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, Rx Balanced SMD 1.8X1.4 mm

(BW=35 MHz)

TST Part No.: TF0130D

Customer Part No.:_____

Customer signature required

Company:_____

Division:_____

Approved by :_____

Date:_____

Checked by:_____ Anne Chen _____

Approved by:_____ Bob Chau _____

Date:_____ 05, 11, 2017 _____

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.:TF0130D REV.1.0

A. MAXIMUM RATING:

1. Operating temperature range: -20 ℃ to +85 ℃
2. Storage temperature range: -40 ℃ to +85 ℃
3. Tx Input power : 29dBm (Ta=+50℃,10000h,CW)

3.1Rx Input power : 15dBm

4. Maximum DC Voltage: 0 V
5. Moisture Sensitivity Level: Level 3 (MSL 3)
6. ESD 100V(MM) 200V(HBM)

RoHS Compliant
Lead free
Lead-free soldering

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

B. ELECTRICAL CHARACTERISTICS:

Terminating impedance (Tx Port): 50 Ω(unbalanced)
Terminating impedance (Rx Port): 100Ω//56nH (balanced)
Terminating impedance (Ant Port): 50 Ω//8.2nH (unbalanced)

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

Parameters Description			Unit	Min	Typ	Max	Remarks
Insertion Loss		880.0 ~ 915.0 MHz	dB	-	2.2	3.4	
		882.4 ~ 912.5 MHz	dB		1.9	2.6	
Amplitude ripple		880 ~ 915 MHz	dB_{p-p}	-	1.3	2.5	
VSWR	ANT	880 ~ 915 MHz	-		1.7	2.2	
	Tx	880 ~ 915 MHz	-	-	1.7	2.3	
Attenuation:							
927.4 ~ 957.6 MHz			dB	42	46		
1573.3 ~ 1605.89 MHz			dB	40	43		
1710.0 ~ 1785.0 MHz			dB	40	45		
1920.0 ~ 1980.0 MHz			dB	35	41		
2110.0 ~ 2170.0 MHz			dB	30	37		
2400.0 ~ 2500.0 MHz			dB	27	33		
2620.0 ~ 2745.0 MHz			dB	25	31		
4900.0 ~ 5950.0 MHz			dB	15	27		

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

Parameters Description			Unit	Min	Typ	Max	Remarks
Insertion Loss		925.0 ~ 960.0	dB	-	2.2	3.1	
		927.4 ~ 957.6	dB	-	1.9	2.4	
Amplitude ripple		925 ~ 960 MHz	dB_{p-p}		0.9	2.2	
Phase Balance		925 ~ 960 MHz	deg	-10	+0.3/+3.0	+10	
Amplitude Balance		925 ~ 960 MHz	dB	-1.5	-0.2/+0.2	+1.5	
VSWR	ANT	925 ~ 960 MHz			1.6	2.3	
	Rx		-		1.7	2.4	
Attenuation:							
882.4 ~ 912.6 MHz			dB	45	53		
1710.0 ~ 1785.0 MHz			dB	40	51		
1805.0 ~ 1920.0 MHz			dB	40	50		
1920.0 ~ 1980.0 MHz			dB	40	50		
2400.0 ~ 2500.0 MHz			dB	40	48		
2500.0 ~ 2570.0 MHz			dB	40	48		
4900.0 ~ 5950.0 MHz			dB	35	42		

