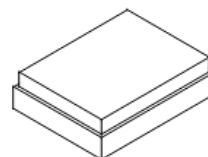


SF2592N

**897.5/942.5 MHz
Filter Duplexer**



SM1814

MAXIMUM RATING:

- Operating temperature range: -20 °C to +85 °C
- Storage temperature range: -40 °C to +85 °C
- Tx Input power : 29dBm (Ta=+50°C,10000h,CW)
- 3.1Rx Input power : 15dBm
- Maximum DC Voltage: 0 V
- Moisture Sensitivity Level: Level 3 (MSL 3)
- ESD 100V(MM) 200V(HBM)

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	dBp-p	-	1.3	2.5	
VSWR	ANT			1.7	2.2	
	Tx		-	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		



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.

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	dBp-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		

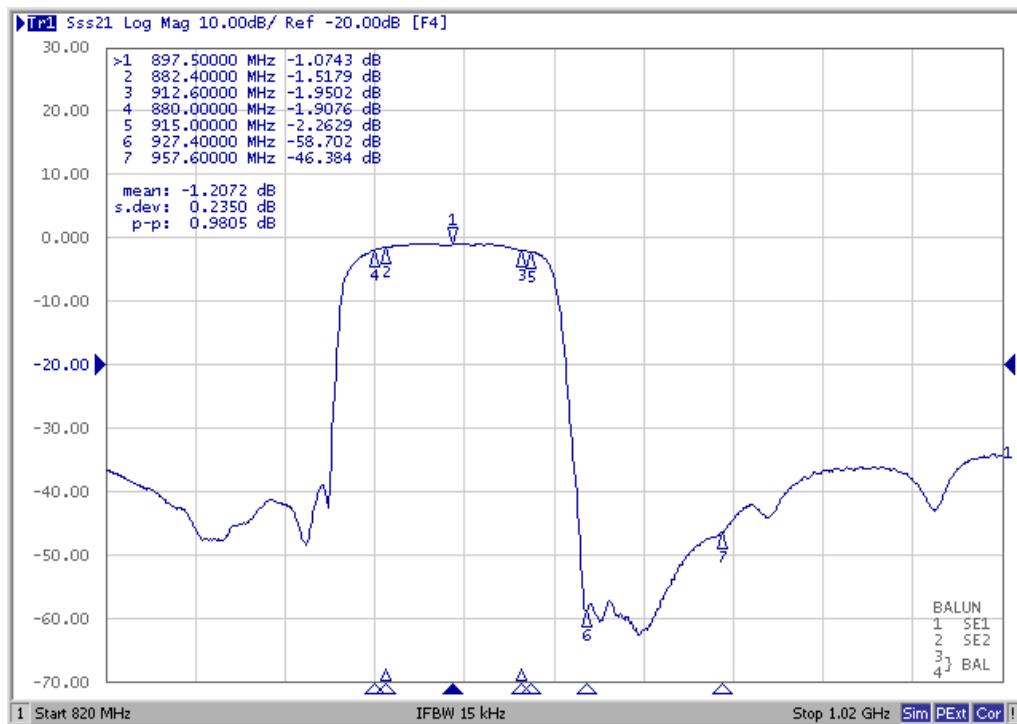
Tx to Rx

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

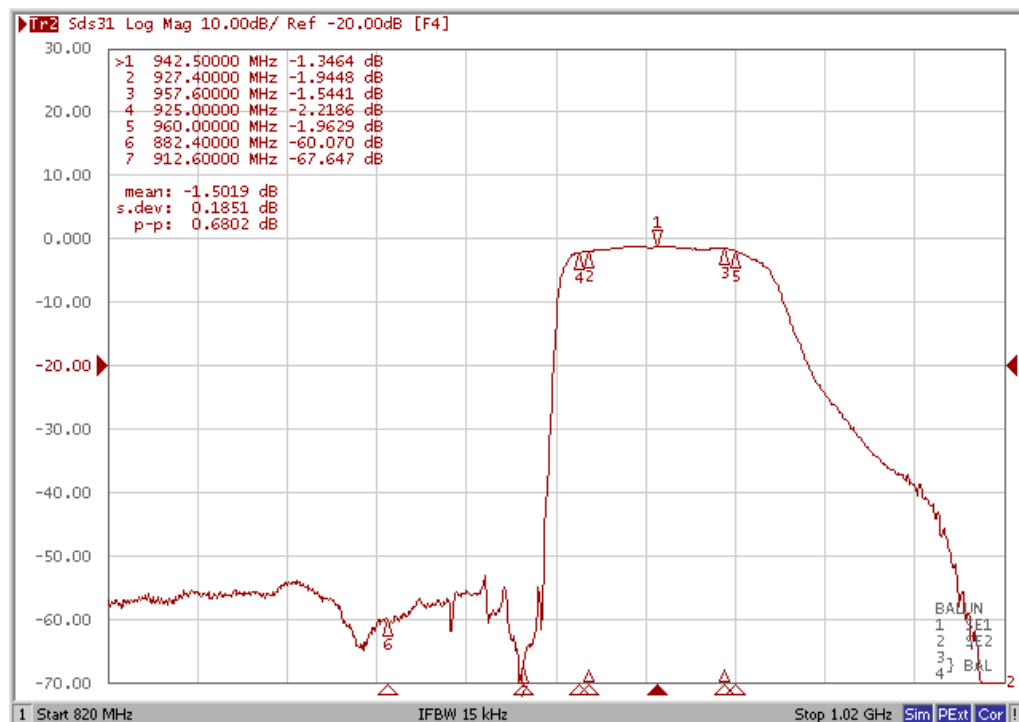
Notes : (1) With Matching Network

FREQUENCY CHARACTERISTICS:

