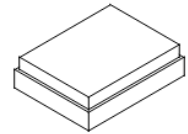


SF2580N

1950/2140 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,50000h,CW)
- 3.1Rx Input power : 15dBm
- Maximum DC Voltage: 0 V
- Moisture Sensitivity Level: Level 3 (MSL 3)
- ESD 50V(MM) 100V(HBM)

ELECTRICAL CHARACTERISTICS:

Terminating impedance (Tx Port): 50 Ω (unbalanced)

Terminating impedance (Rx Port): 100 Ω //11nH (balanced)

Terminating impedance (Ant Port): 50 Ω //3.4nH (unbalanced)

Tx to ANT (f_{T0} =1950 MHz)

Parameters Description		Unit	Min	Typ	Max	Remarks
Insertion Loss	1920 ~ 1980 MHz	dB	-	1.7	2.3	
Amplitude ripple	1920 ~ 1980 MHz	dB	-	0.8	1.3	
VSWR	ANT	-	-	1.6	2.0	
	Tx	-	-	1.5	2.0	
Attenuation:						
824.0 ~ 849.0 MHz		dB	35	41		
869.0 ~ 894.0 MHz		dB	33	40		
880.0 ~ 915.0 MHz		dB	33	40		
925.0 ~ 960.0 MHz		dB	33	39		
1565.42 ~ 1605.88 MHz		dB	30	34		
1805.0 ~ 1880.0 MHz		dB	20	39		
2010.0 ~ 2025.0 MHz		dB	10	30		
2110.0 ~ 2170.0 MHz		dB	40	43		
2400.0 ~ 2500.0 MHz		dB	30	43		
3840.0 ~ 3960.0 MHz		dB	30	38		
4900.0 ~ 5950.0 MHz		dB	16	29		

ANT to Rx (f_{T0}=2140 MHz)

Parameters Description		Unit	Min	Typ	Max	Remarks
Insertion Loss	2110 ~ 2170 MHz	dB	-	1.9	2.3	
Amplitude ripple	2110 ~ 2170 MHz	dB		0.7	1.2	
Phase Balance	2110 ~ 2170 MHz	deg	-20	-14/-2	+20	
Amplitude Balance	2110 ~ 2170 MHz	dB	-2.0	+0.2/+1.2	+2.0	
VSWR	ANT			1.6	2.0	
	Rx	-		1.9	2.2	
Attenuation:						
824.0 ~ 849.0 MHz		dB	40	65		
880.0 ~ 915.0 MHz		dB	40	63		
1710.0 ~ 1785.0 MHz		dB	45	45		
1920.0 ~ 1980.0 MHz		dB	44	47		
1980.0 ~ 2025.0 MHz		dB	25	41		
2400.0 ~ 2500.0 MHz		dB	30	40		
4900.0 ~ 5950.0 MHz		dB	33	44		

Tx to Rx

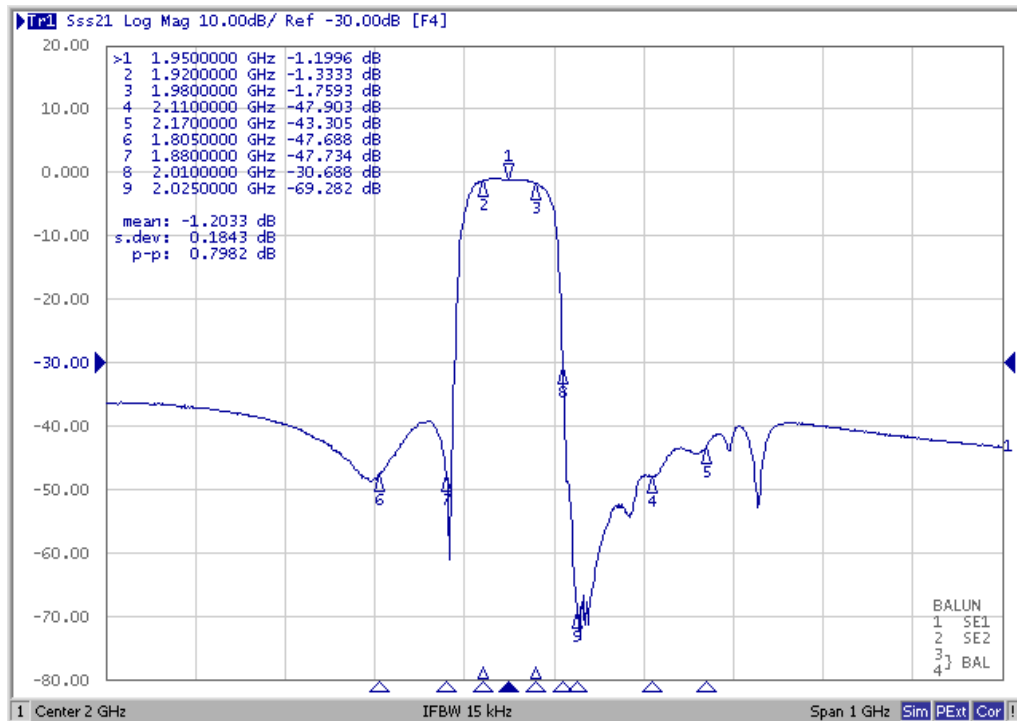
Parameters Description		Unit	Min	Typ	Max	Remarks
Isolation	1920.0 ~ 1980.0 MHz	dB	48	51	-	
	2110.0 ~ 2170.0 MHz	dB	44	47	-	

