



Total Solution Provider in Saw Device

SD-1960T4-C45

Band 2, SAW Duplexer(Rx Single Port)

Revision 1: May 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	-	+85
Storage Temperature Range	°C	-40	-	+85
Maximum DC Voltage	V	0		
Input Power at Tx Port	dBm	29dBm, Ta=+50°C, 50kh, CW		
Antenna Impedance(single ended) ⁽¹⁾	Ω	50//4.3nH		
Tx Impedance(single ended) ⁽¹⁾	Ω	50		
Rx Impedance(single ended) ⁽¹⁾	Ω	50		
Package type		C45		
Length x Width	mm ²	2.0 x 1.6		
Height	mm	0.5		

Electrical Specification

Tx to Ant		Specifications				Remarks
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum	
Insertion Loss	1850.48 ~ 1909.52	dB	-	2.2	3.0	-20 to 85°C
	1850.6 ~ 1909.4	dB	-	2.2	3.0	
Ripple	1850.48 ~ 1909.52	dB _{p-p}	-	0.8	1.8	
VSWR of Ant Port	1850.48 ~ 1909.52	-	-	1.6	2.0	
VSWR of Tx Port	1850.48 ~ 1909.52	-	-	1.6	2.0	
Attenuation	1565.42 ~ 1573.374	dB	43	48	-	
	1573.374 ~ 1577.466	dB	43	48	-	
	1577.466 ~ 1585.42	dB	43	48	-	
	1930.48 ~ 1989.52	dB	44	48	-	-20 to 85°C
	1930.6 ~ 1989.4	dB	41	48	-	
	3700.0 ~ 3820.0	dB	20	27	-	
	5550.0 ~ 5730.0	dB	10	17	-	



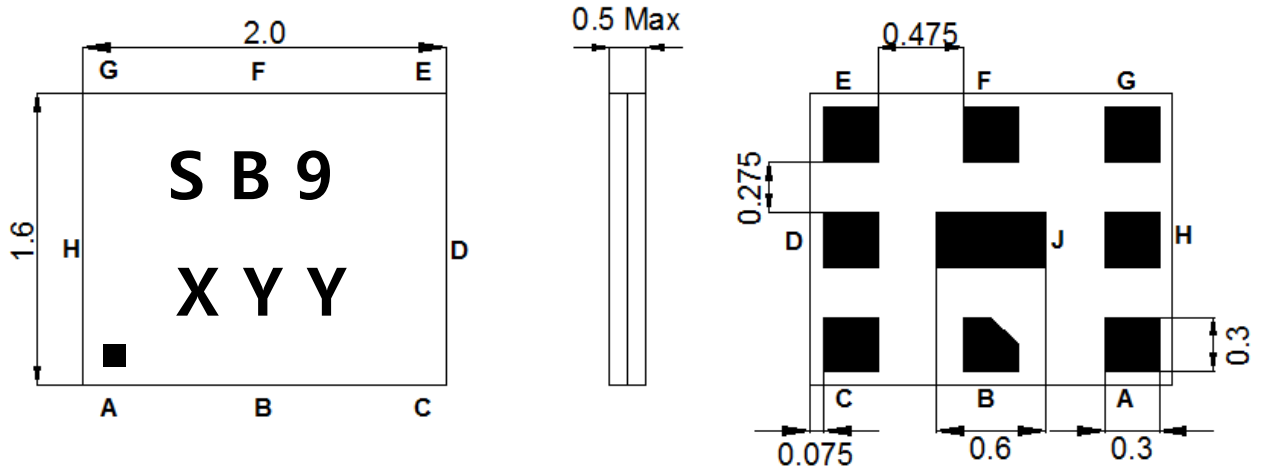
Ant to Rx		Specifications				Remarks
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum	
Insertion Loss	1930.48 ~ 1989.52	dB	-	2.7	3.5	-20 to 85°C
	1930.6 ~ 1989.4	dB	-	2.7	3.5	
Ripple	1930.48 ~ 1989.52	dB _{p-p}	-	1.4	2.2	
VSWR of Ant Port	1930.48 ~ 1989.52	-	-	1.8	2.2	
VSWR of Rx Port	1930.48 ~ 1989.52	-	-	1.8	2.2	
Attenuation	1850.48 ~ 1909.52	dB	45	48	-	-20 to 85°C
	1850.6 ~ 1909.4	dB	45	48	-	