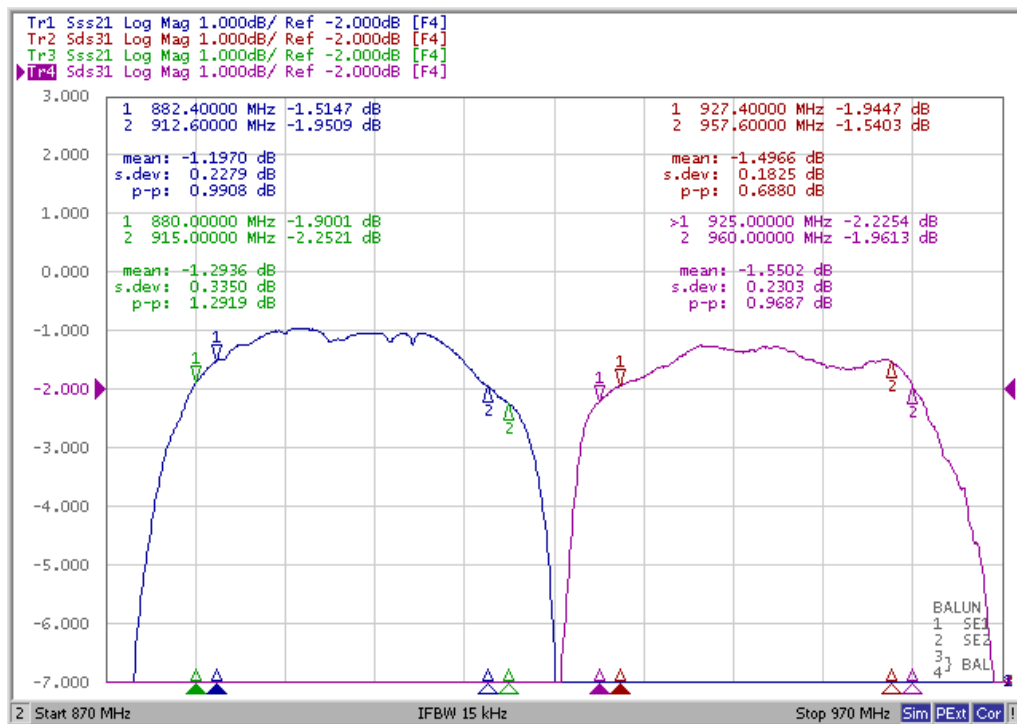
Tx to Ant



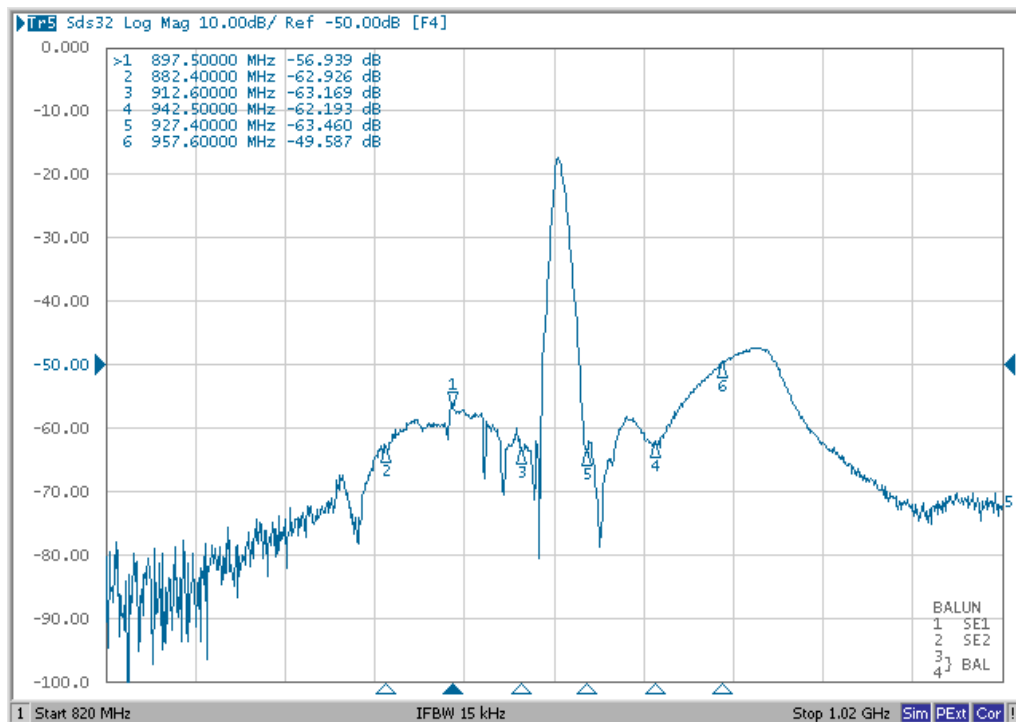
Ant to Rx



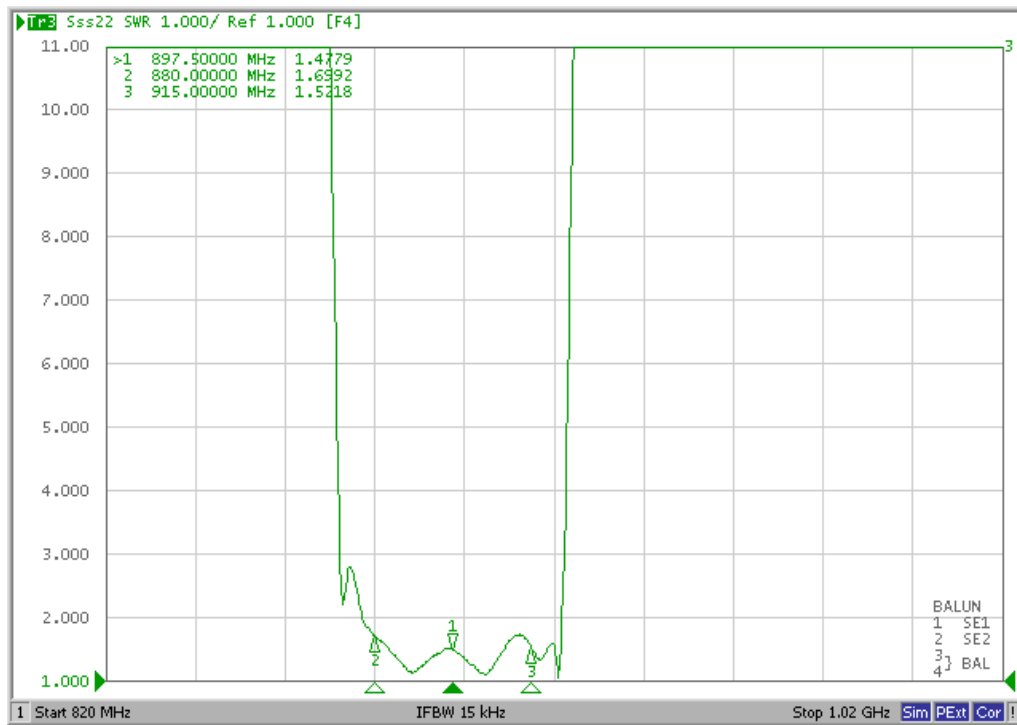
