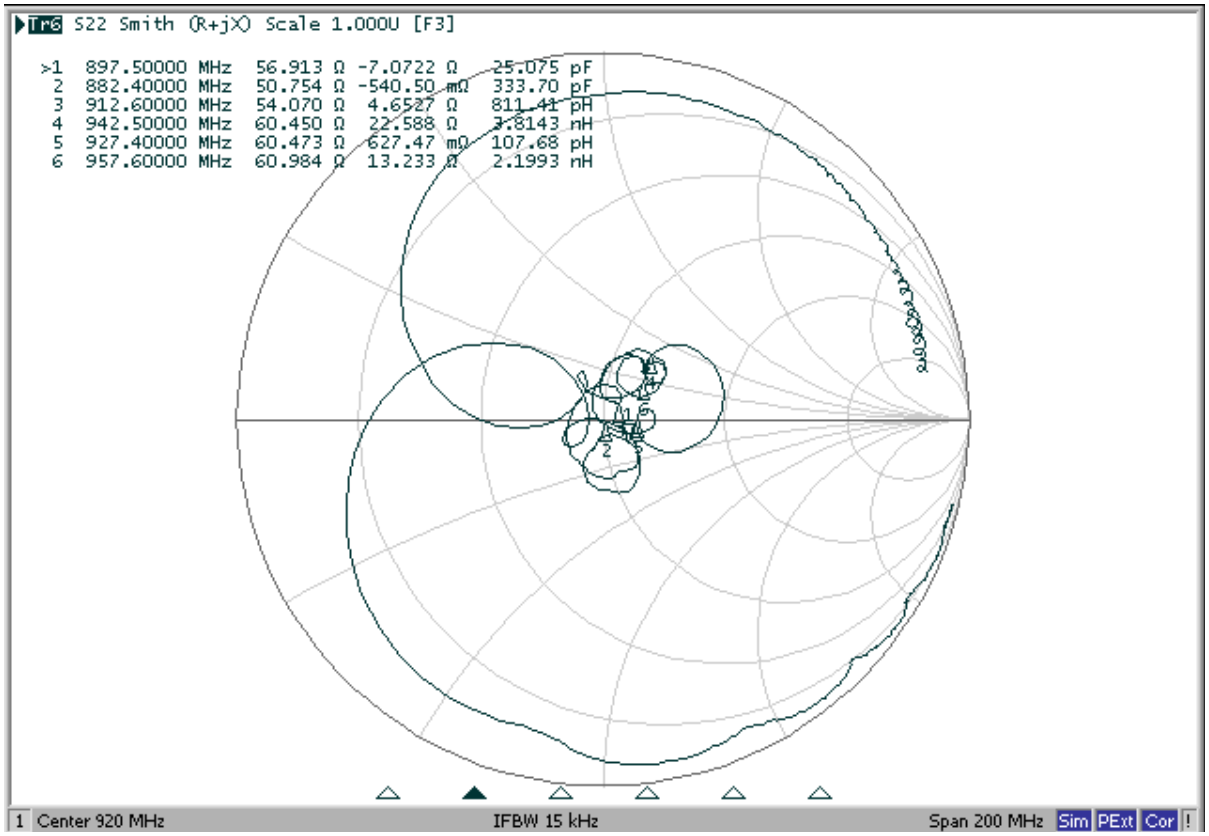
Smith Chart (Rx Port)