Notes : (1) With Matching Network**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.****NOTES:**

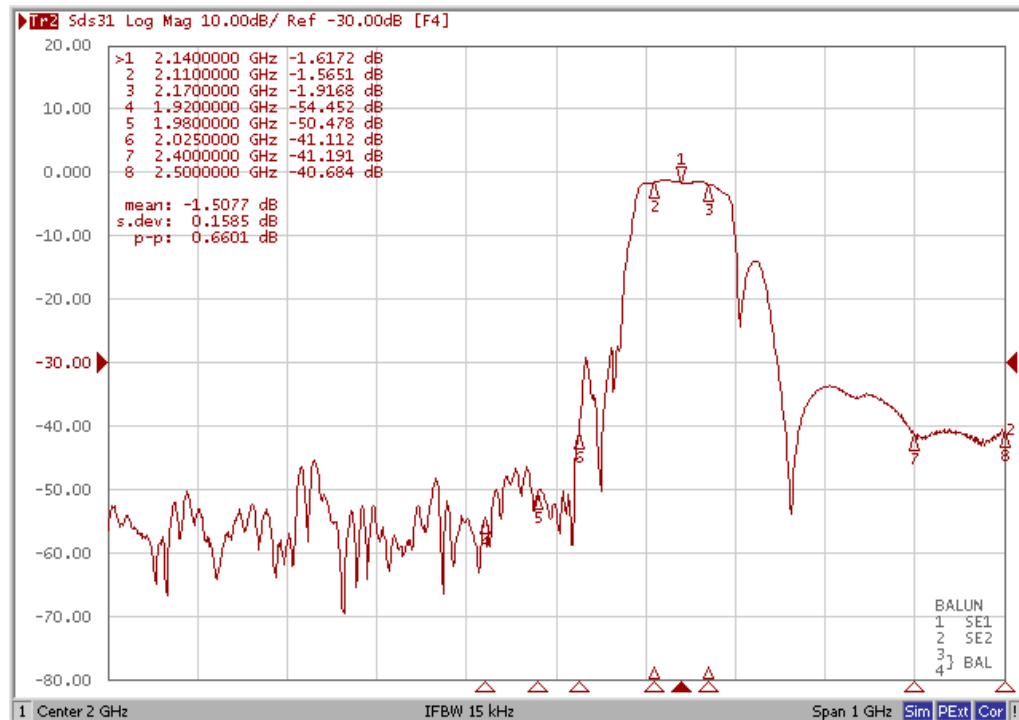
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

FREQUENCY CHARACTERISTICS:

