



*Total Solution Provider in Saw Device*

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# SD-0782T2-C45

Band 13, SAW Duplexer  
Revision 1: April 2014



- Electrical Characteristics
  - Package Dimensions
  - Testing Environment
  - Frequency Characteristics
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## □ Electrical Characteristics

### Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-30	-	+90
Storage Temperature Range	°C	-40	-	+90
Maximum DC Voltage	V	0		
Input Power at Tx Port	dBm	29dBm(0.8W)>50000h		
Antenna Impedance(single ended) <sup>(1)</sup>	Ω	50+8.2nH		
Tx Impedance(single ended) <sup>(1)</sup>	Ω	50		
Rx Impedance (single ended) <sup>(1)</sup>	Ω	50		
Package type		C45		
Length x Width	mm <sup>2</sup>	2.0 x 1.6		
Height	mm	0.5		

**Electrical Specification**

Tx to Ant		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Insertion Loss	777.0 ~ 787.0	dB	-	1.6	2.5
Ripple	777.0 ~ 787.0	dB <sub>p-p</sub>	-	0.6	1.5
VSWR of Ant Port	777.0 ~ 787.0	-	-	1.5	2.0
VSWR of Tx Port	777.0 ~ 787.0	-	-	1.7	2.0
Attenuation	10.0 ~ 716.0	dB	30	40	-
	716.0 ~ 728.0	dB	40	44	-
	728.0 ~ 746.0	dB	30	46	-
	746.0 ~ 756.0	dB	45	53	-
	758.0 ~ 767.5	dB	28	31	-
	767.5 ~ 768.0	dB	15	27	-
	869.0 ~ 894.0	dB	30	44	-
	1554.0 ~ 1565.0	dB	45	54	-
	1565.0 ~ 1585.0	dB	45	55	-
	1597.0 ~ 1607.0	dB	45	56	-
	1805.0 ~ 1880.0	dB	30	62	-
	1930.0 ~ 1990.0	dB	30	60	-
	2110.0 ~ 2170.0	dB	30	56	-
	2331.0 ~ 2361.0	dB	20	54	-
	2400.0 ~ 2484.0	dB	35	53	-
3108.0 ~ 3148.0	dB	15	50	-	
4900.0 ~ 5850.0	dB	20	35	-	