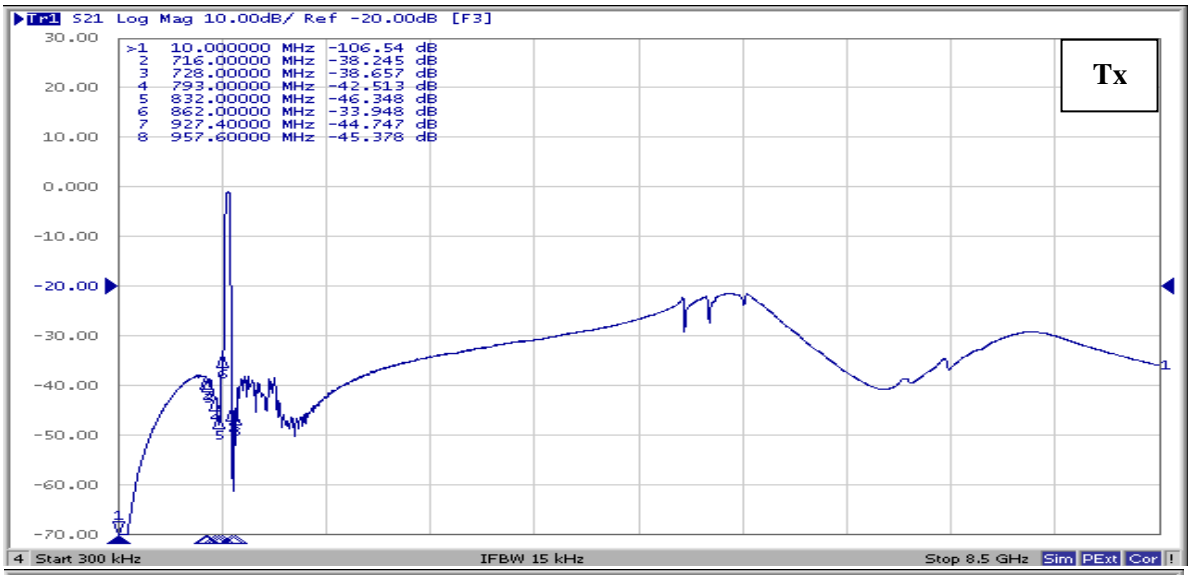
VSWR (ANT Port)