Tx to Rx		Specifications				Remarks
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum	
Isolation in Tx Band	1850.48 ~ 1909.52	dB	53	57	-	-20 to 85°C
	1850.6 ~ 1909.4	dB	53	57	-	
Isolation in Rx Band	1930.48 ~ 1989.52	dB	48	52	-	-20 to 85°C
	1930.6 ~ 1989.4	dB	48	52	-	-10 to 85°C
		dB	45	52	-	

		Specifications				Remarks
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum	
Triple beat	1931.25 ~ 1988.75	dBc	-	-82	-	22dBm@ Tx Port -27dBm@ Ant Port

Notes : (1) With Matching Network

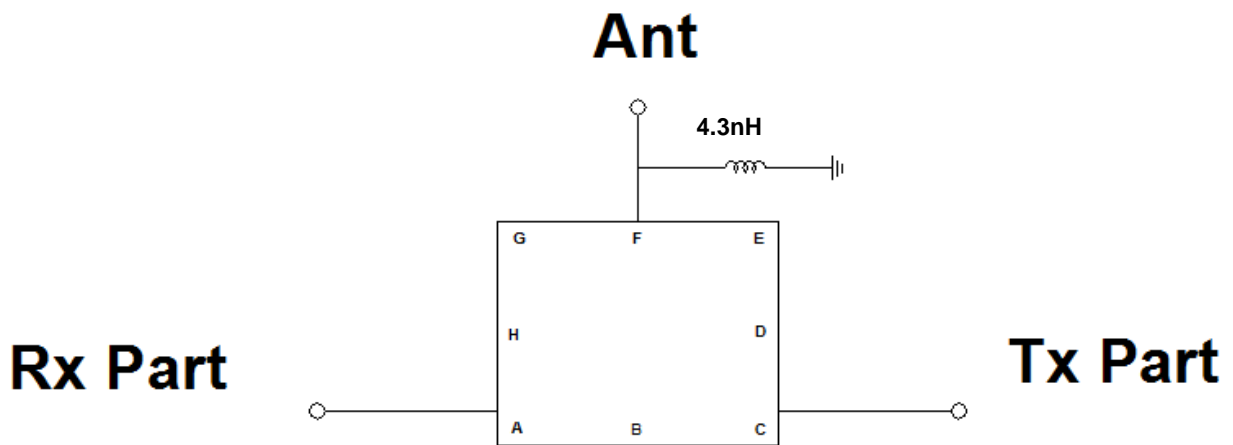
Package Dimensions



Marking Descriptions	
S	SAWNICS
B9	Series Number
X	Date Code(Year+Month)
YY	Lot No

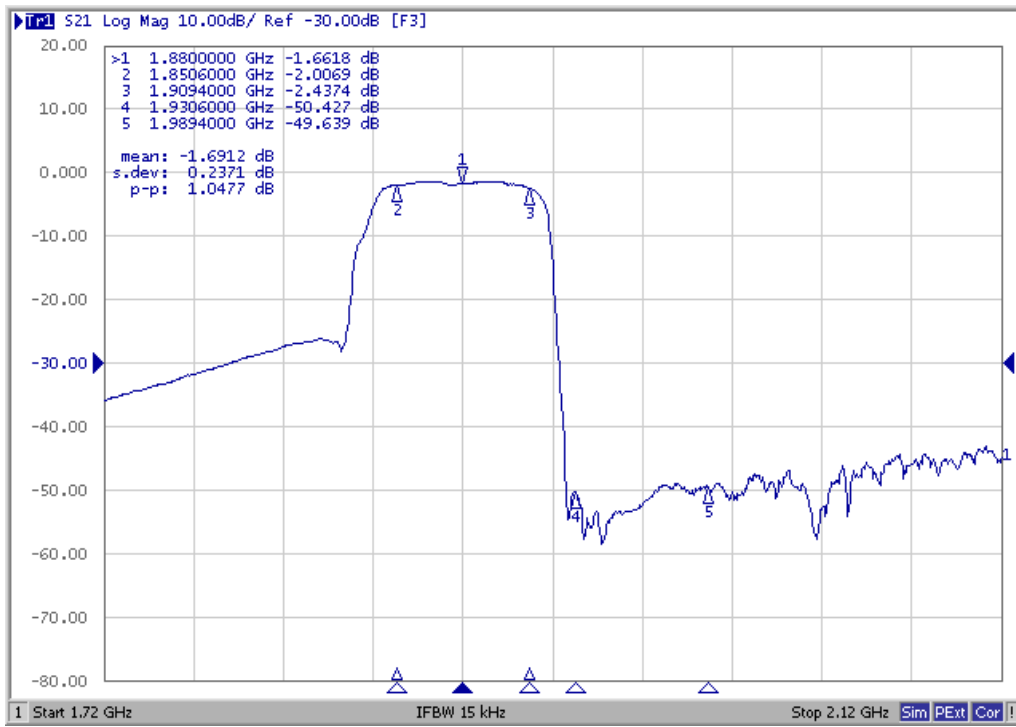
Pin Description	
B,D,E,G,H,J	Ground
F	Ant
C	Tx (1880.0MHz)
A	Rx (1960.0MHz)