Tx to Ant



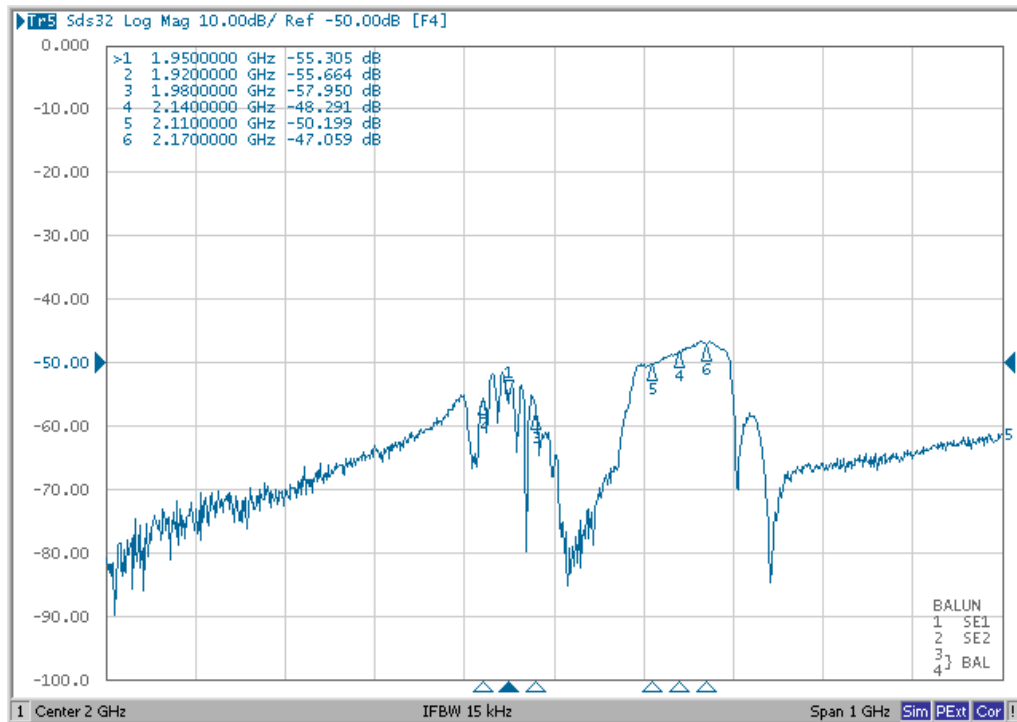
Ant to Rx



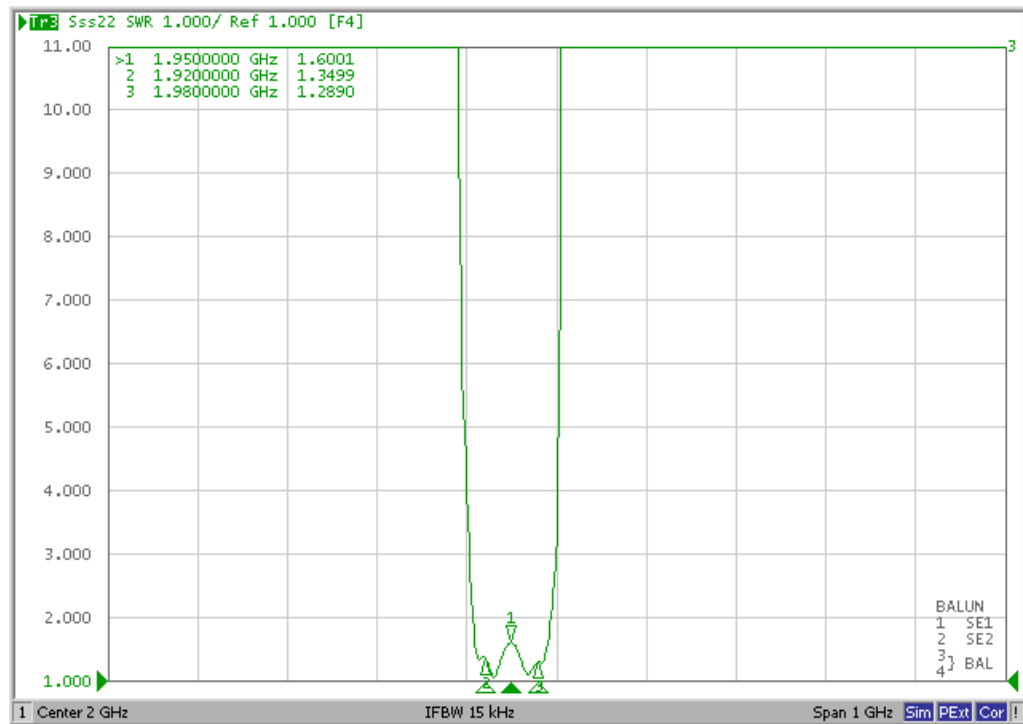
Ripple



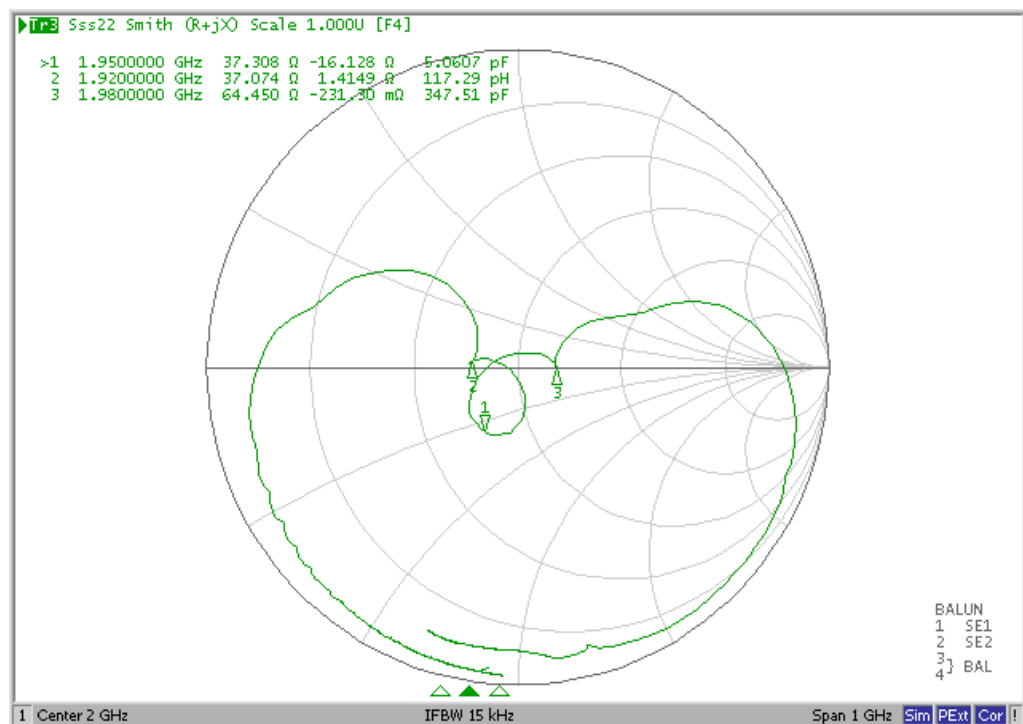
Isolation



VSWR (Tx Port)