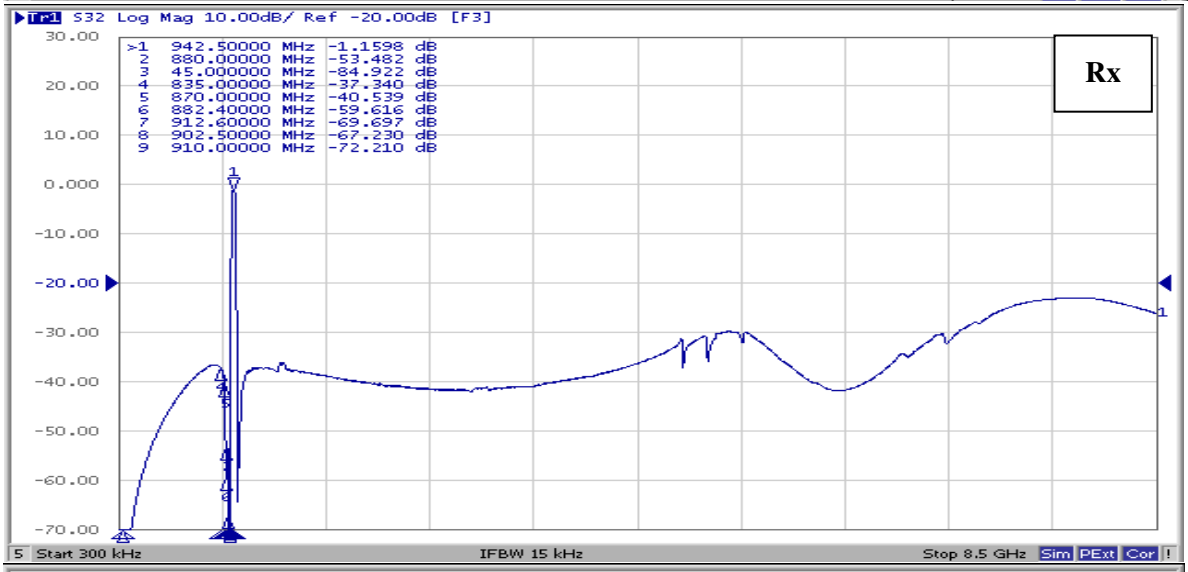


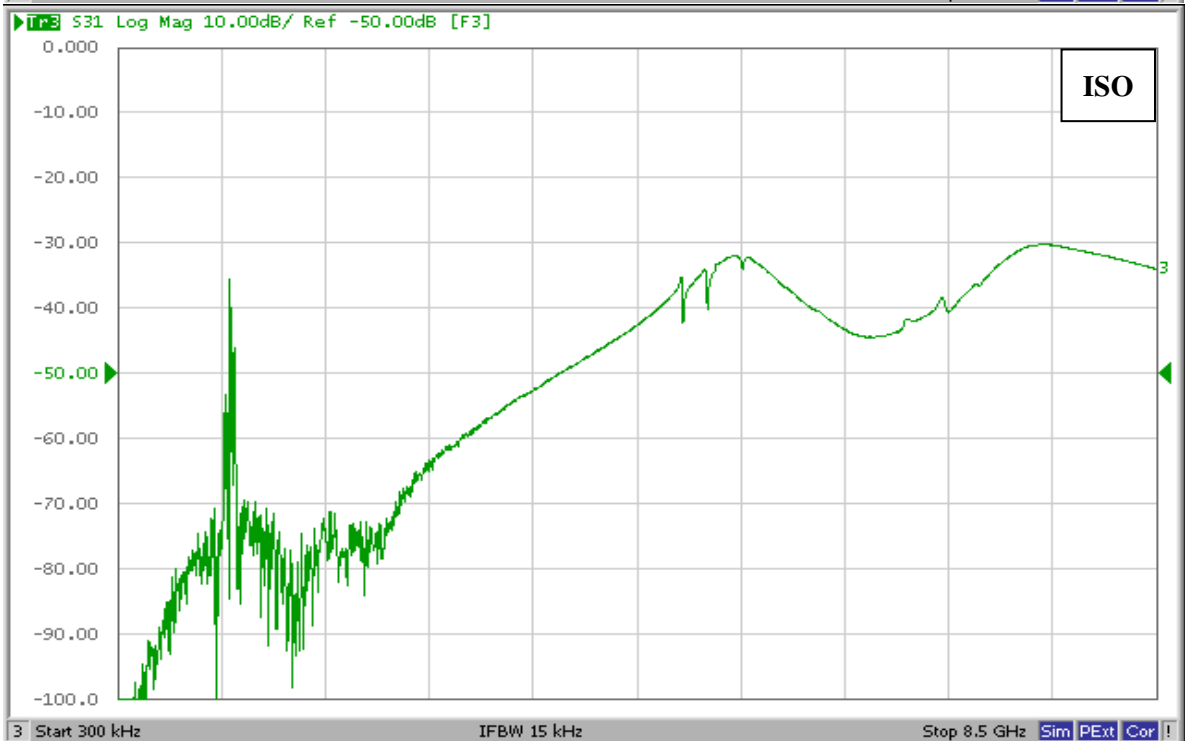
Smith Chart (ANT Port)