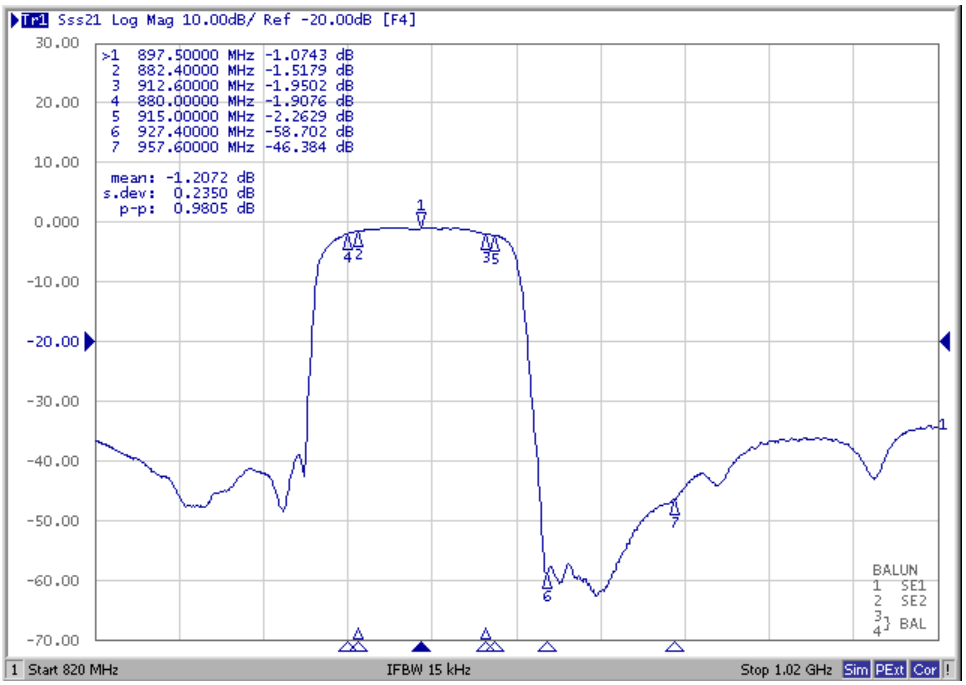
Tx to Rx

Isolation	882.4 ~ 912.6 MHz	dB	52	56	-	
	927.4 ~ 957.6 MHz	dB	46	49	-	

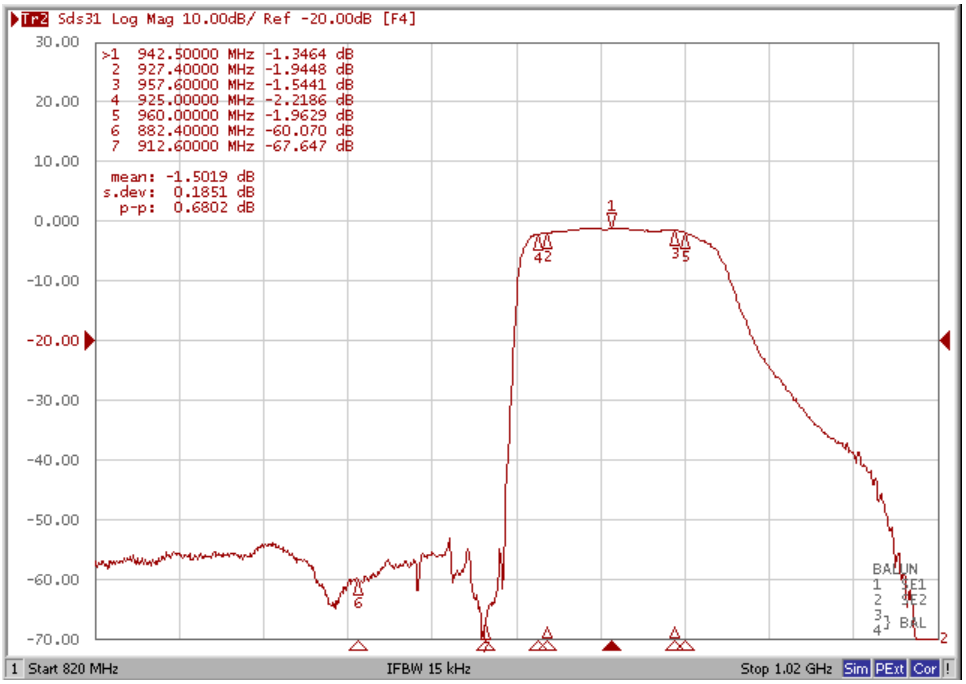
Notes : (1) With Matching Network