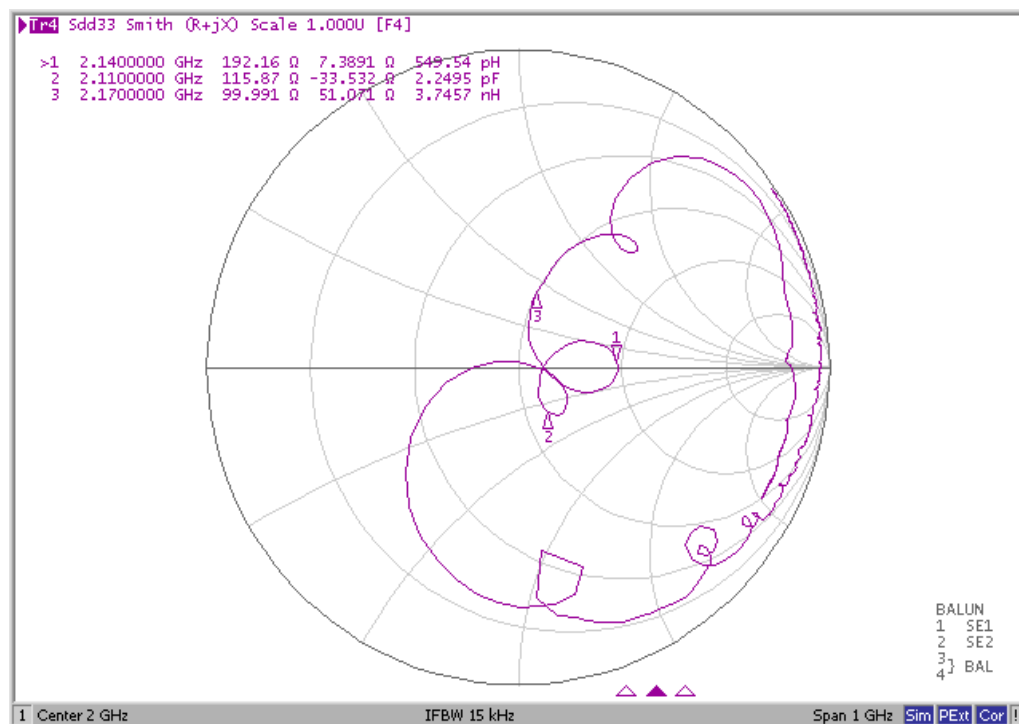
Smith Chart (Tx Port)



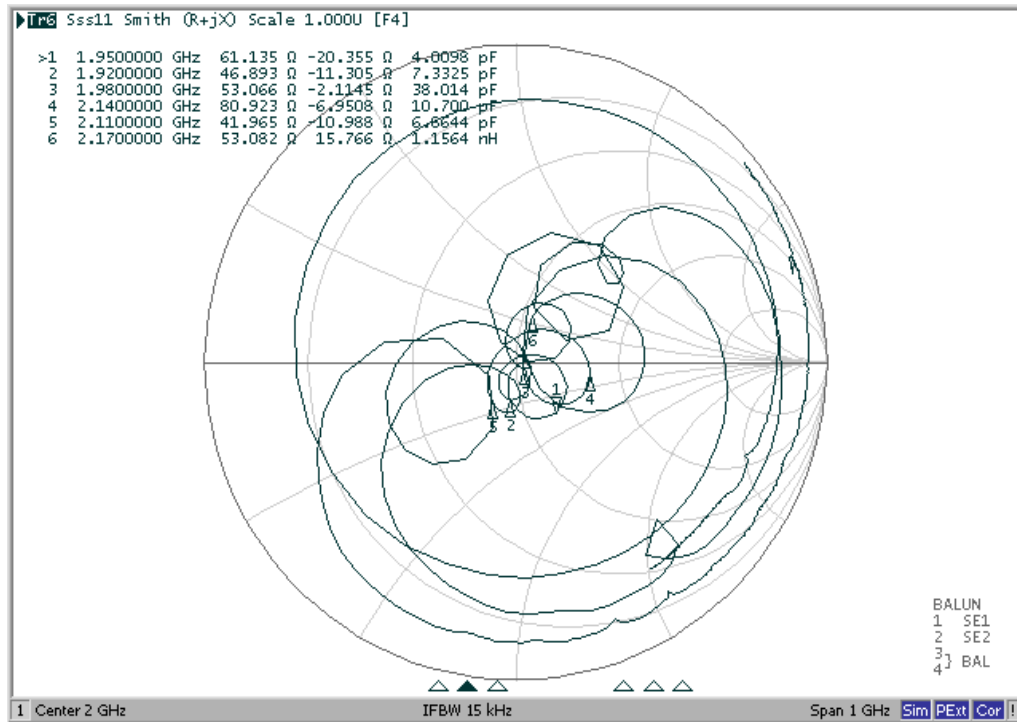
VSWR (Rx Port)



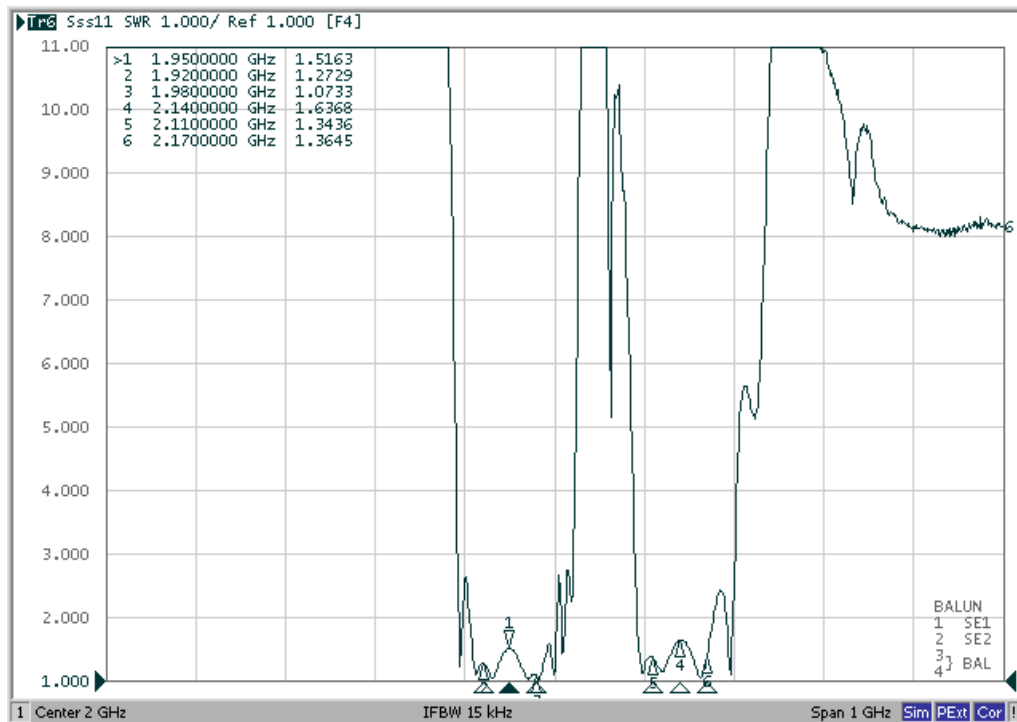
Smith Chart (Rx Port)