Ripple



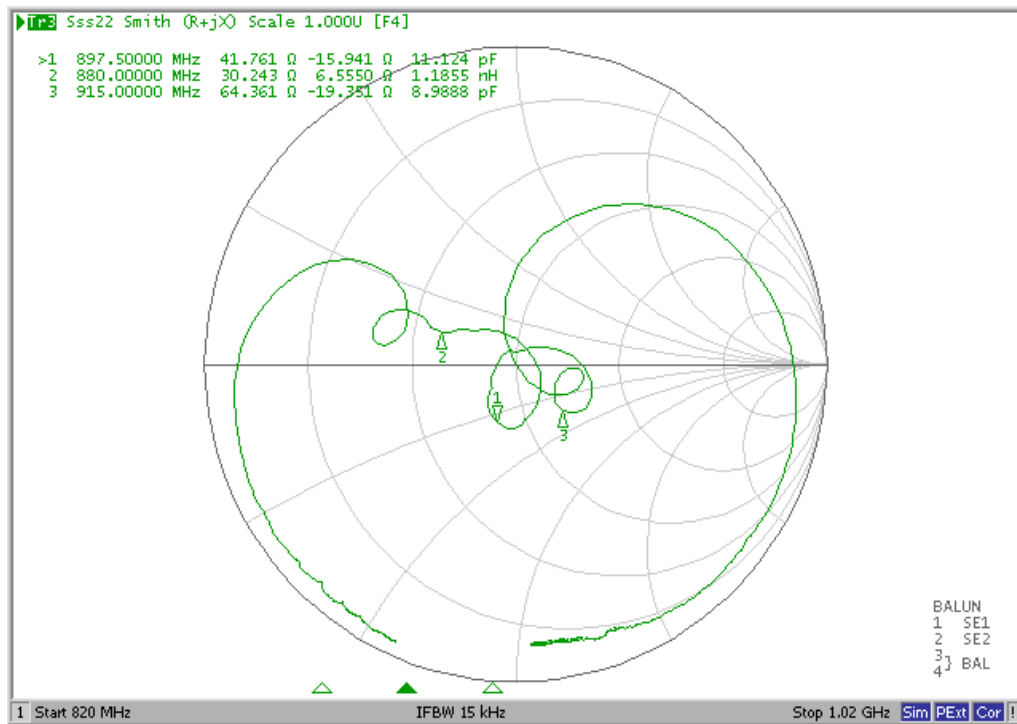
Isolation



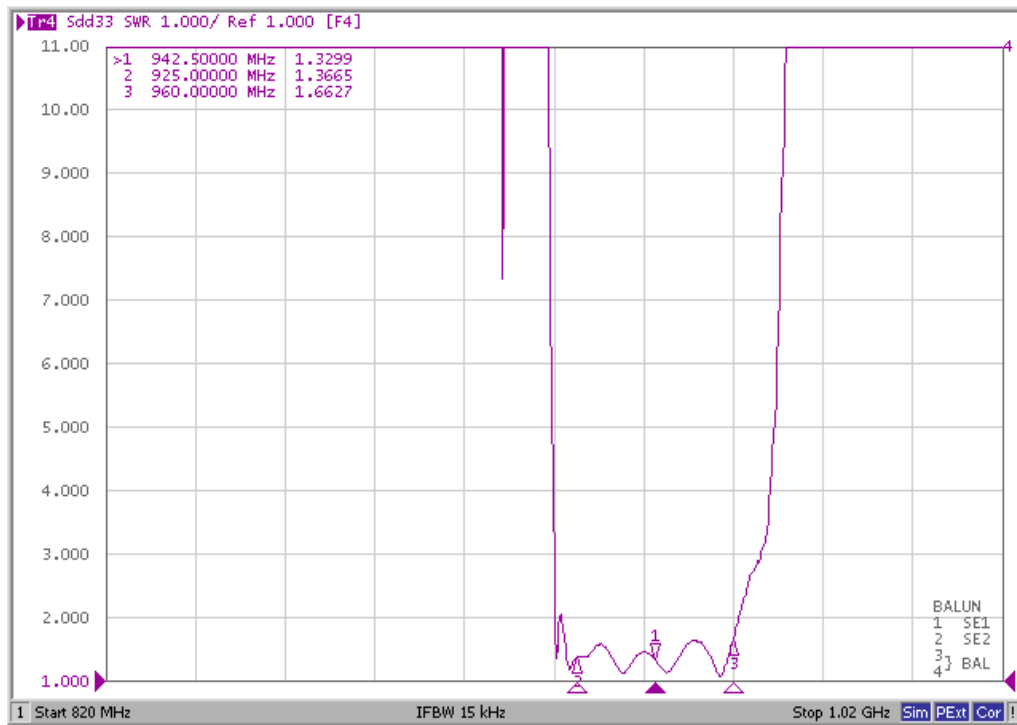
VSWR (Tx Port)