Testing Environment

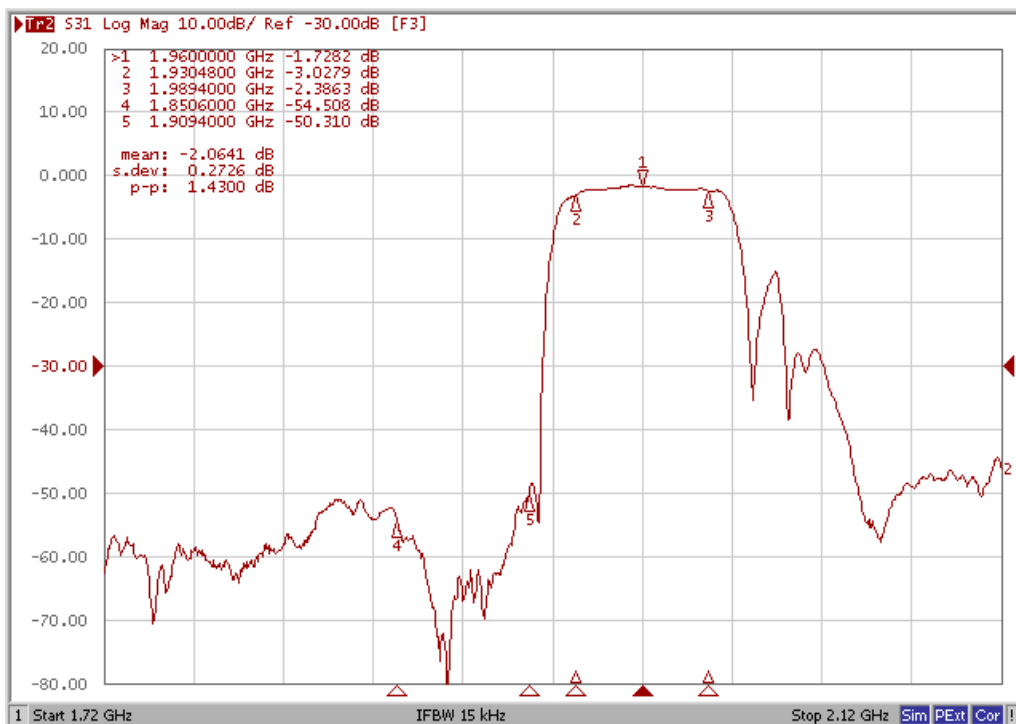


□ Frequency Characteristics