C. FREQUENCY CHARACTERISTICS:

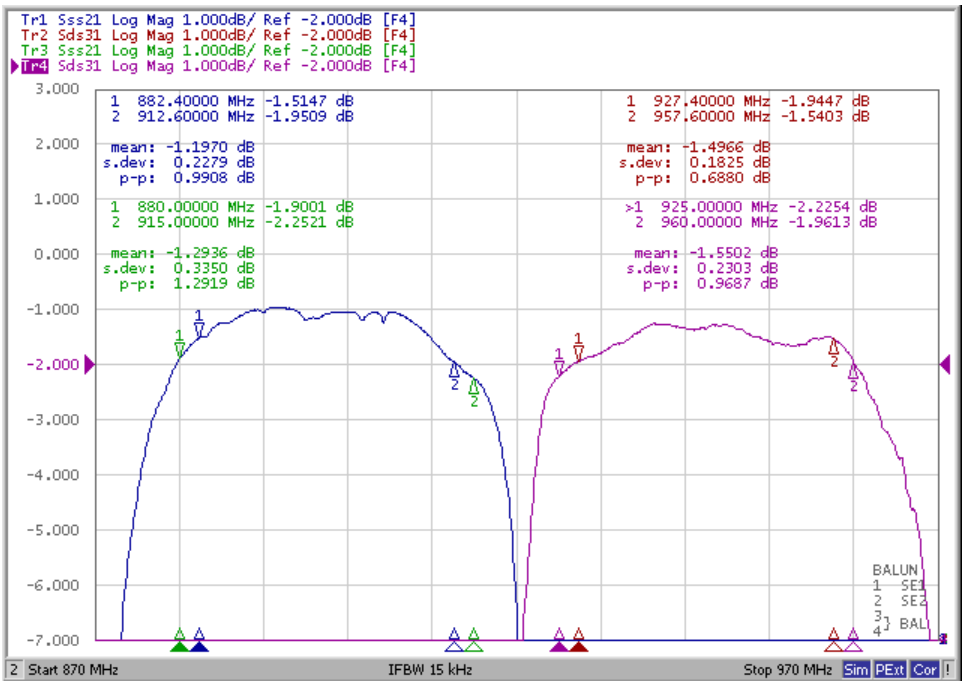
Tx to Ant



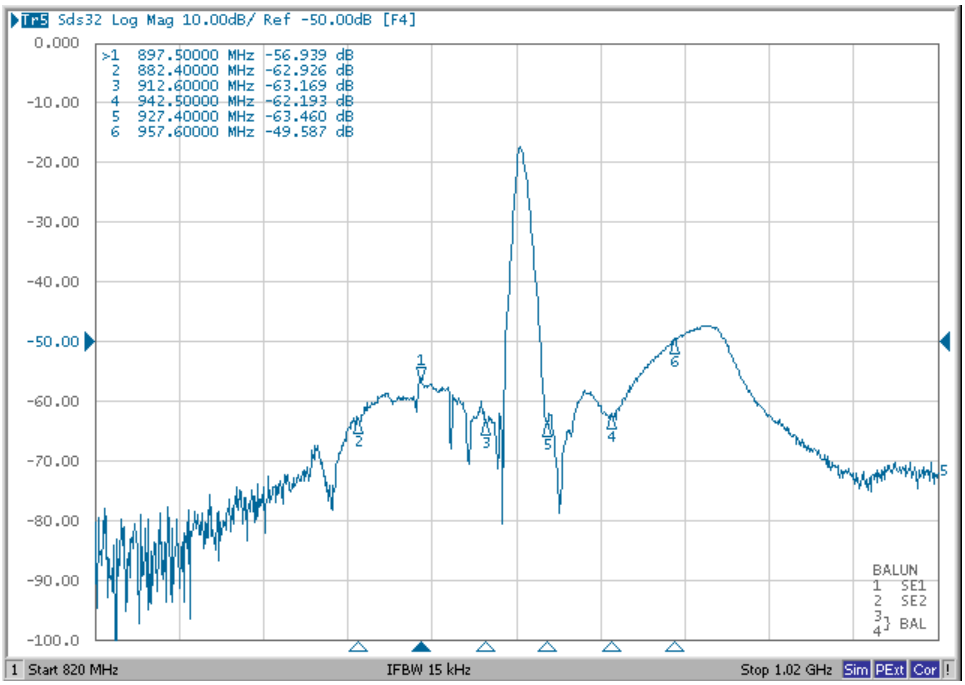
Ant to Rx



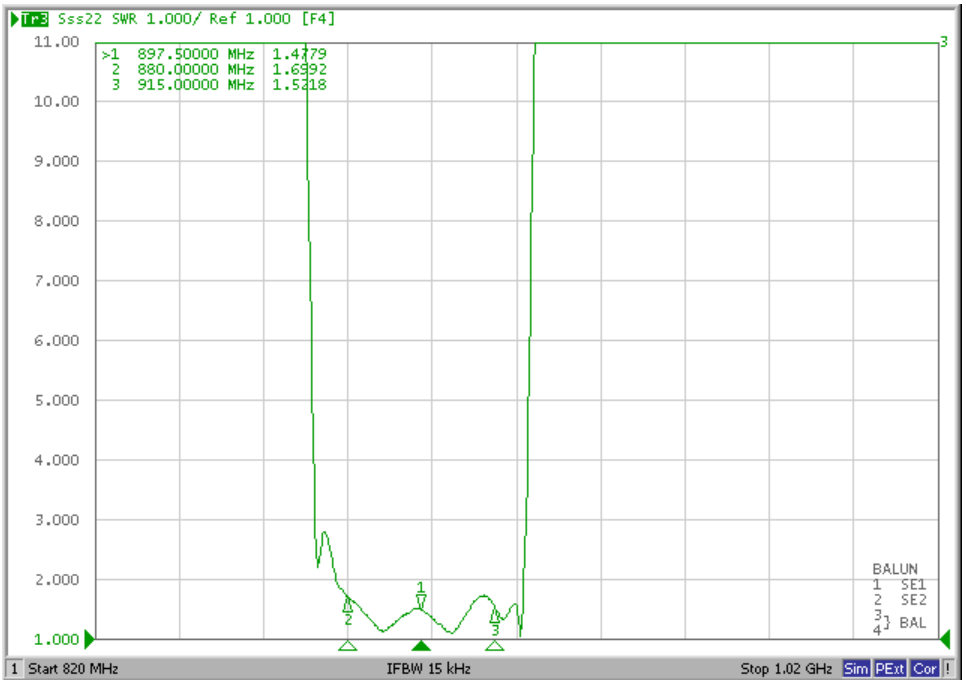
Ripple



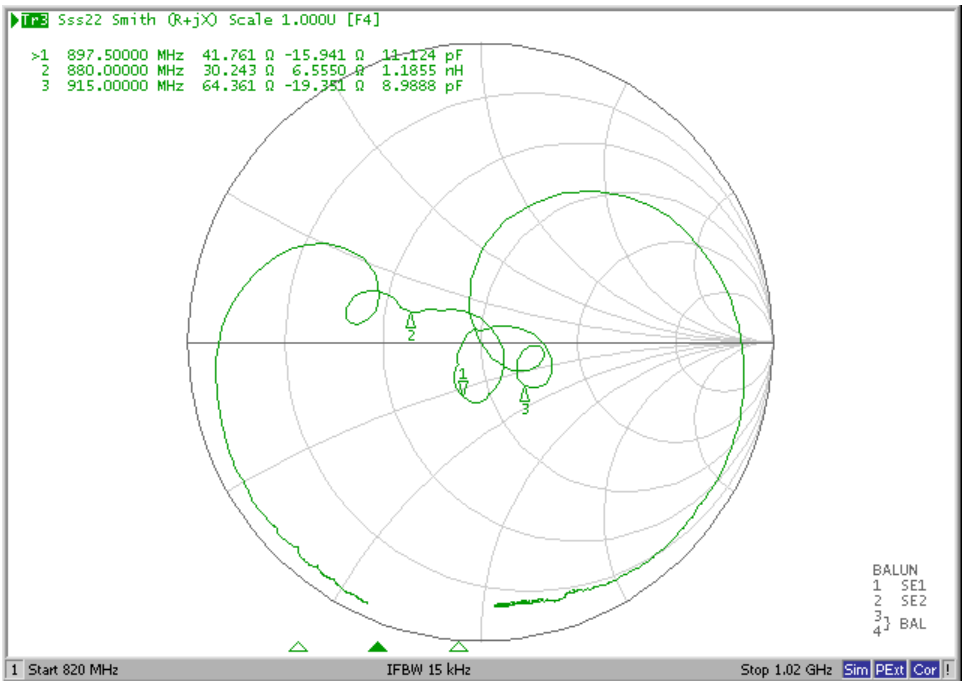