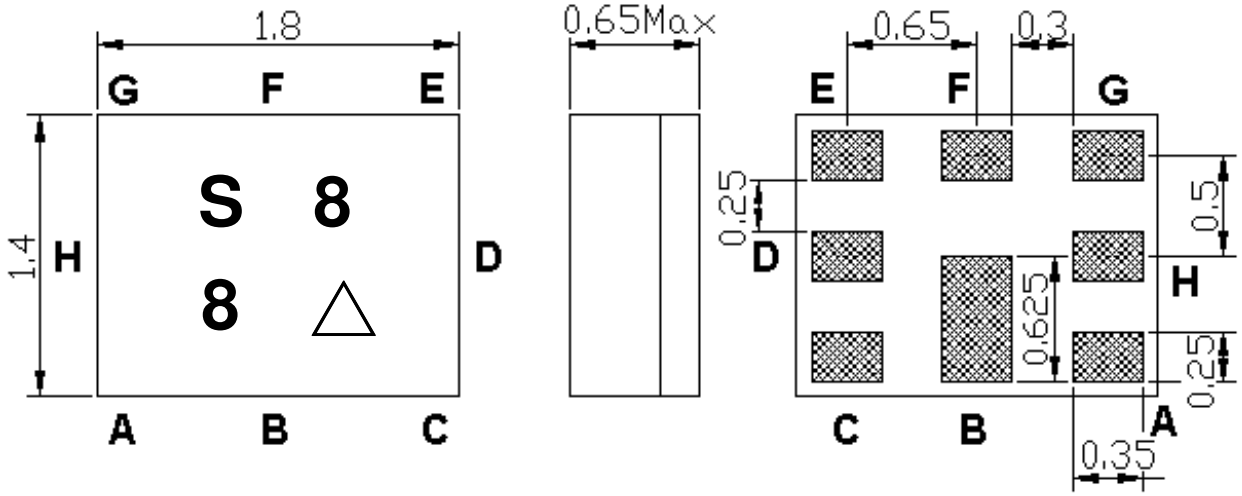
Wide Span


Tr1 S21 Log Mag 10.00dB/ Ref -20.00dB [F3]
>1 10.000000 MHz -106.54 dB
2 716.00000 MHz -38.245 dB
3 728.00000 MHz -38.657 dB
4 793.00000 MHz -42.513 dB
5 832.00000 MHz -46.348 dB
6 862.00000 MHz -33.948 dB
7 927.40000 MHz -44.747 dB
8 957.60000 MHz -45.378 dB
Tx
4 Start 300 kHz
IFBW 15 kHz
Stop 8.5 GHz


Tr1 S32 Log Mag 10.00dB/ Ref -20.00dB [F3]
>1 942.50000 MHz -1.1598 dB
2 880.00000 MHz -53.482 dB
3 45.000000 MHz -84.922 dB
4 835.00000 MHz -37.340 dB
5 870.00000 MHz -40.539 dB
6 882.40000 MHz -59.616 dB
7 912.60000 MHz -69.697 dB
8 902.50000 MHz -67.230 dB
9 910.00000 MHz -72.210 dB
Rx
5 Start 300 kHz
IFBW 15 kHz
Stop 8.5 GHz


Tr3 S31 Log Mag 10.00dB/ Ref -50.00dB [F3]
ISO
3 Start 300 kHz
IFBW 15 kHz
Stop 8.5 GHz

D.OUTLINE DRAWIN:



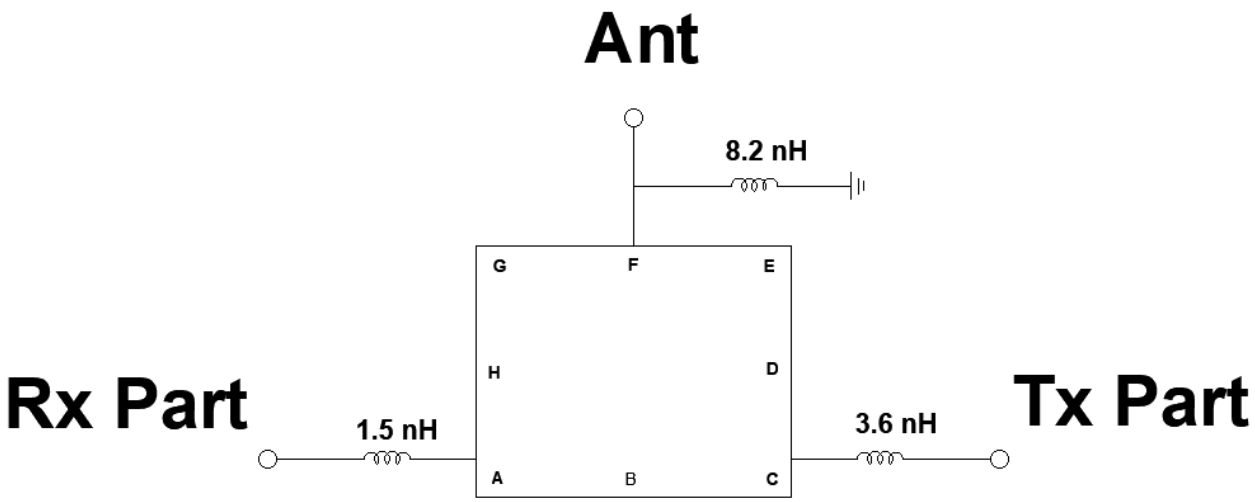
Marking Descriptions	
S	Marking name
8	Band Class
8	Series Number
△	Date Code(Year+Month)

Pin Description	
B,D,E,G,H	Ground
F	Ant
C	Tx (897.5MHz)
A	Rx (942.5MHz)