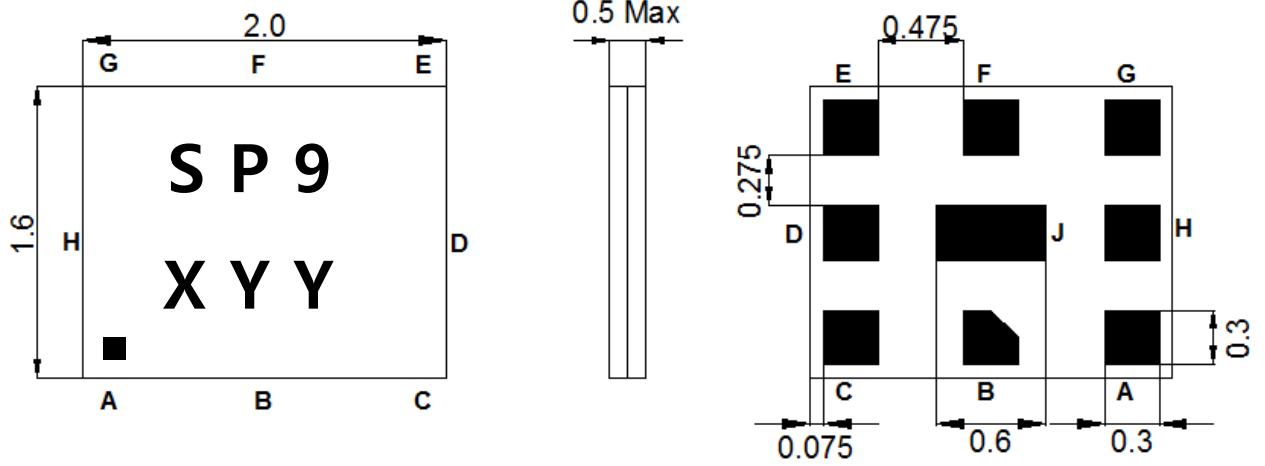


Ant to Rx		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Insertion Loss	746.0 ~ 756.0	dB	-	2.0	2.5
Ripple	746.0 ~ 756.0	dB <sub>p-p</sub>	-	0.7	1.0
VSWR of Ant Port	746.0 ~ 756.0	-	-	1.6	2.0
VSWR of Rx Port	746.0 ~ 756.0	-	-	1.9	2.1
Attenuation	1.0 ~ 686.0	dB	40	62	-
	31.0	dB	50	70	-
	686.0 ~ 728.0	dB	30	40	-
	771.0 ~ 772.0	dB	15	20	-
	777.0 ~ 787.0	dB	50	65	-
	787.0 ~ 6048.0	dB	40	49	-
	1710.0 ~ 1755.0	dB	40	56	-
	1850.0 ~ 1910.0	dB	40	56	-
	2238.0 ~ 2268.0	dB	40	56	-
	2400.0 ~ 2500.0	dB	40	56	-
4900.0 ~ 5950.0	dB	40	54	-	

Tx to Rx		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Isolation	777.0 ~ 787.0	dB	56	64	-
	746.5 ~ 749.0	dB	50	60	-
	749.0 ~ 752.0	dB	52	55	-
	752.0 ~ 755.5	dB	49	51	-
	1552.0 ~ 1574.0	dB	30	59	-
	2328.0 ~ 2361.0	dB	30	54	-
	3104.0 ~ 3148.0	dB	30	53	-

**Notes :** (1) With Matching Network .

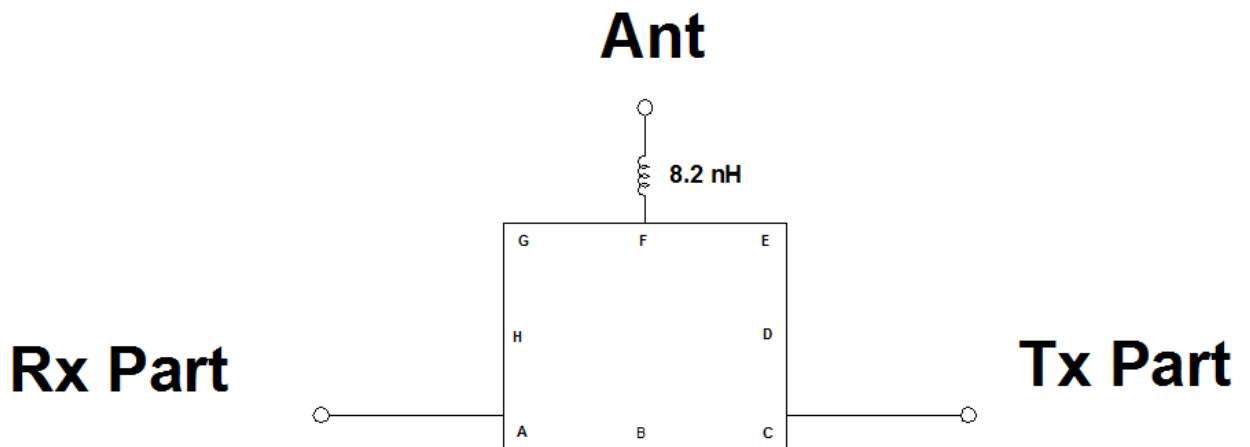
**Package Dimensions**



Marking Descriptions	
S	SAWNICS
P9	Series Number
X	Date Code(Year+Month)
YY	Lot No