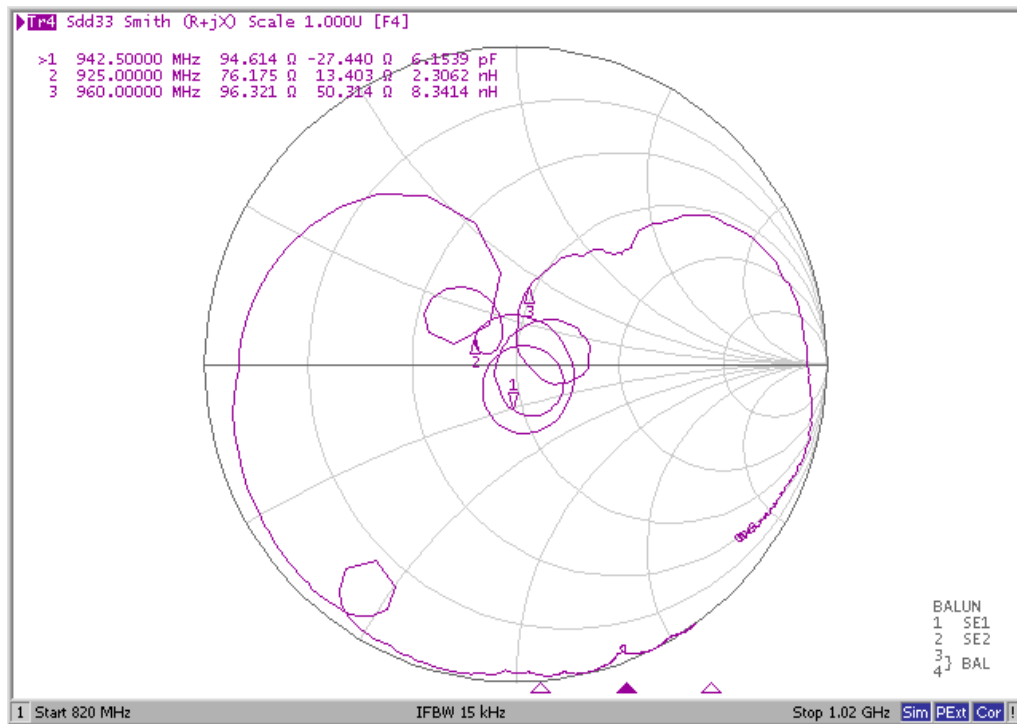
Smith Chart (Tx Port)



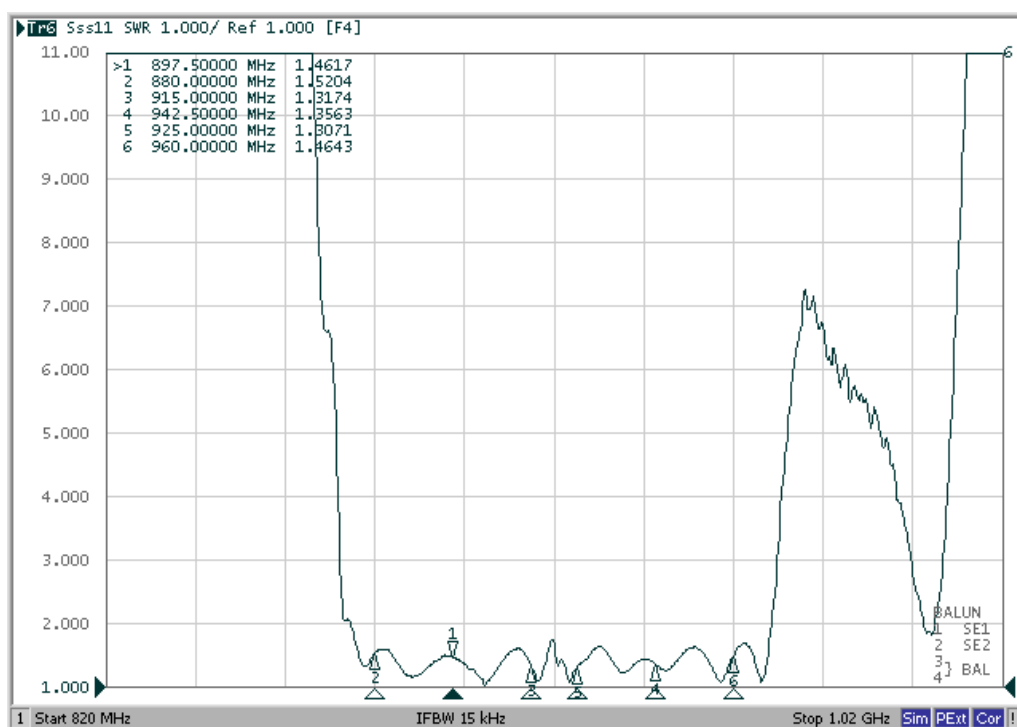
VSWR (Rx Port)