Isolation



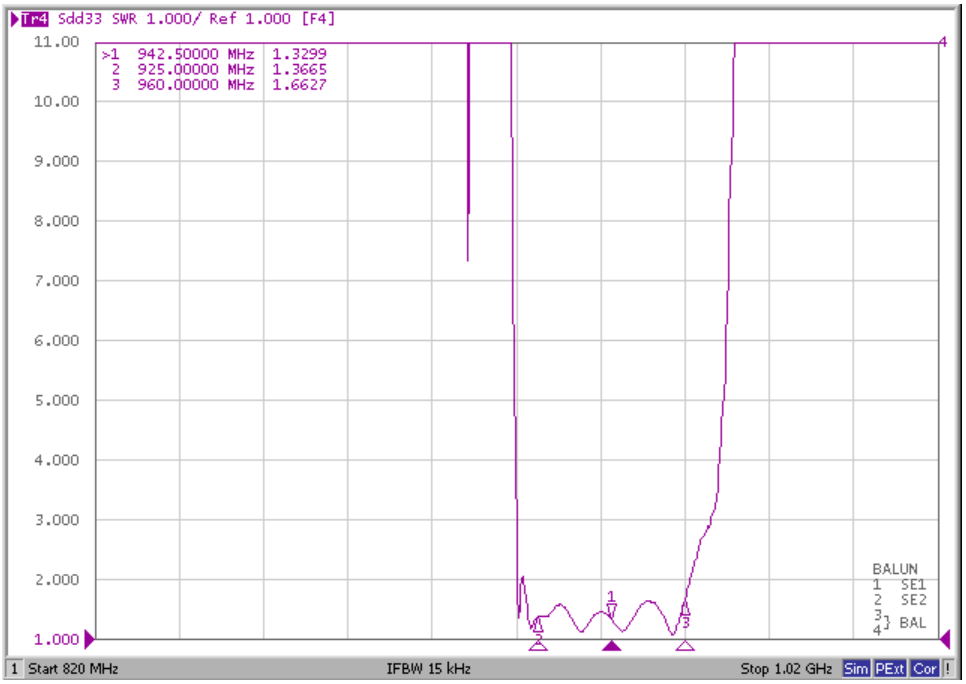
VSWR (Tx Port)



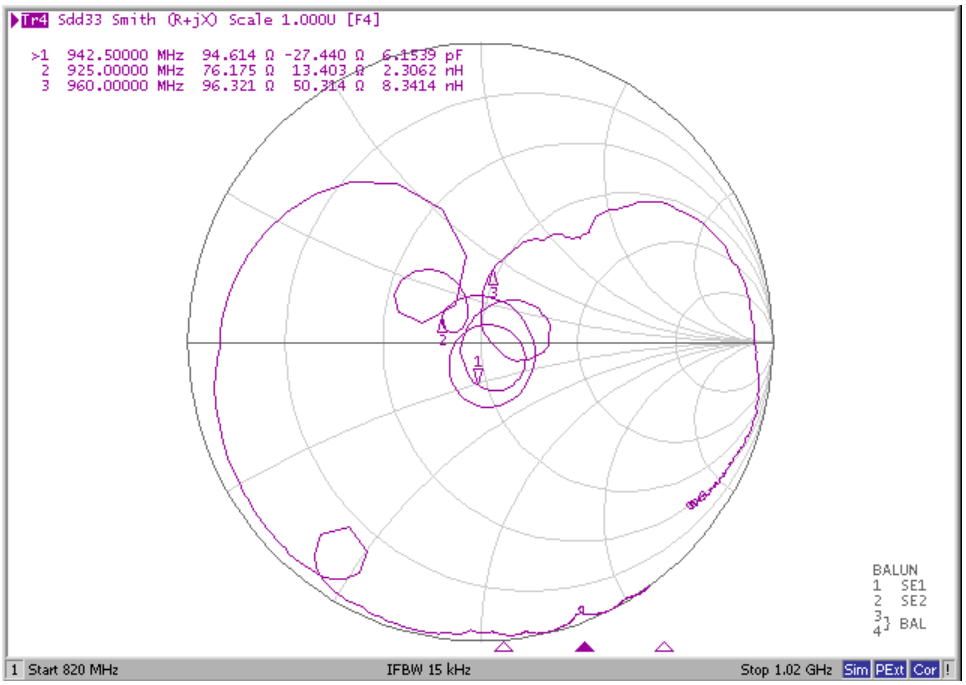
Smith Chart (Tx Port)



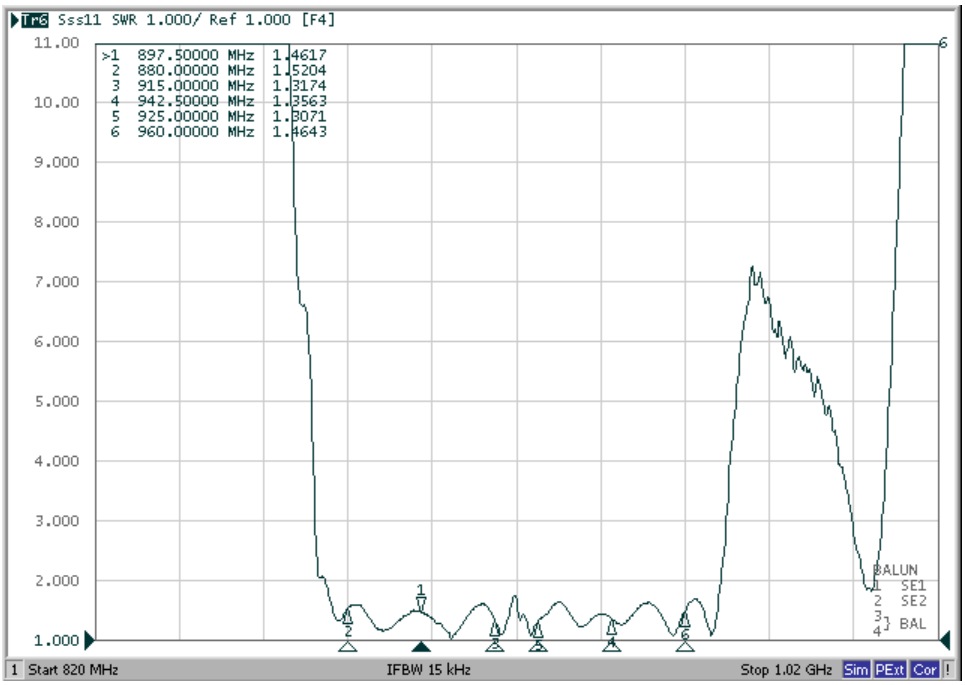
VSWR (Rx Port)