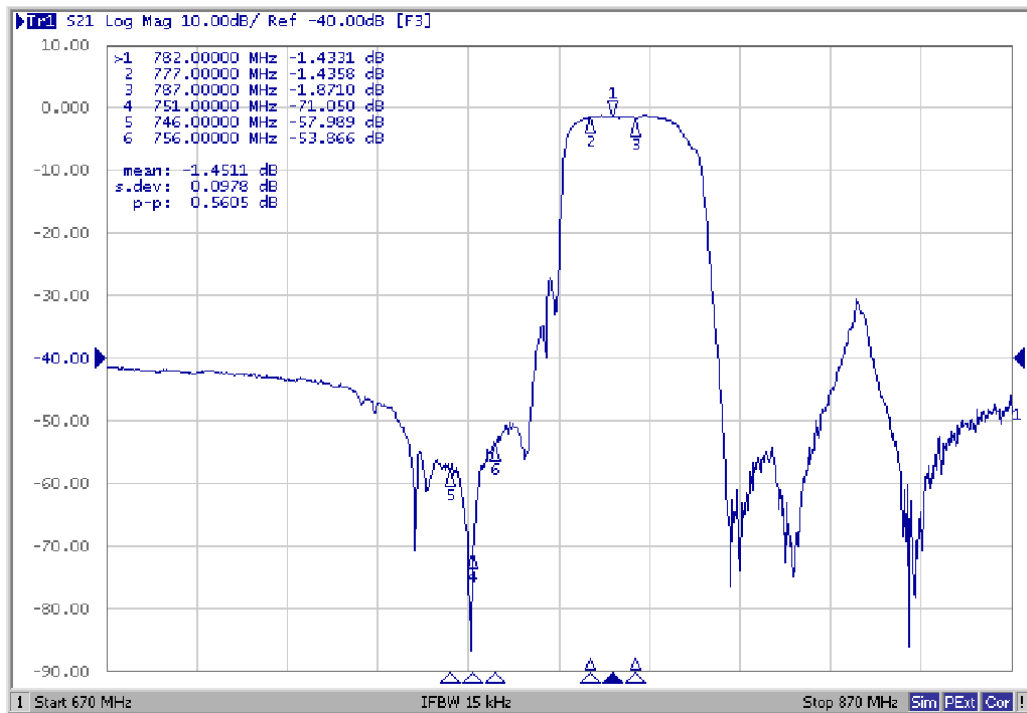
Pin Description	
B,D,E,G,H	Ground
F	Ant
C	Tx (782MHz)
A	Rx (751MHz)