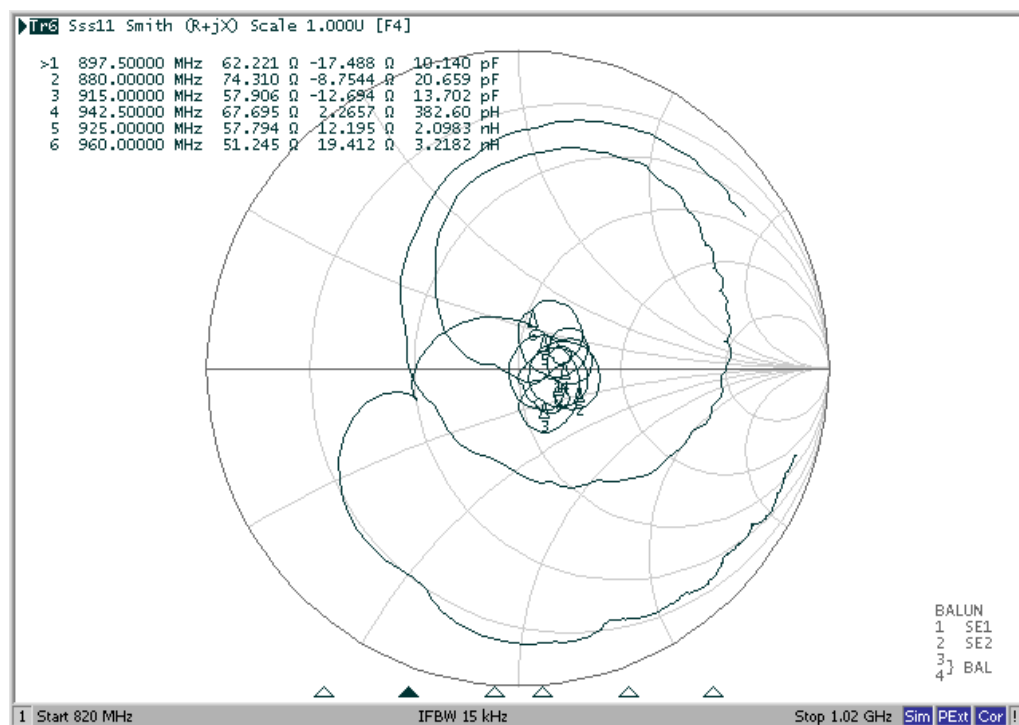
Smith Chart (Rx Port)



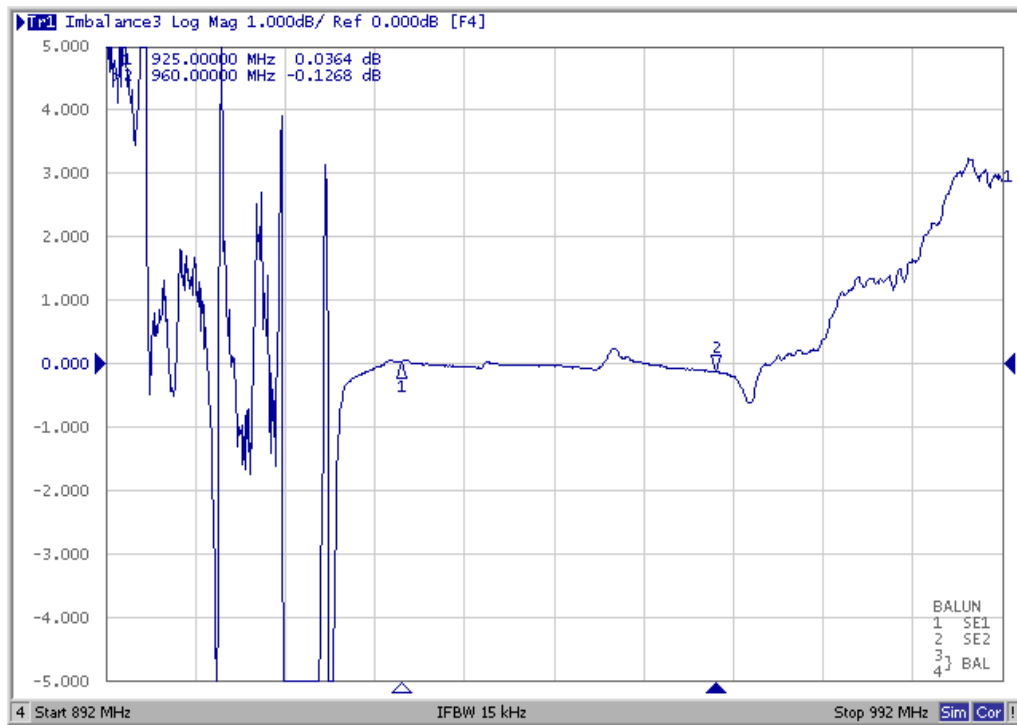
VSWR (ANT Port)