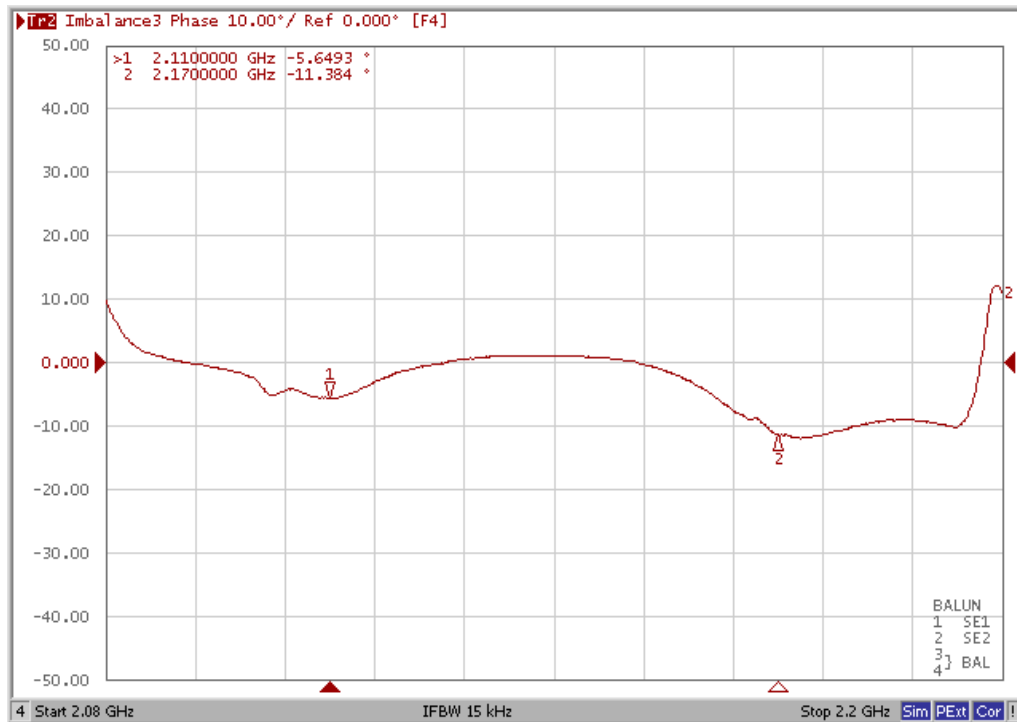
VSWR (ANT Port)



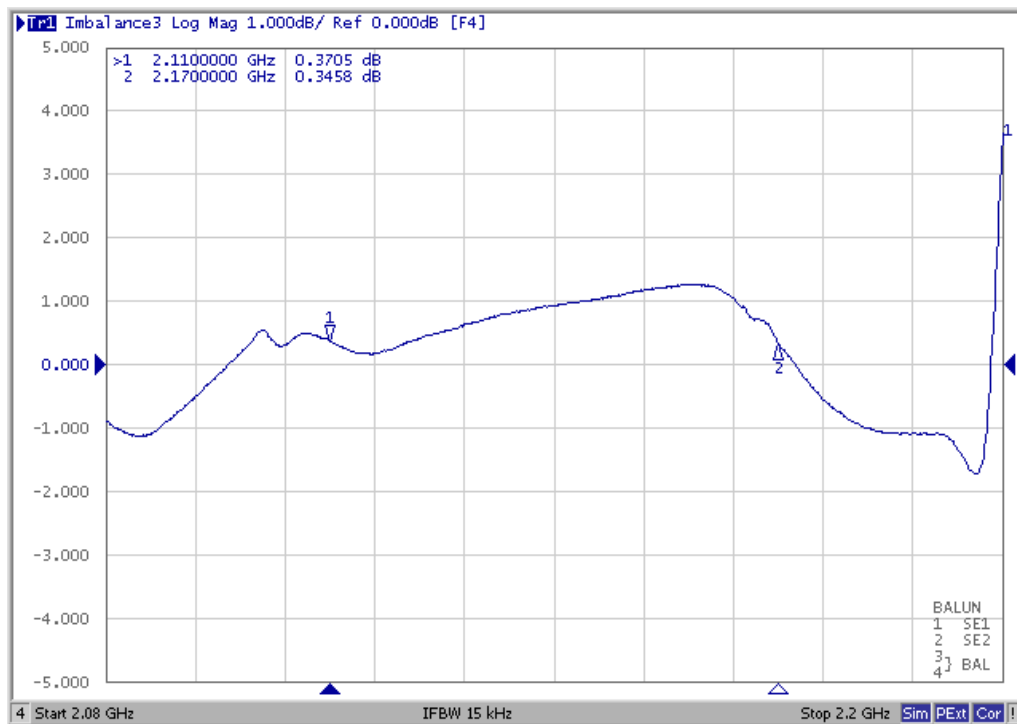
Smith Chart (ANT Port)