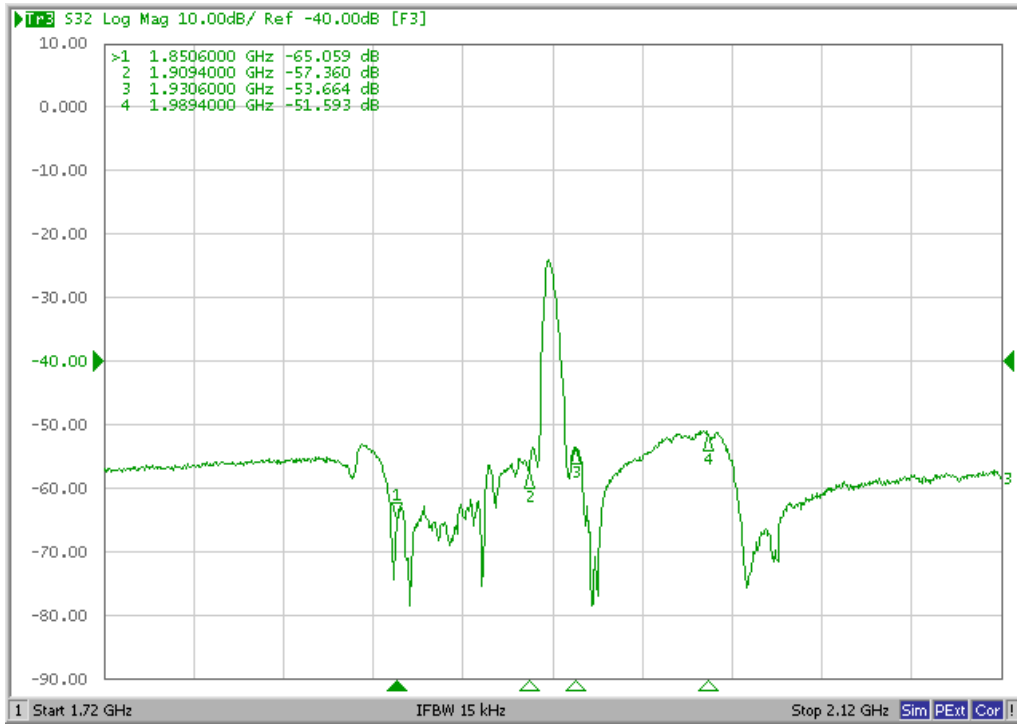
Tx to Ant



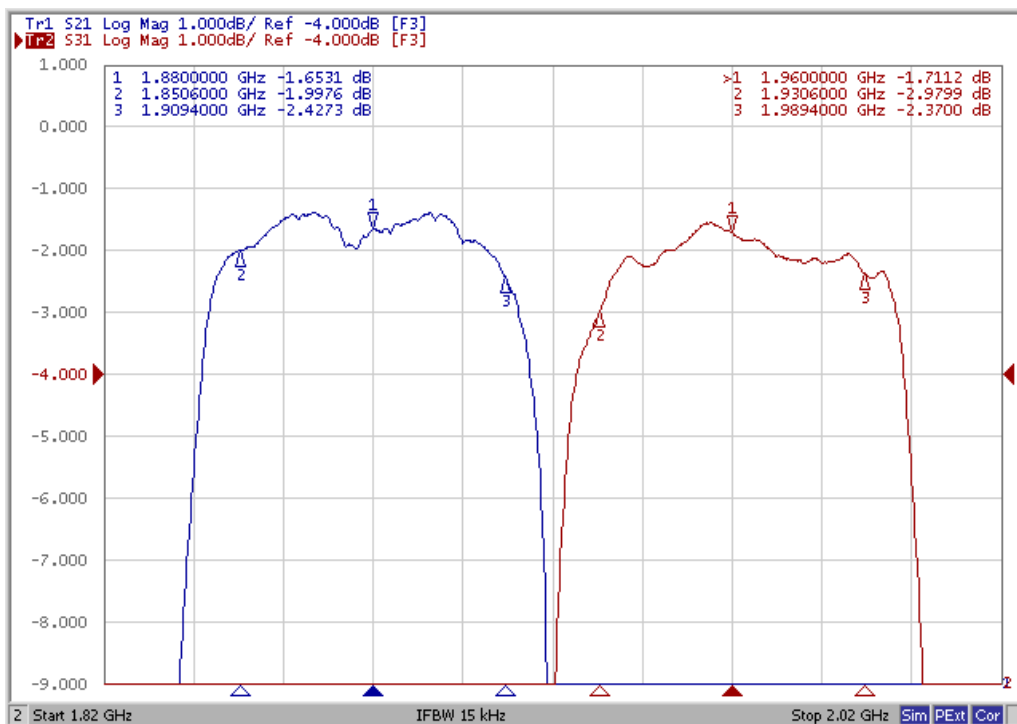
Ant to Rx



Isolation