Smith Chart (ANT Port)



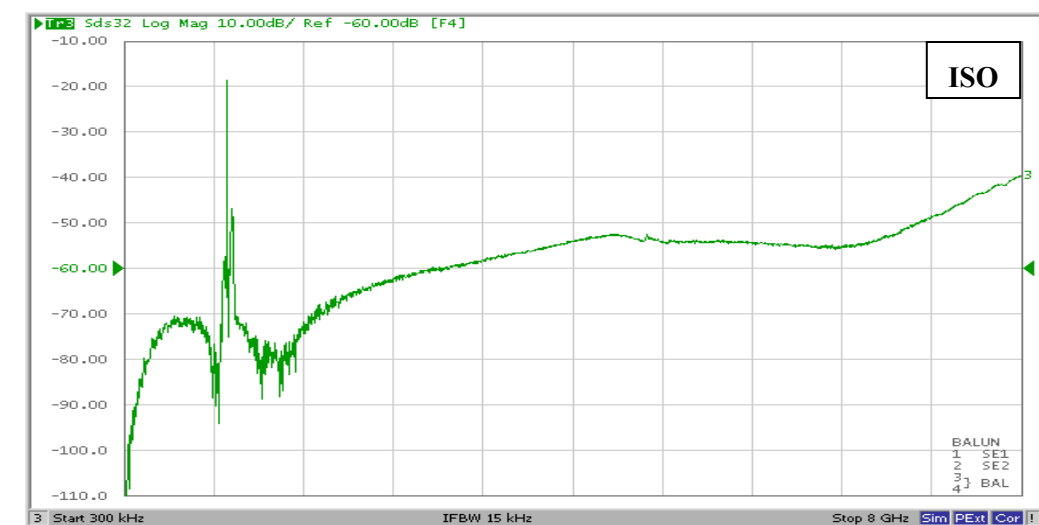
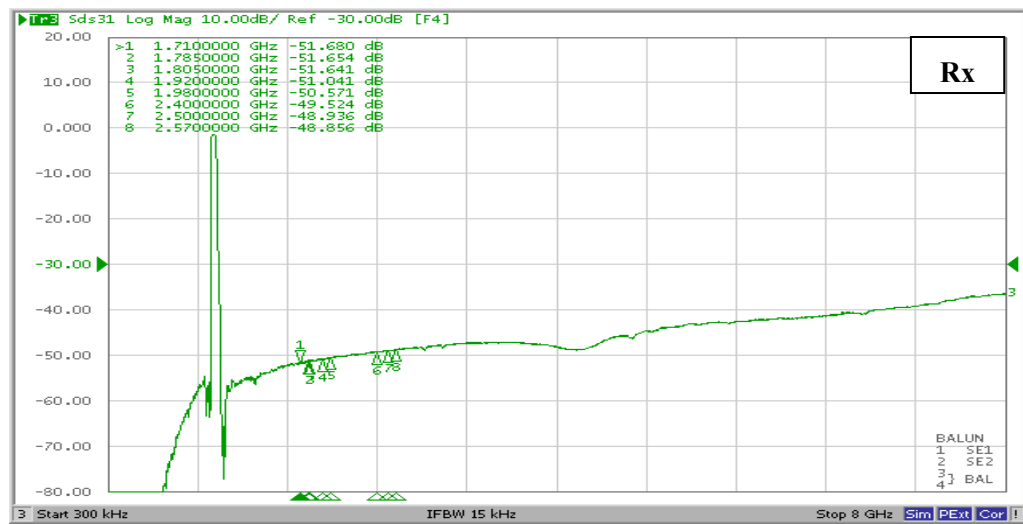
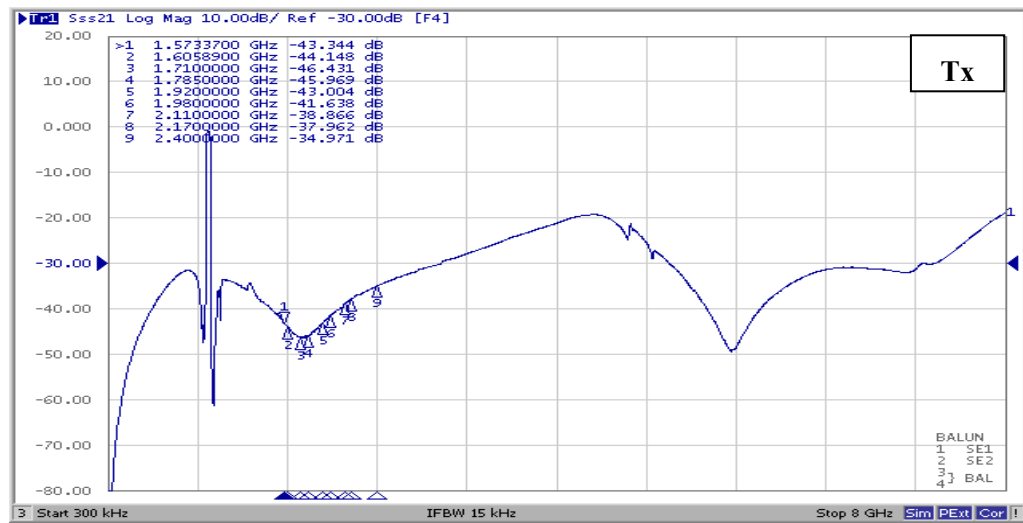
Phase Balance