**Testing Environment**

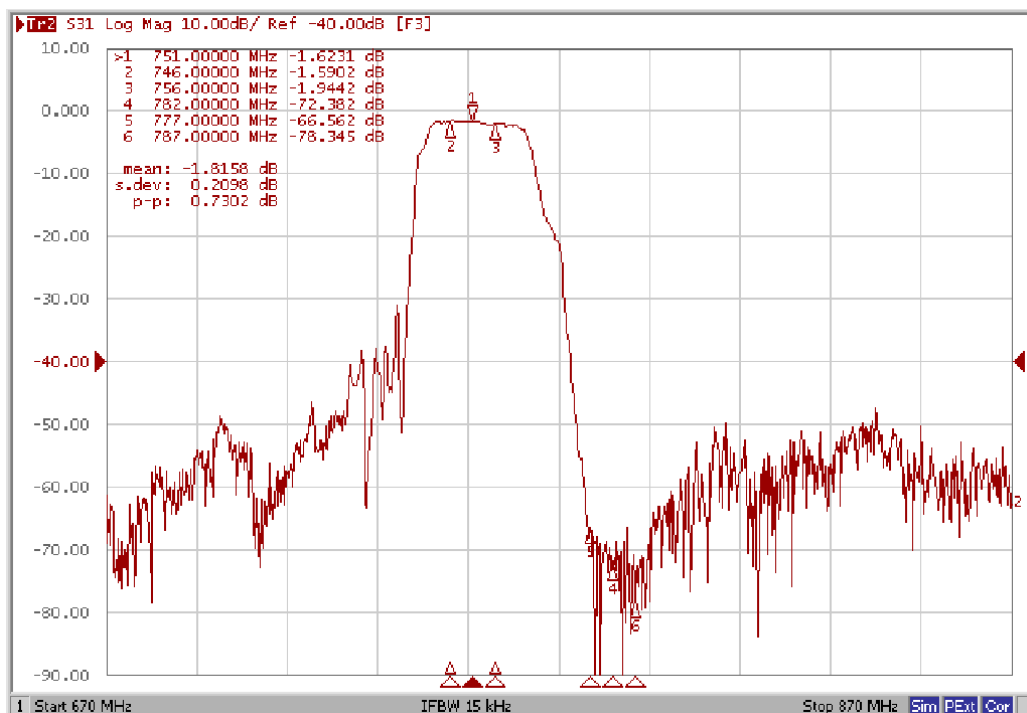


**□ Frequency Characteristics**

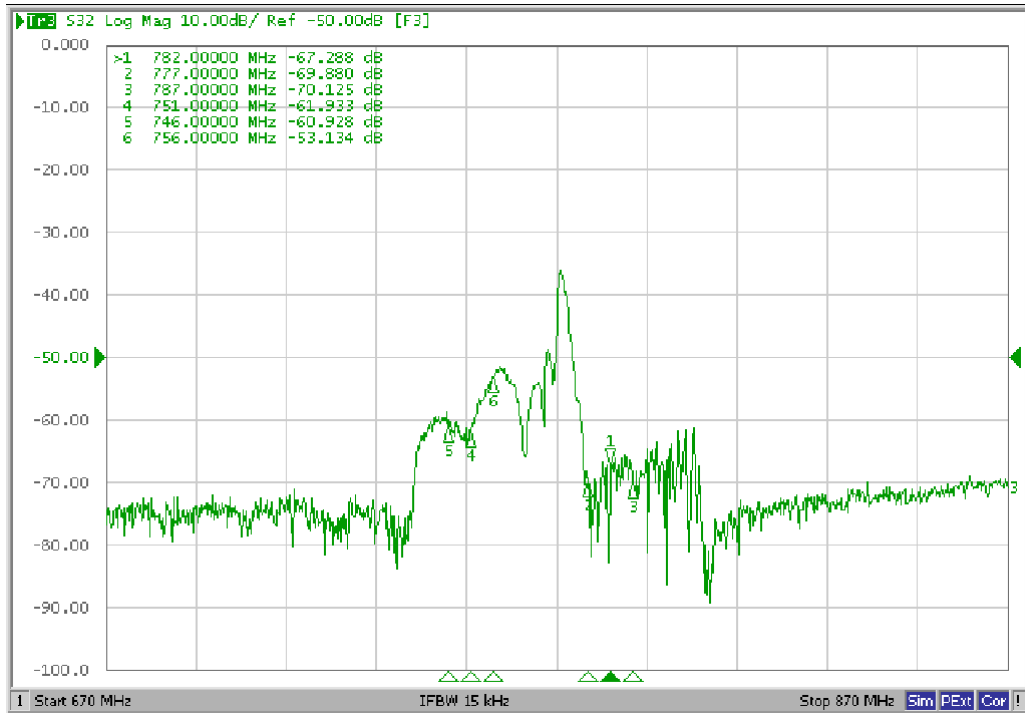