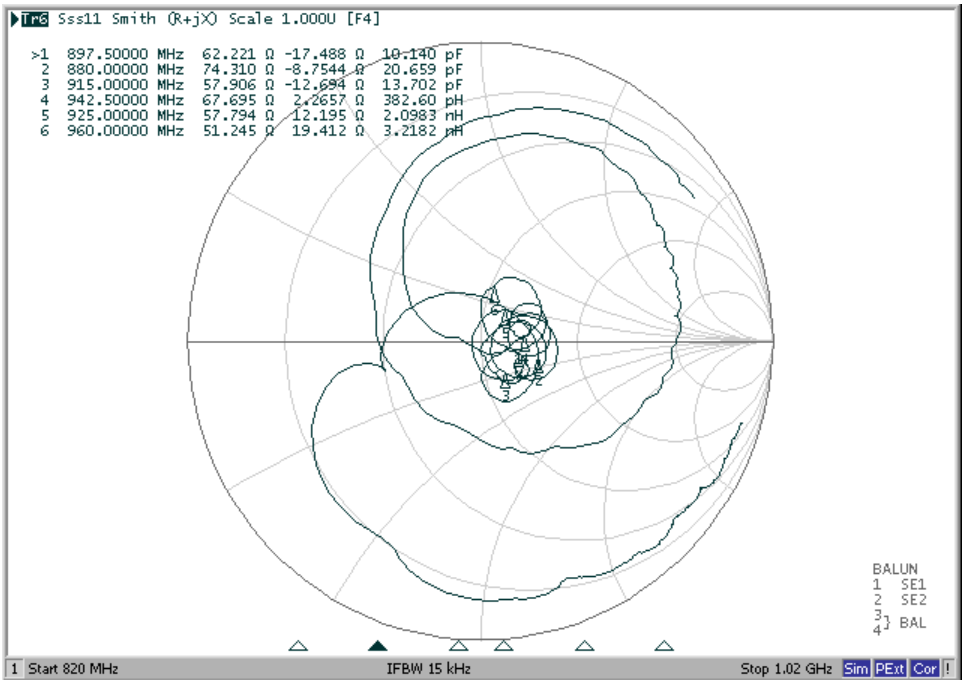
Smith Chart (Rx Port)



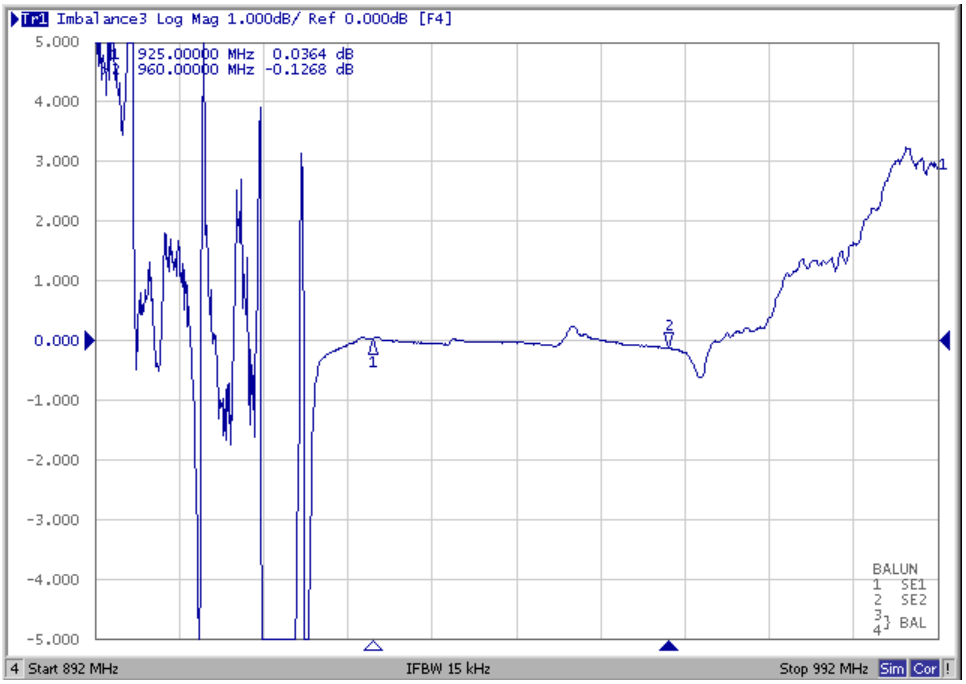
VSWR (ANT Port)