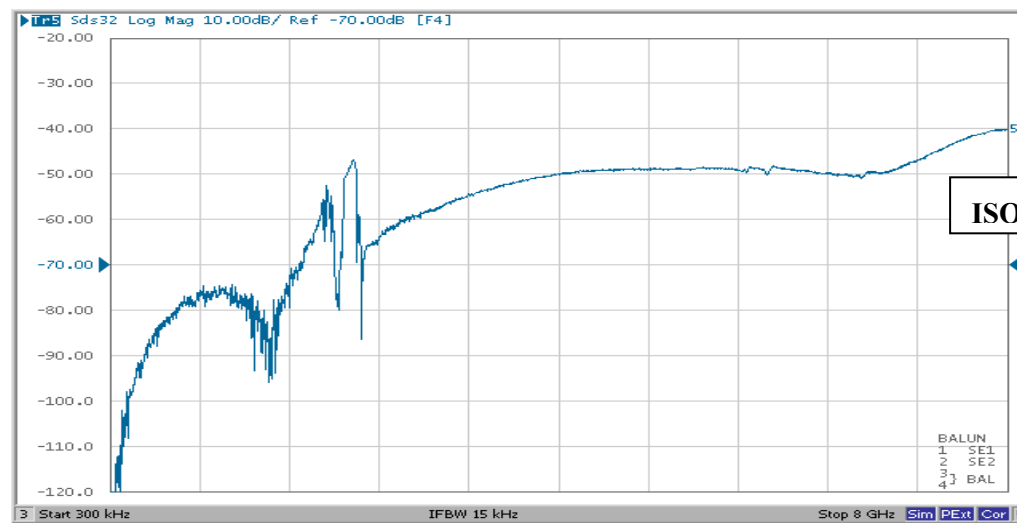
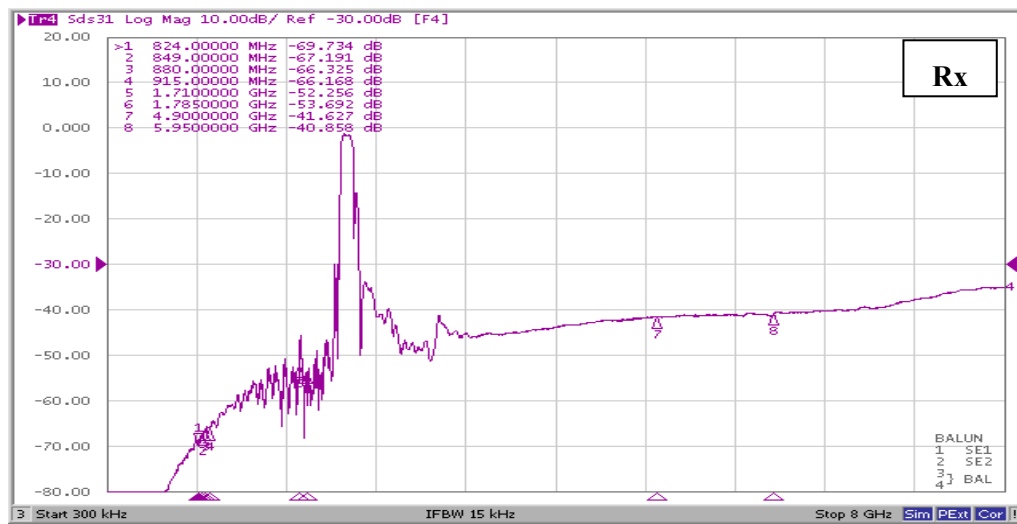
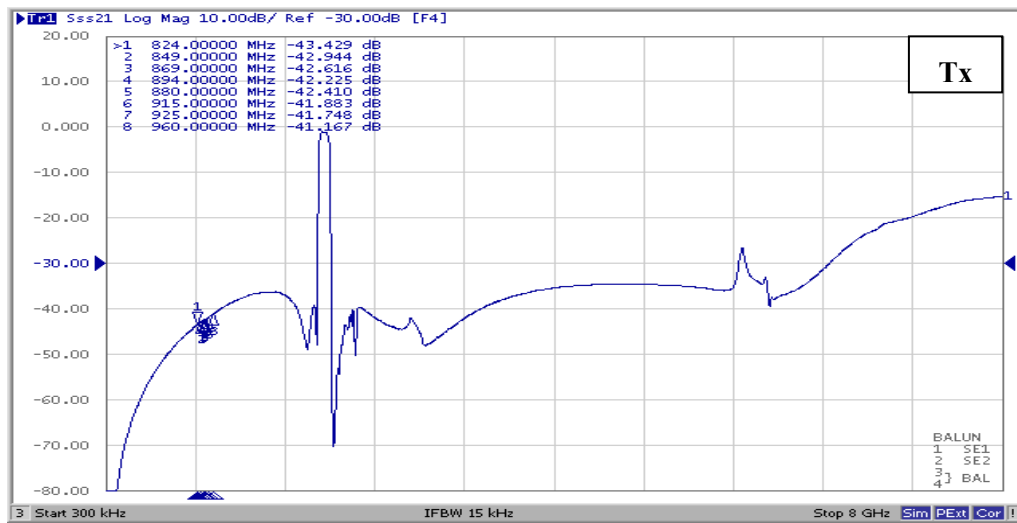
Phase Balance