**Tx to Ant**



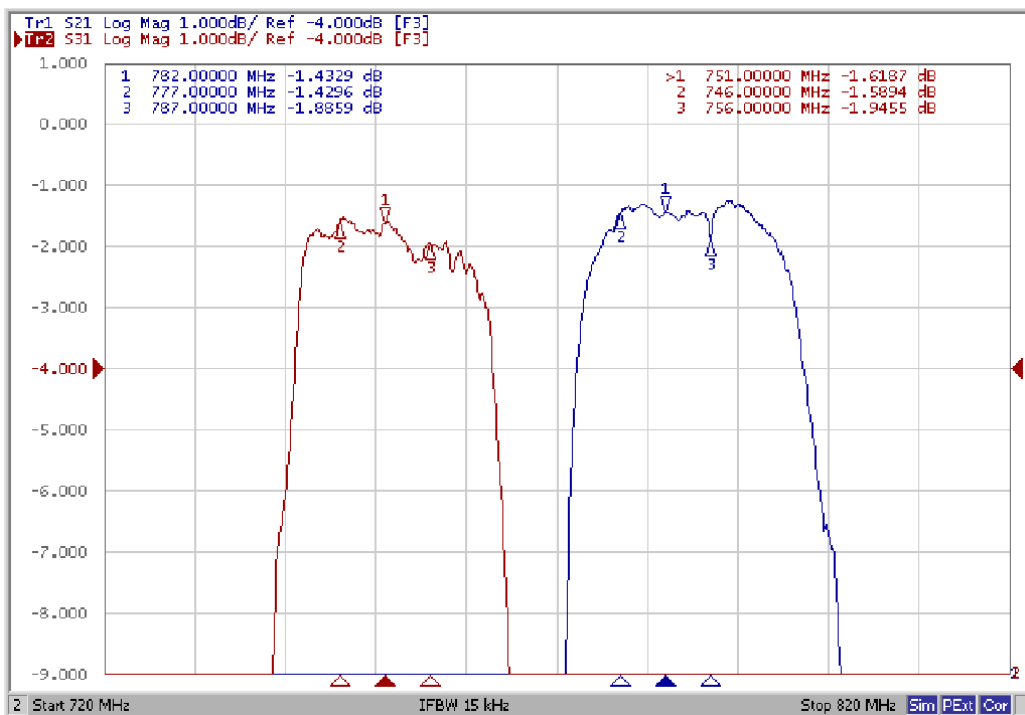
**Ant to Rx**



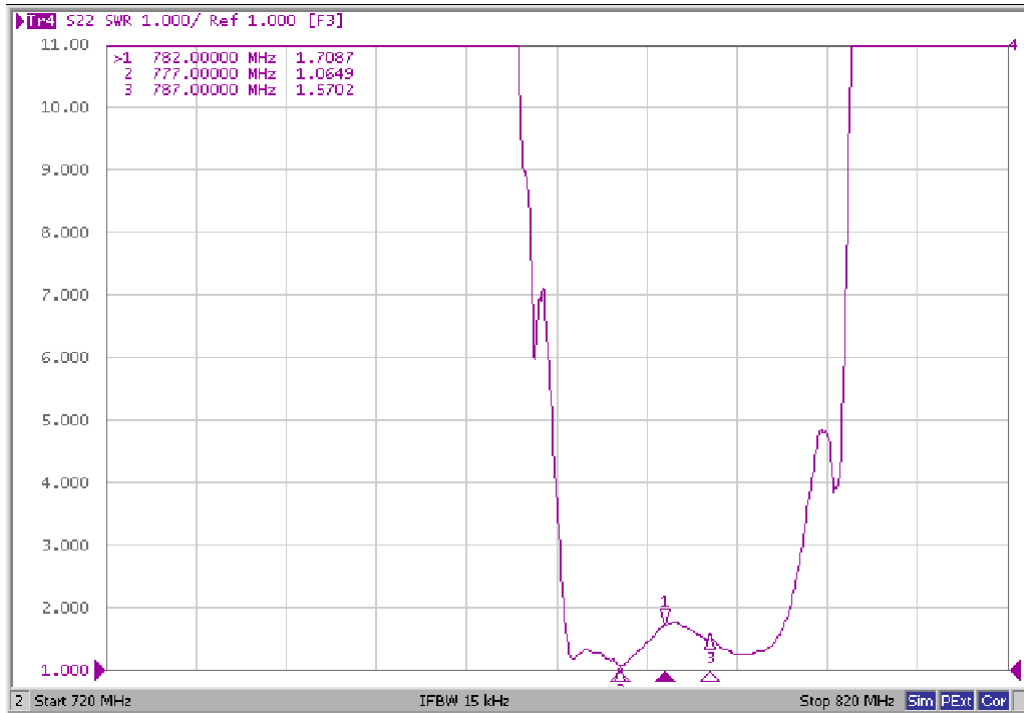
**Isolation**