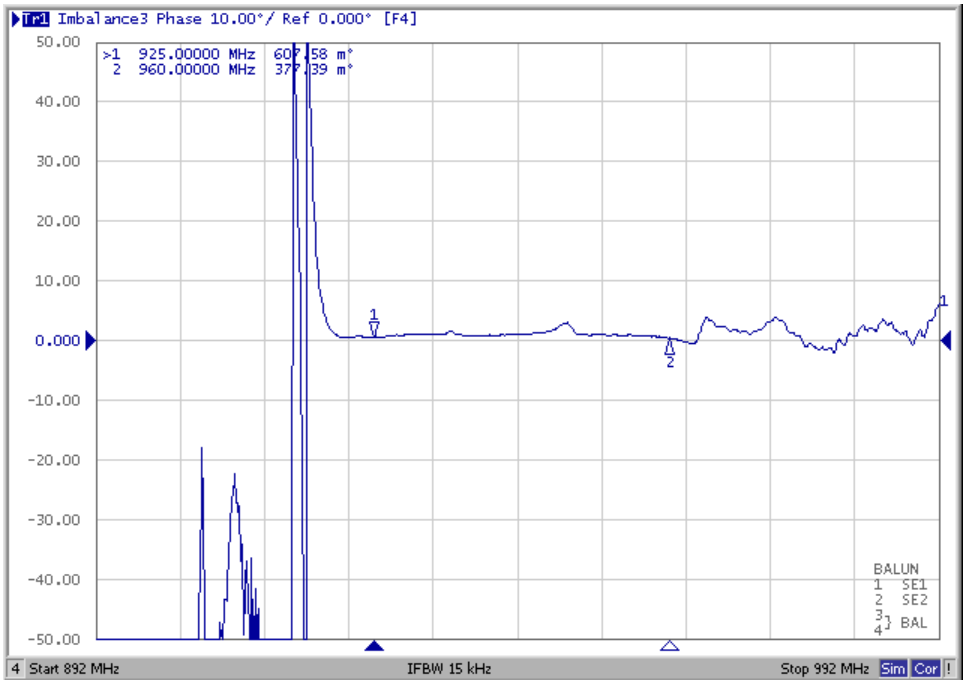
Smith Chart (ANT Port)