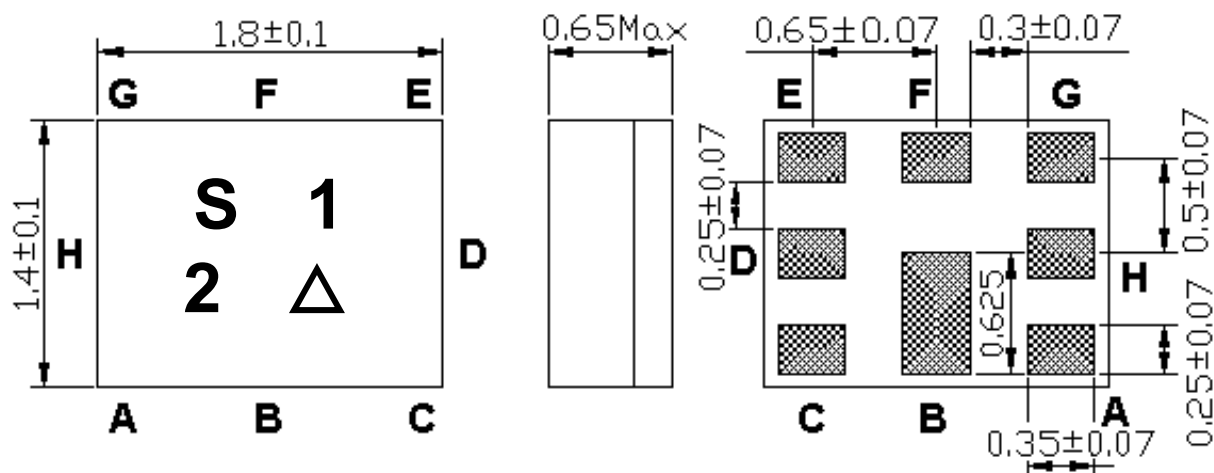
Amplitude Balance



Wide Span



OUTLINE DRAWING:(Mass Production)



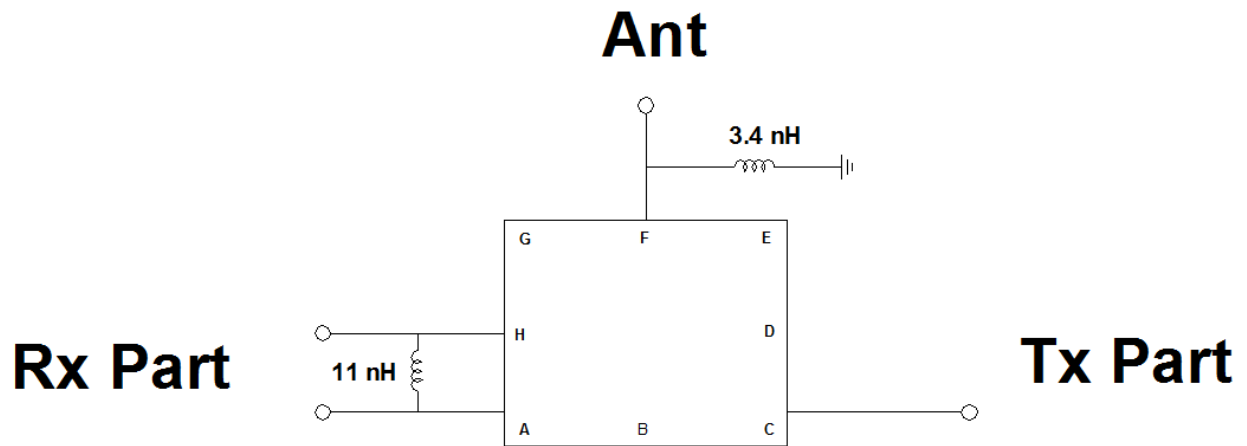
Marking Descriptions	
S	Marking name
1	Band Class
2	Series Number
△	Date Code(Year+Month)

Pin Description	
B,D,E,G,	Ground
F	Ant
C	Tx (1950.0MHz)
A,H	Rx (2140.0MHz)