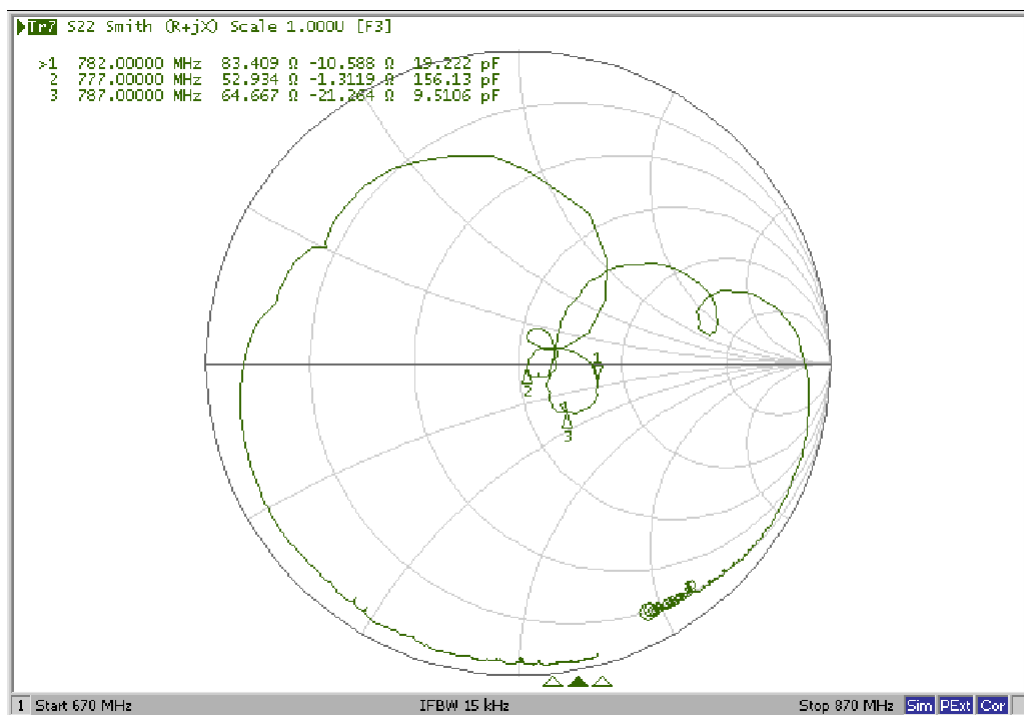
**Ripple**



**VSWR (Tx Port)**

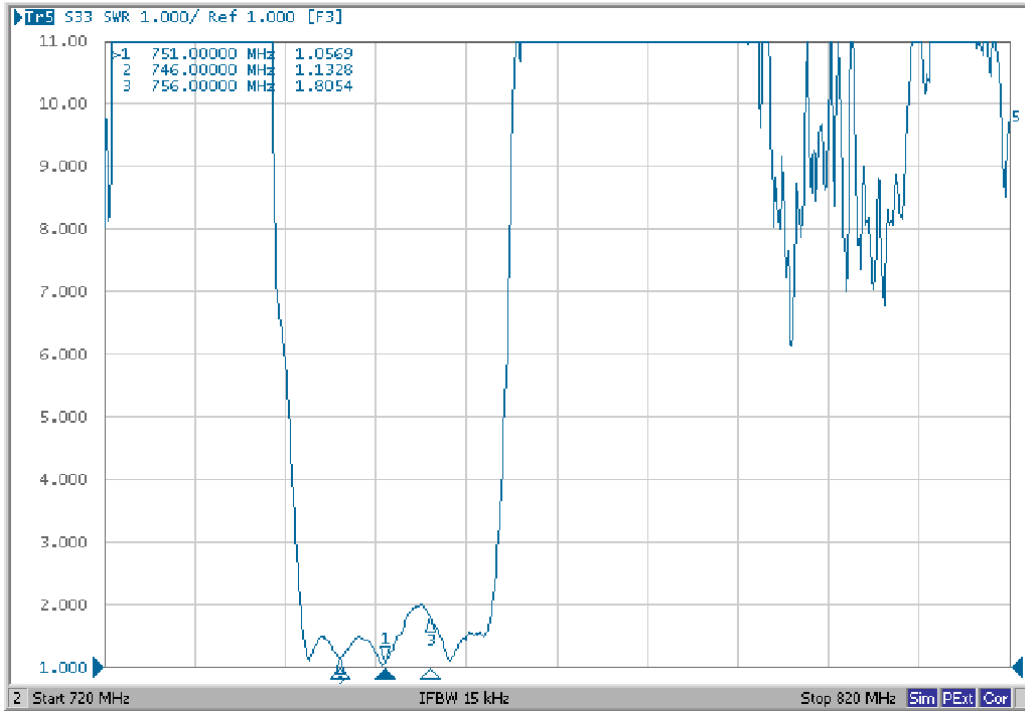


**Smith Chart (Tx Port)**