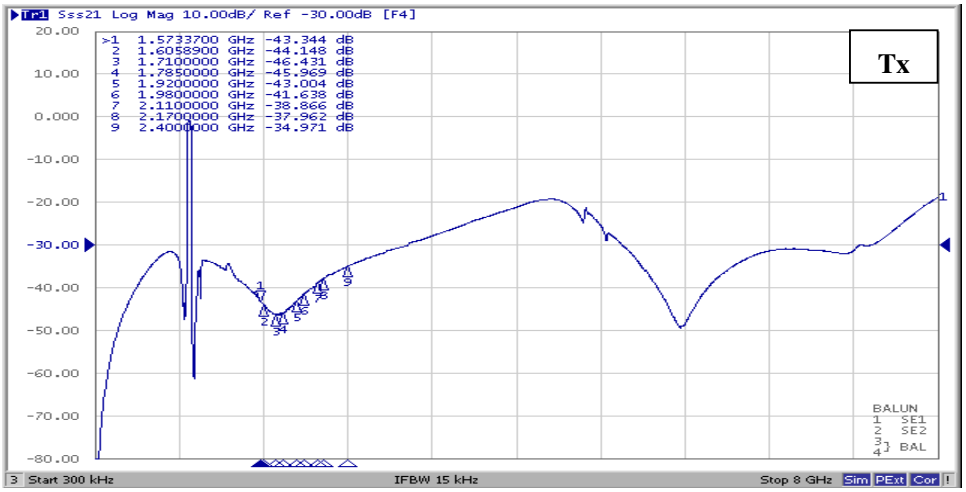
Phase Balance

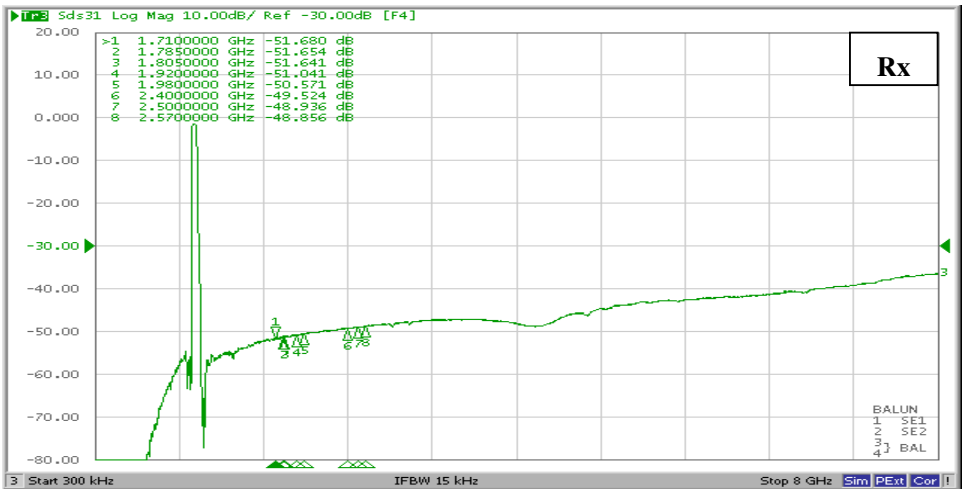


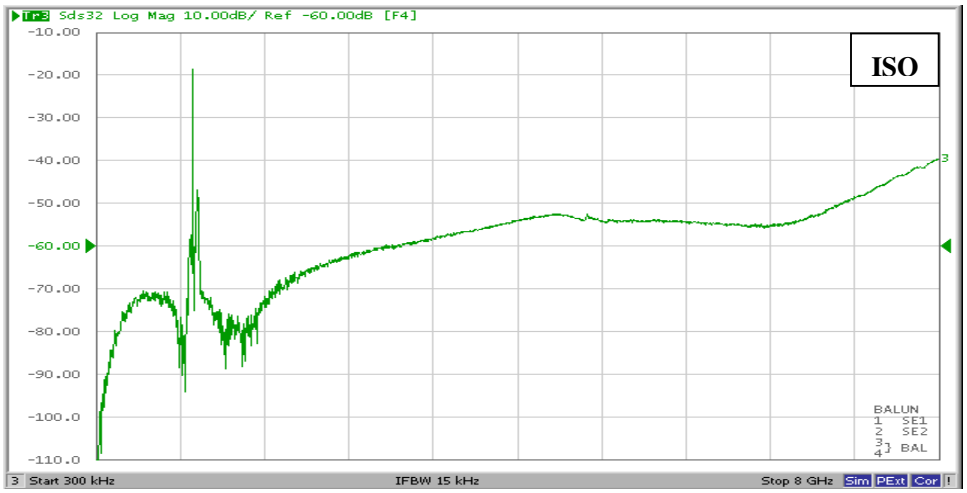
Amplitude Balance



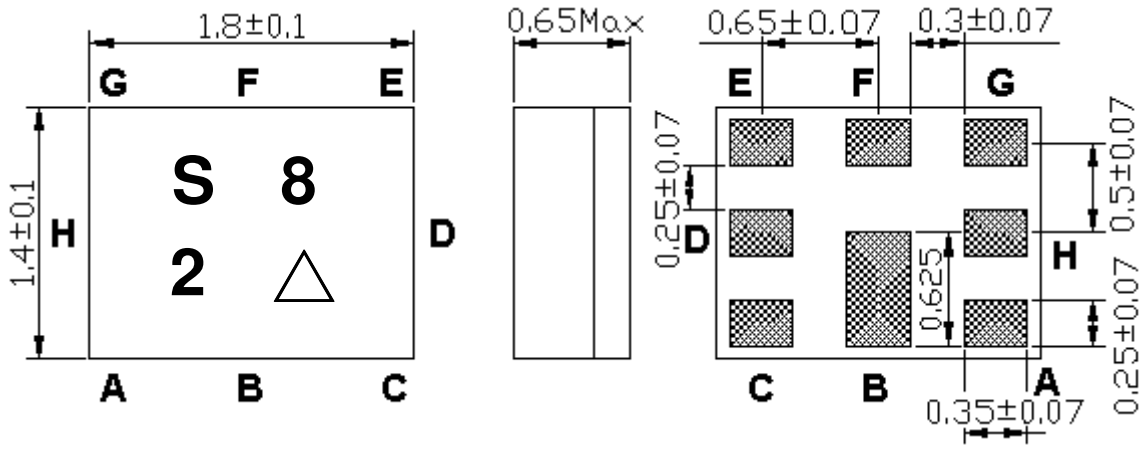
Wide Span


Sss21 Log Mag 10.00dB/ Ref -30.00dB [F4]
>1 1.5733700 GHz -43.344 dB
2 1.6058900 GHz -44.148 dB
3 1.7100000 GHz -46.431 dB
4 1.7850000 GHz -45.969 dB
5 1.9200000 GHz -43.004 dB
6 1.9800000 GHz -41.638 dB
7 2.1100000 GHz -38.866 dB
8 2.1700000 GHz -37.962 dB
9 2.4000000 GHz -34.971 dB
Tx
BALUN
1 SE1
2 SE2
3 BAL
4
Start 300 kHz
IFBW 15 kHz
Stop 8 GHz
Sim PExt Cor


Sds31 Log Mag 10.00dB/ Ref -30.00dB [F4]
>1 1.7100000 GHz -51.680 dB
2 1.7850000 GHz -51.654 dB
3 1.8050000 GHz -51.641 dB
4 1.9200000 GHz -51.041 dB
5 1.9800000 GHz -50.571 dB
6 2.4000000 GHz -49.524 dB
7 2.5000000 GHz -48.936 dB
8 2.5700000 GHz -48.856 dB
Rx
BALUN
1 SE1
2 SE2
3 BAL
4
Start 300 kHz
IFBW 15 kHz
Stop 8 GHz
Sim PExt Cor


Sds32 Log Mag 10.00dB/ Ref -60.00dB [F4]
ISO
BALUN
1 SE1
2 SE2
3 BAL
4
Start 300 kHz
IFBW 15 kHz
Stop 8 GHz
Sim PExt Cor

D.OUTLINE DRAWIN:



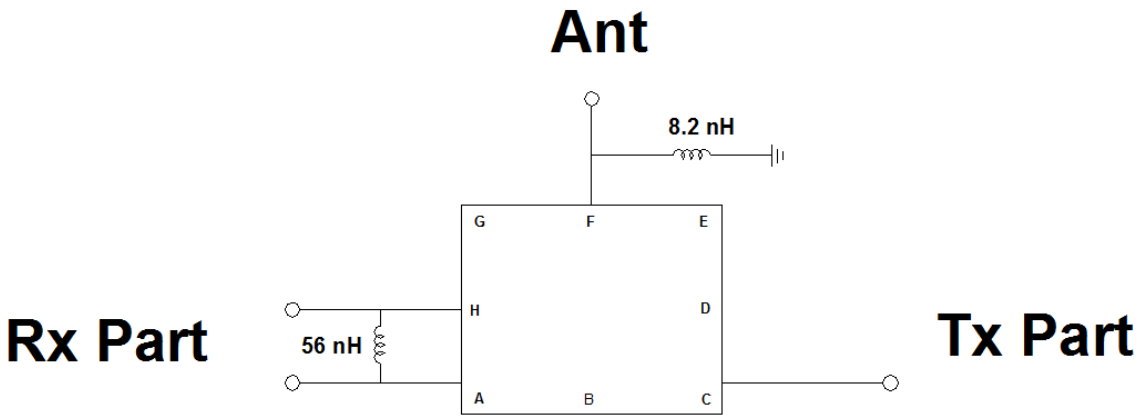
Marking Descriptions	
S	Marking name
8	Band Class
2	Series Number
△	Date Code(Year+Month)