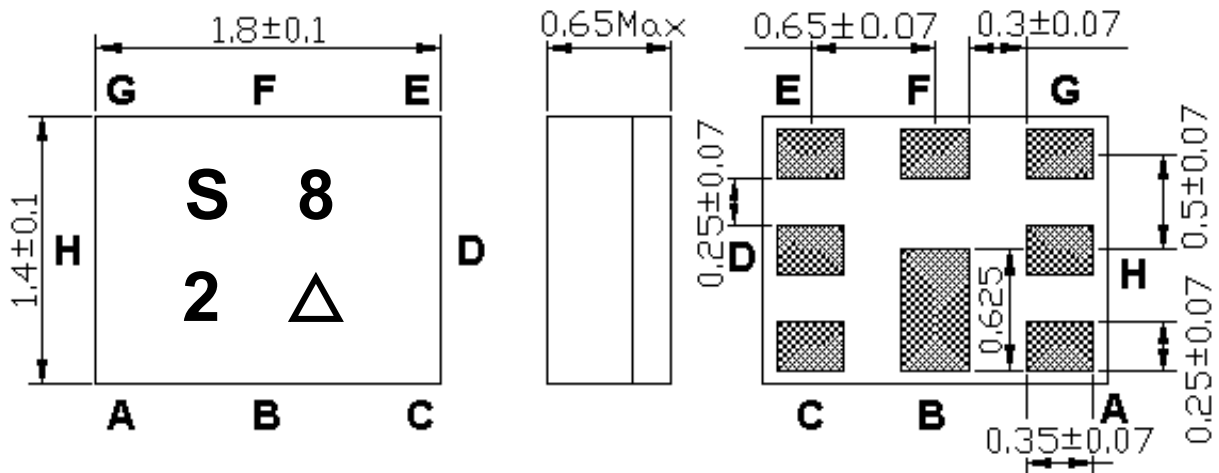
Amplitude Balance



Wide Span



OUTLINE DRAWING:



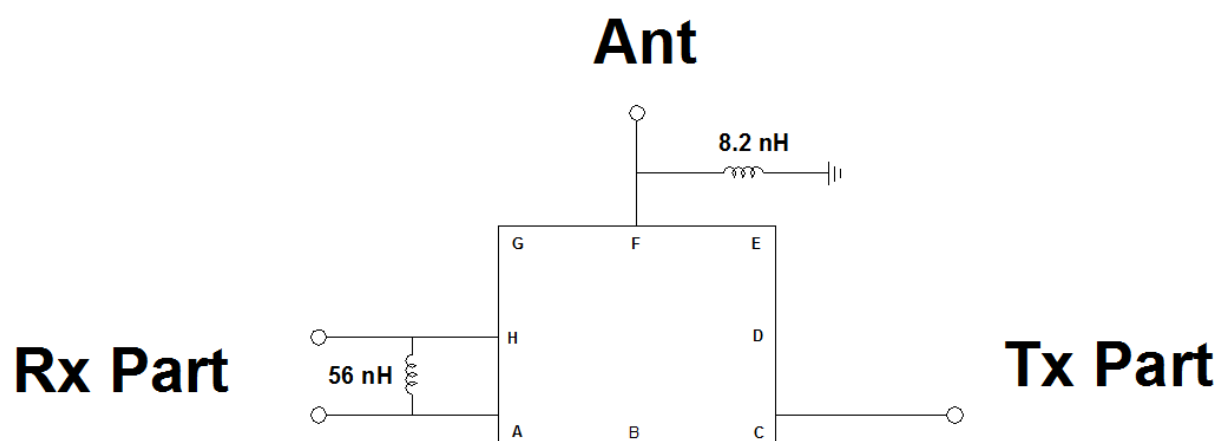
Marking Descriptions	
S	Marking name
8	Band Class
2	Series Number
△	Date Code(Year+Month)

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

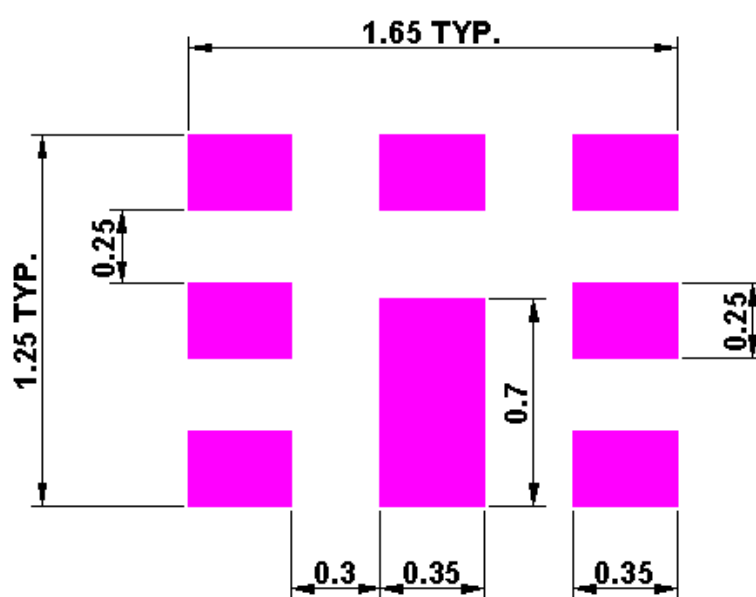
Date Code (year+month)