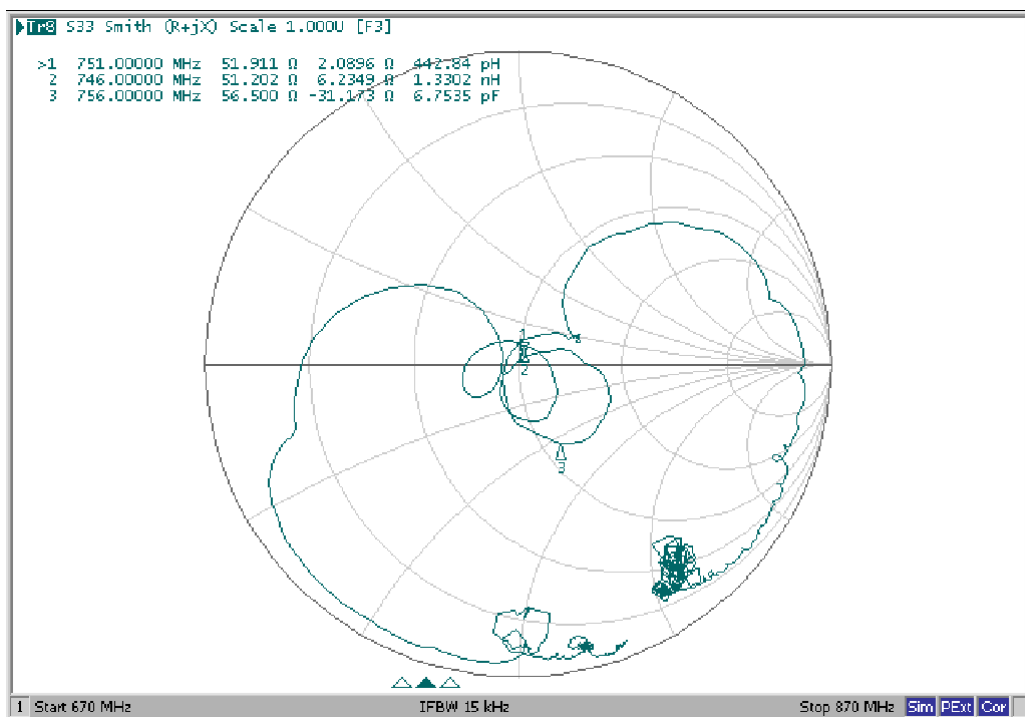




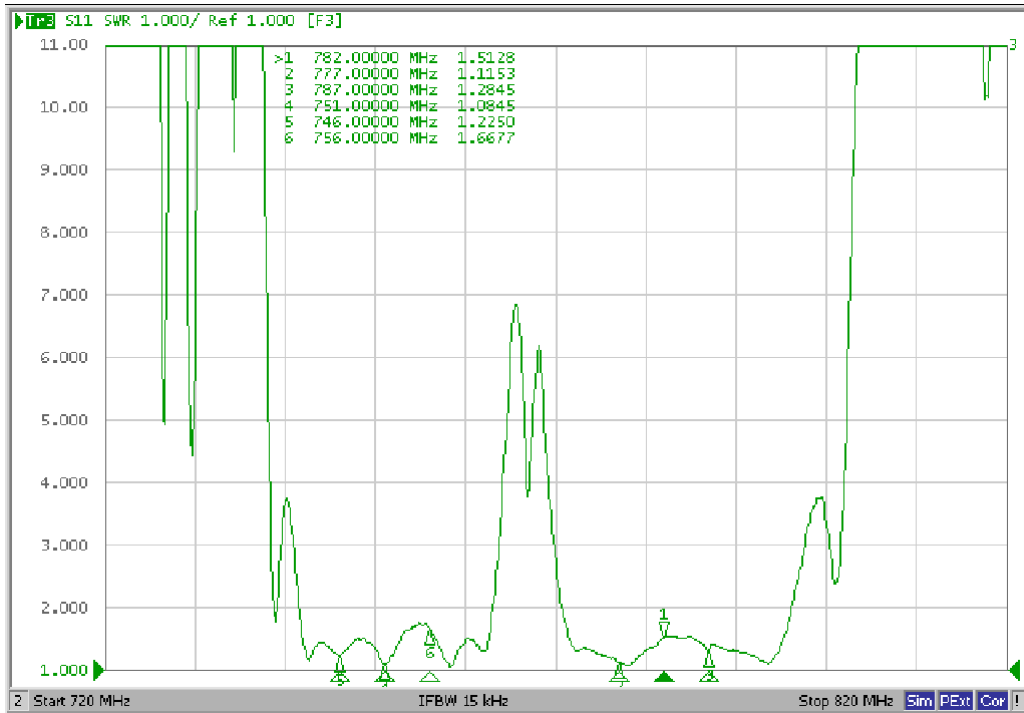
**VSWR (Rx Port)**



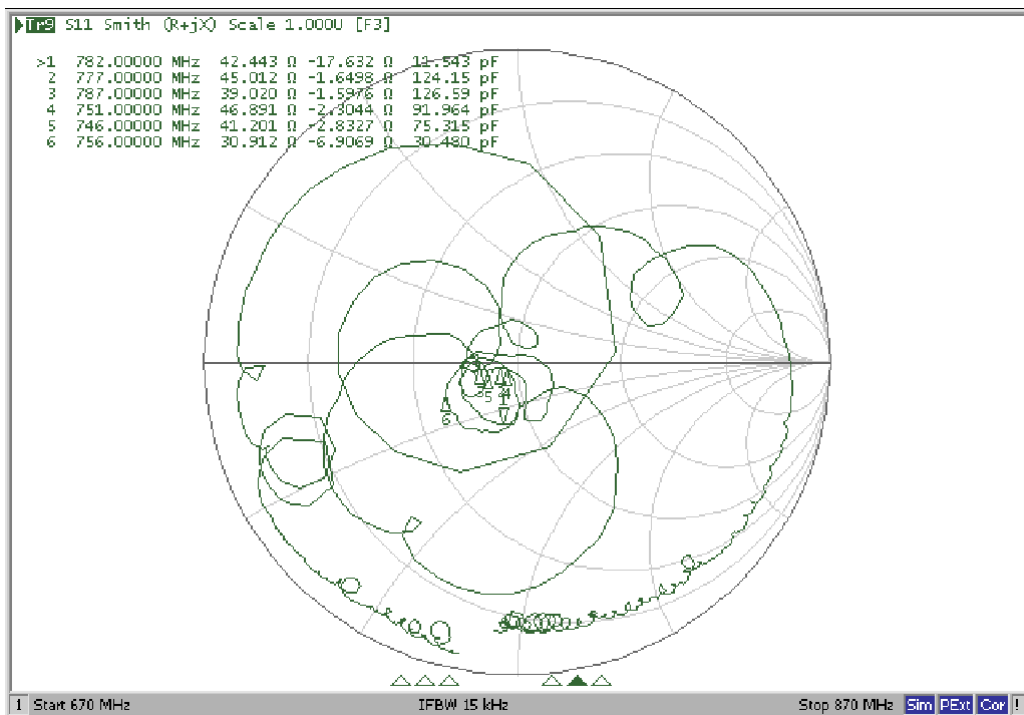