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

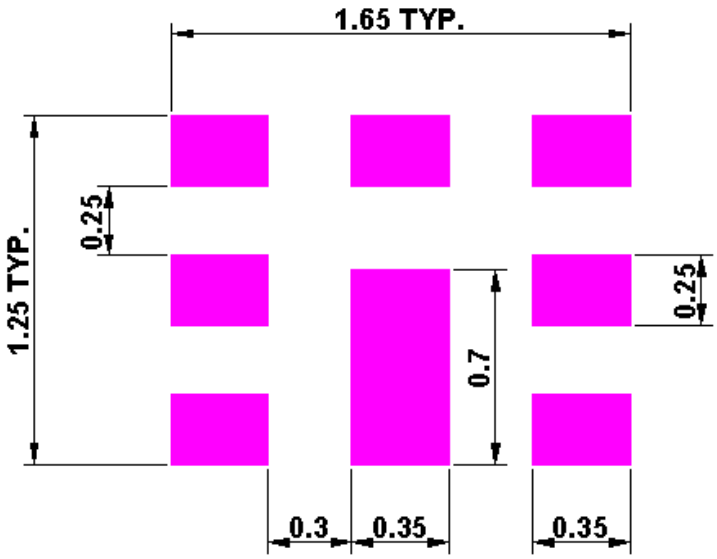
Date Code (year+month)

Year	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2013	A	B	C	D	E	F	G	H	J	K	L	M
2014	N	P	Q	R	S	T	U	V	W	X	Y	Z
2015	a	b	c	d	e	f	g	h	j	k	l	m
2016	n	p	q	r	s	t	u	v	w	x	y	z
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	g	r	s	t	u	v	w	x	y	z

E.Evaluation Circuit



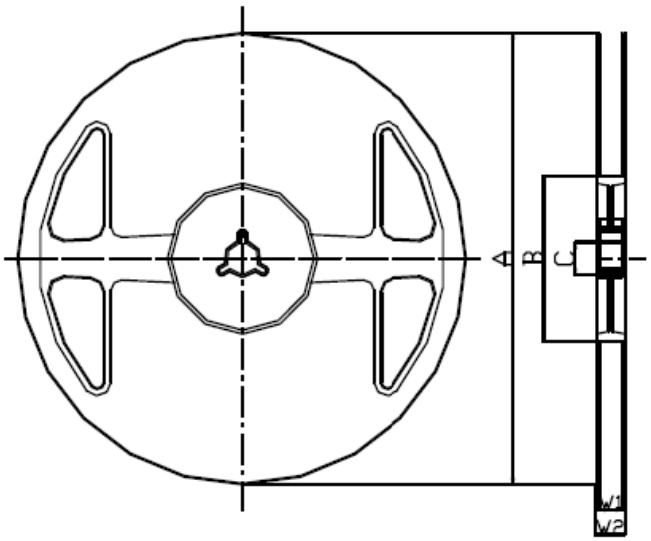
F. FOOTPRINT:



G. PACKING:

1. REEL DIMENSION

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



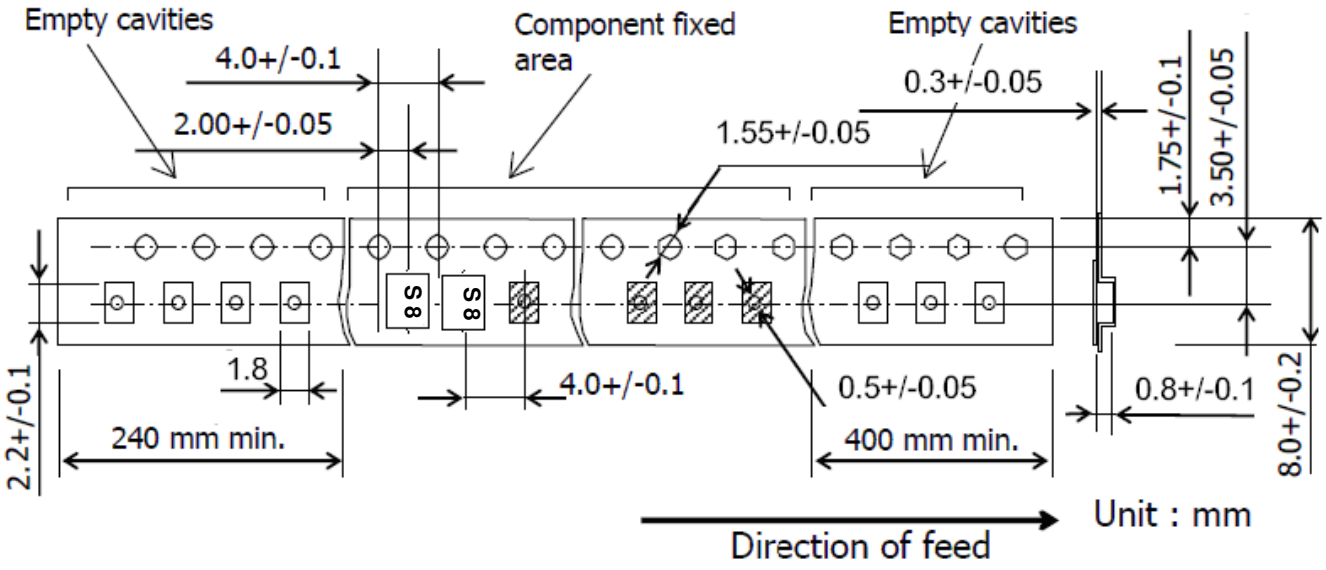
Materials of Reel

Material : Polystyrene + Carbon
Characteristics : Conforms to EIAJ-ET-7200A
Color : Black
Surface resistance (reference value) : $10^9\Omega$/sq Max.

Unit : mm

Code	Quantity	A	B	C	W1	W2
Z	3,000 pcs	ϕ 180.0 +0.0/-1.5	ϕ 66.0 +/-0.5	ϕ 13.0 +/-0.2	9.0 +1.0/-0.0	11.4 +/-1.0

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.