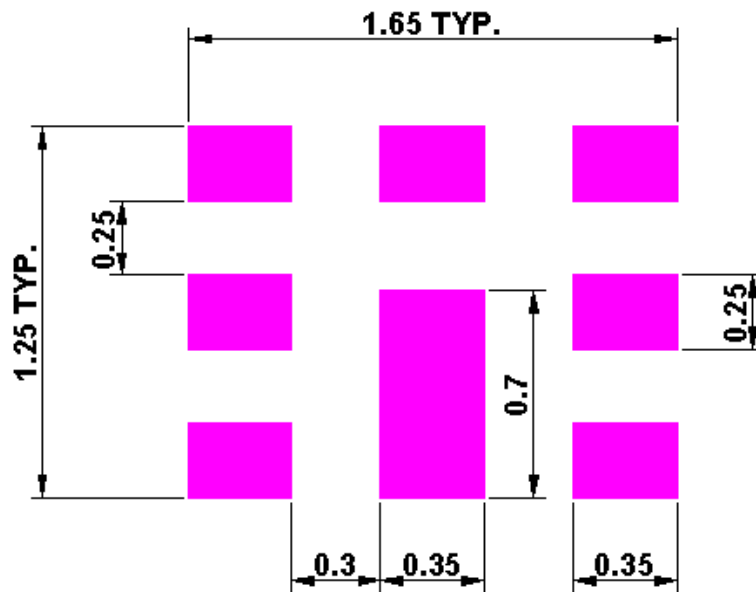
Date Code (year+month)

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:

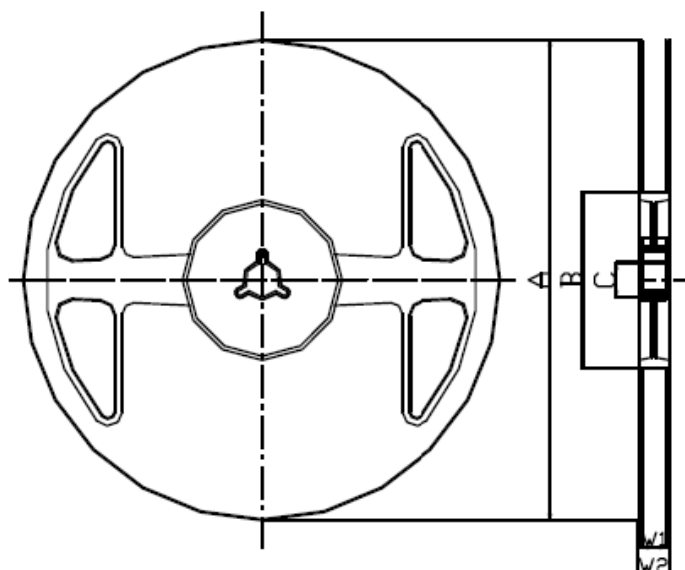


PACKING:**REEL DIMENSION**

Reel Count:

7" = 3000

13" = 10,000

**Materials of Reel**

Material : Polystyrene + Carbon

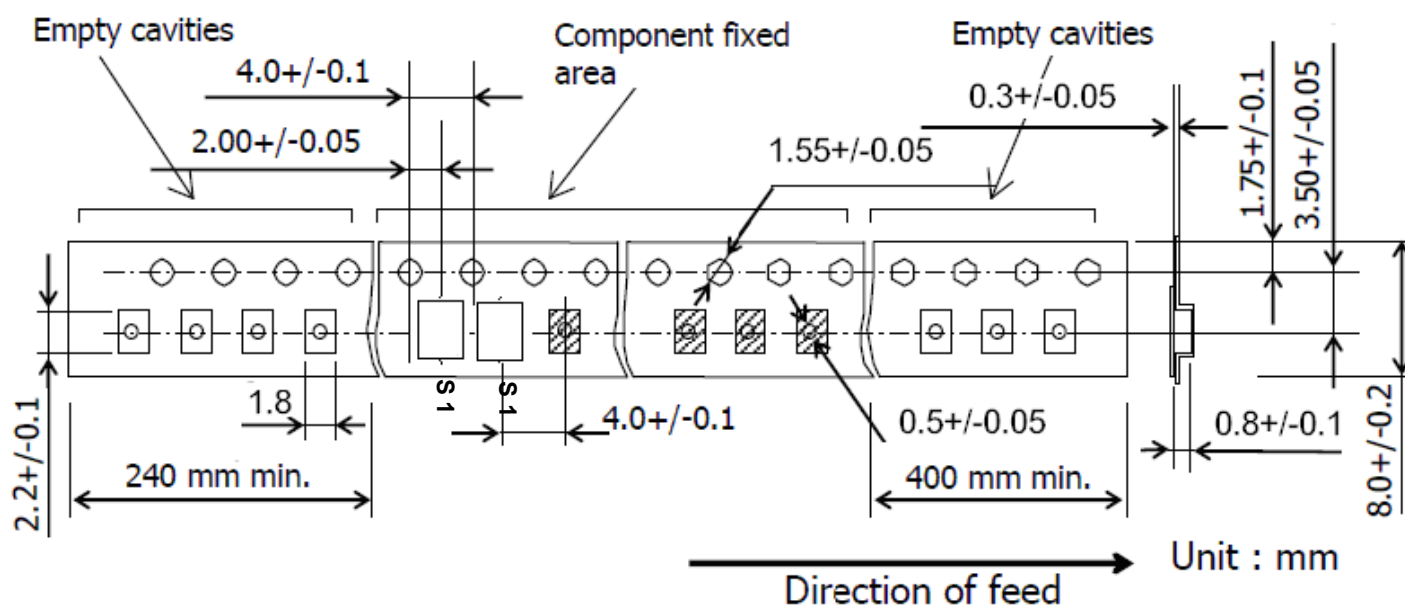
Characteristics : Conforms to EIAJ-ET-7200A

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	$\phi 180.0 +0.0/-1.5$	$\phi 66.0 +/-.0.5$	$\phi 13.0 +/-.0.2$	$9.0 +1.0/-0.0$	$11.4 +/-.1.0$

2. 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.