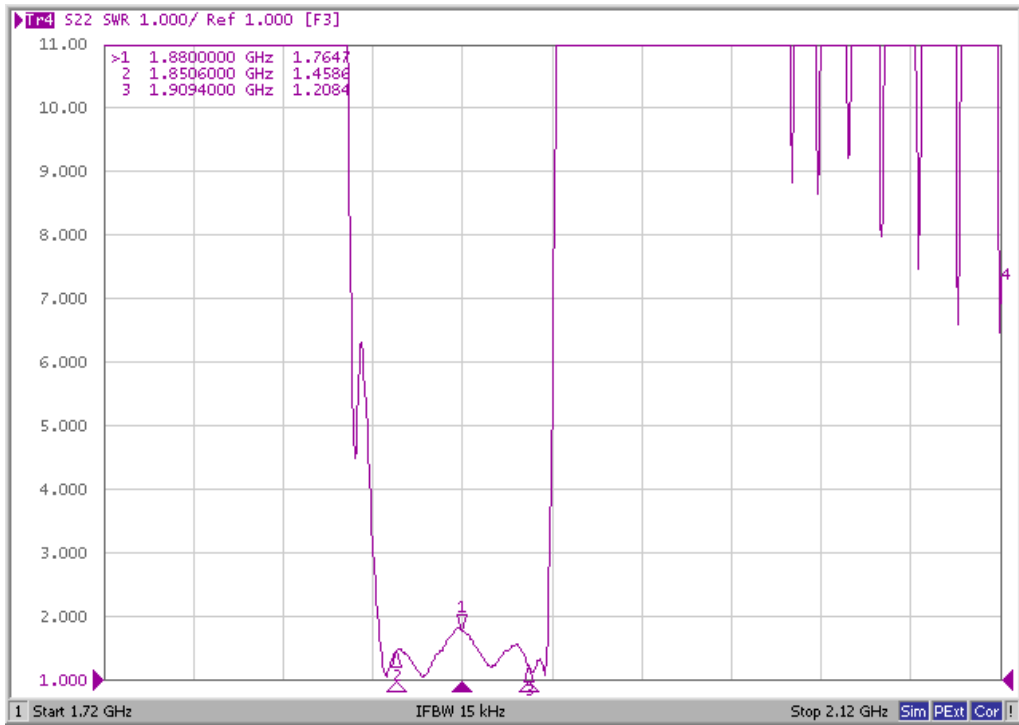


Ripple

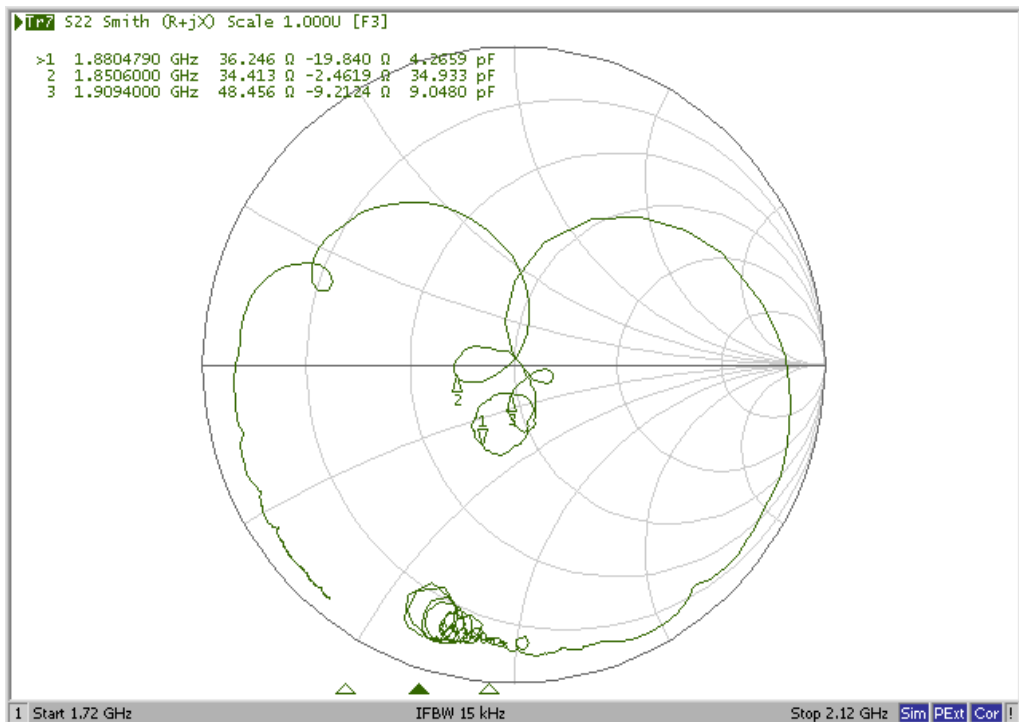




VSWR (Tx Port)