**Smith Chart (Rx Port)**



### VSWR (ANT Port)



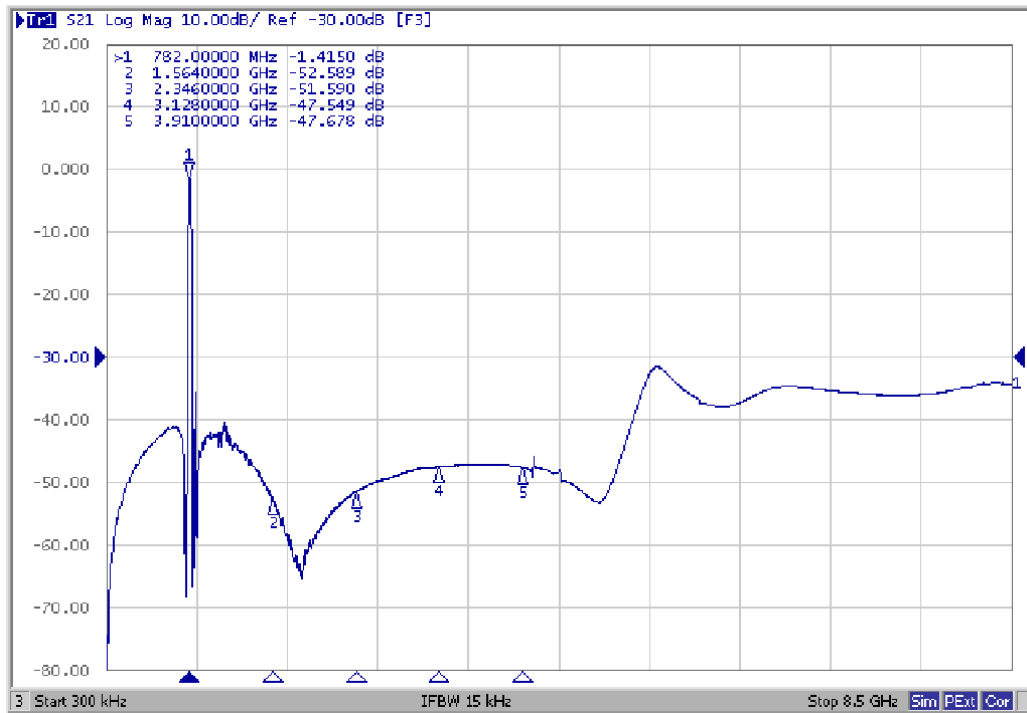
### Smith Chart (ANT Port)





Wide Span

Tx



Rx