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	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>	<u>H</u>	<u>J</u>	<u>K</u>	<u>L</u>	<u>M</u>
2018	<u>N</u>	<u>P</u>	<u>Q</u>	<u>R</u>	<u>S</u>	<u>T</u>	<u>U</u>	<u>V</u>	<u>W</u>	<u>X</u>	<u>Y</u>	<u>Z</u>
2019	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>j</u>	<u>k</u>	<u>l</u>	<u>m</u>
2020	<u>n</u>	<u>p</u>	<u>q</u>	<u>r</u>	<u>s</u>	<u>t</u>	<u>u</u>	<u>v</u>	<u>w</u>	<u>x</u>	<u>y</u>	<u>z</u>

Evaluation Circuit

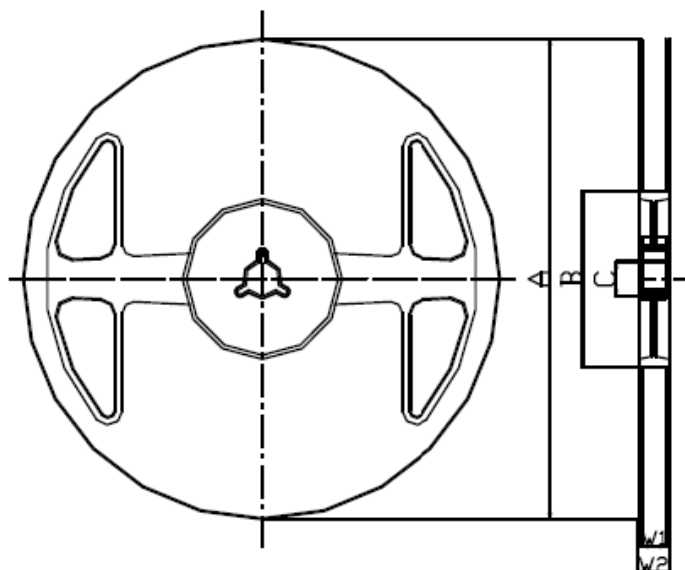


FOOTPRINT:



PACKING:
REEL DIMENSION

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



Materials of Reel

Material : Polystyrene + Carbon

Characteristics : Conforms to EIAJ-ET-7200A

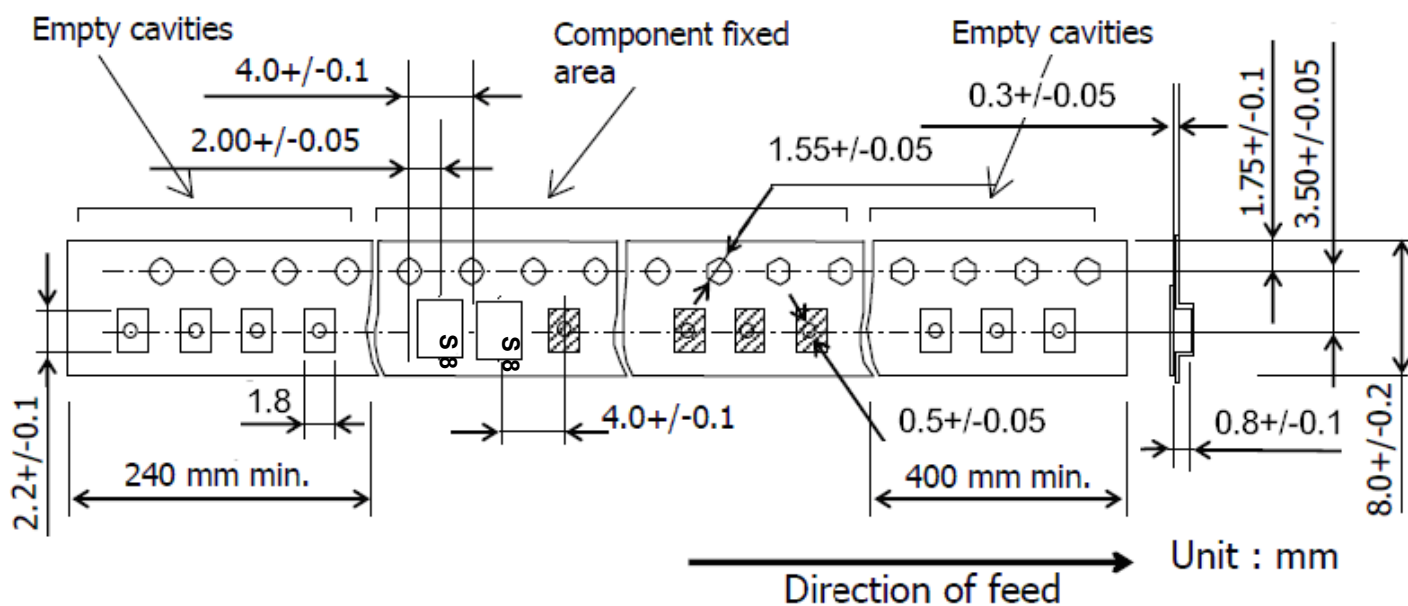
Color : Black

Surface resistance (reference value) : $10^9 \Omega/\text{sq}$ Max.

Unit : mm

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

TAPE DIMENSION



RECOMMENDED REFLOW PROFILE :

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 245~260°C peak (min. 10sec).
4. Time : 2 times.