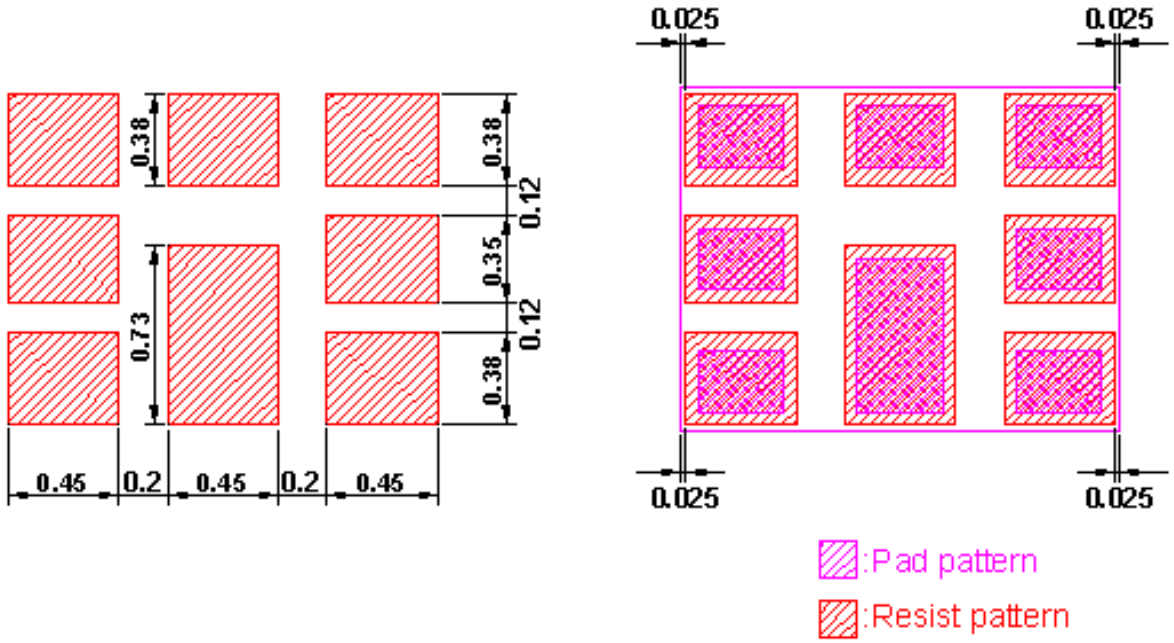
△ **:** Date Code(Year+Month) **.Follow the table. (8-year cycle)**

YEAR/Month	1	2	3	4	5	6	7	8	9	10	11	*12*
2013 / 2021	A	B	C	D	E	F	G	H	J	K	L	M
2014 / 2022	N	P	Q	R	S	T	U	V	W	X	Y	Z
2015 / 2023	a	b	c	d	e	f	g	h	j	k	l	m
2016 / 2024	n	p	q	r	s	t	u	v	w	x	y	z
2017 / 2025	A	B	C	D	E	F	G	H	J	K	L	M
2018 / 2026	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019 / 2027	a	b	c	d	e	f	g	h	j	k	l	m
2020 / 2028	n	p	q	r	s	t	u	v	w	x	y	z

E.Evaluation Circuit



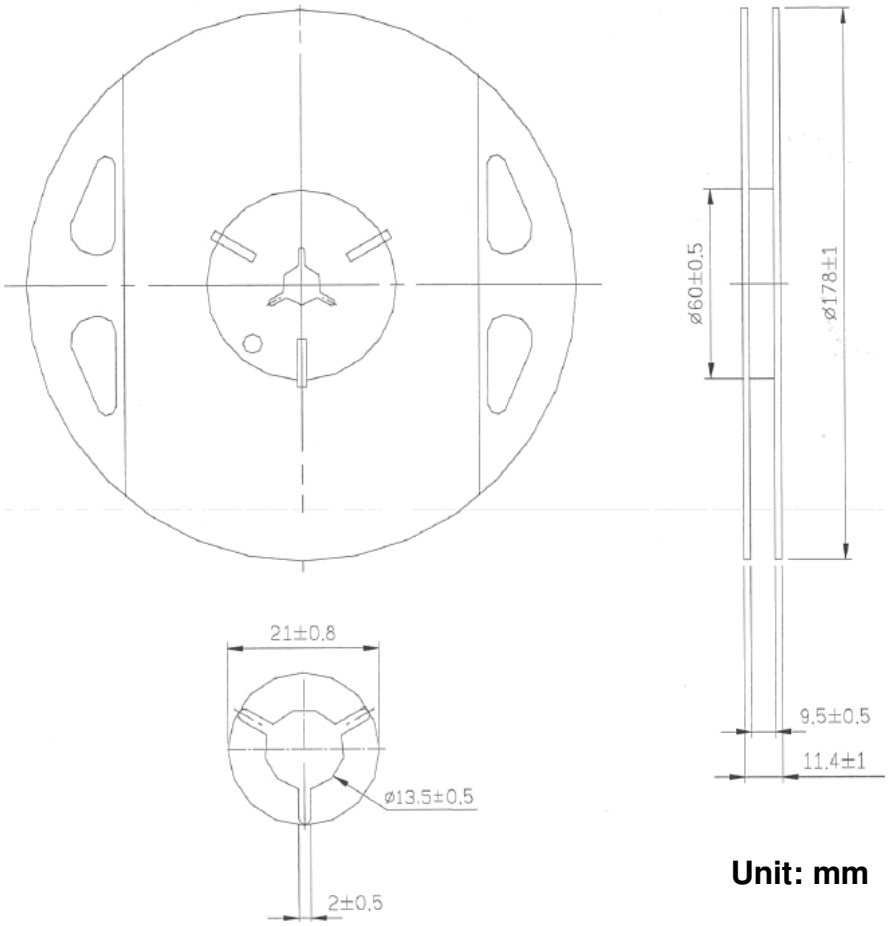
F. FOOTPRINT:



G. PACKING:

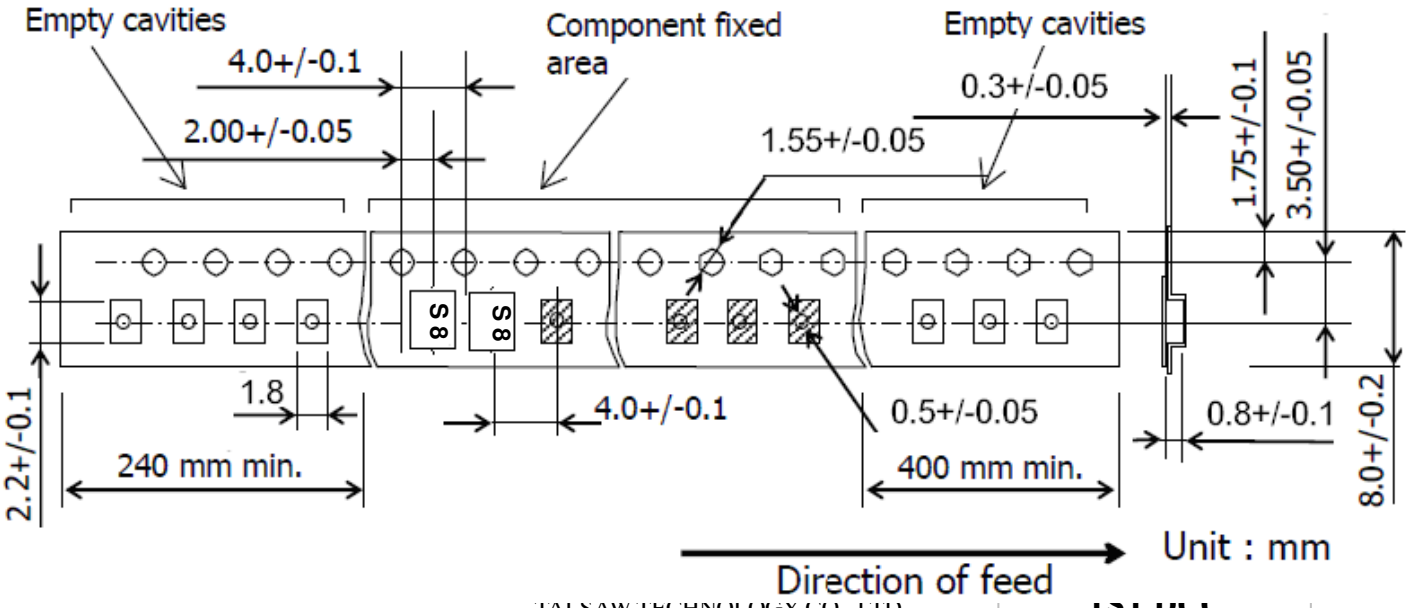
1. REEL DIMENSION

(Please refer to FR-75D10 for packing quantity)



Unit: mm

2. TAPE DIMENSION



H. 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 245~260℃ peak (min. 10sec).
4. Time : 2 times.