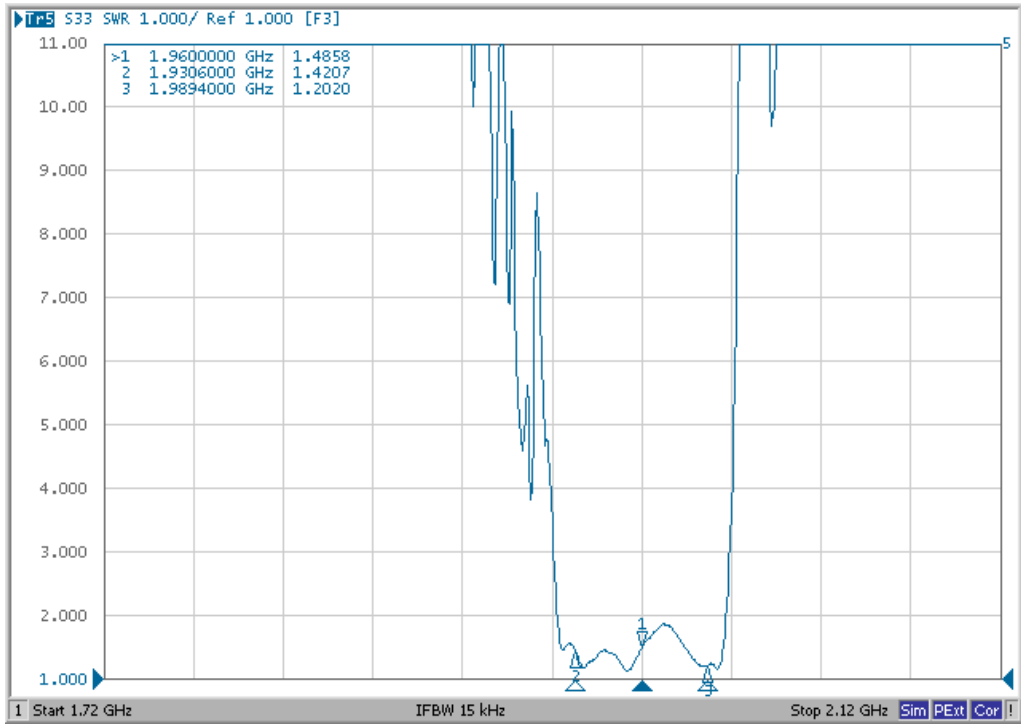


Smith Chart (Tx Port)

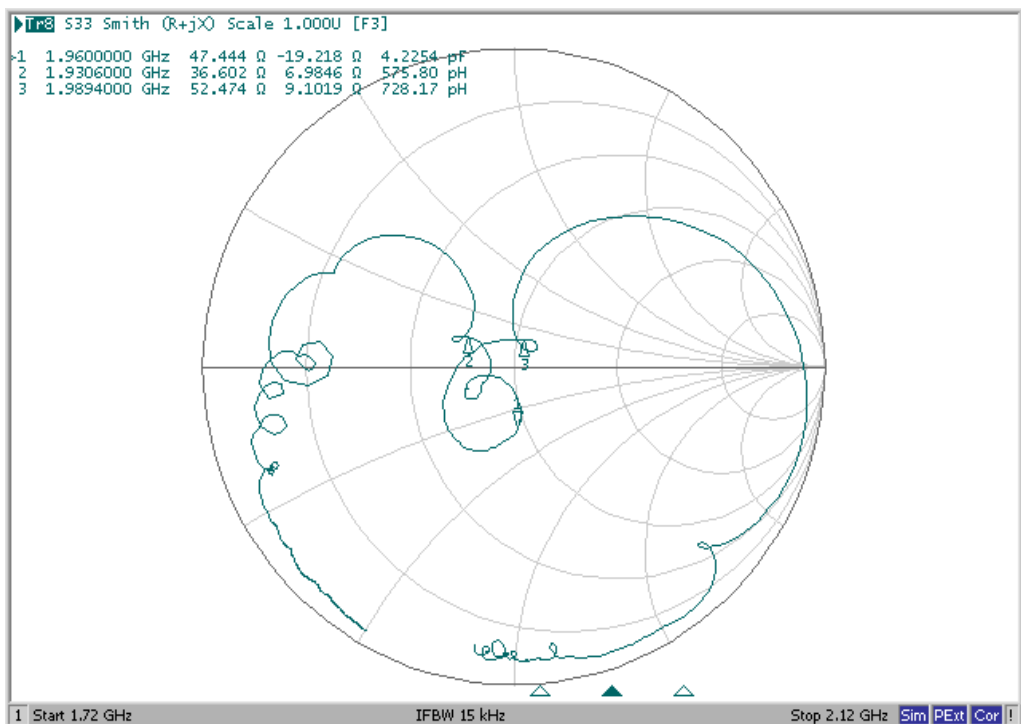




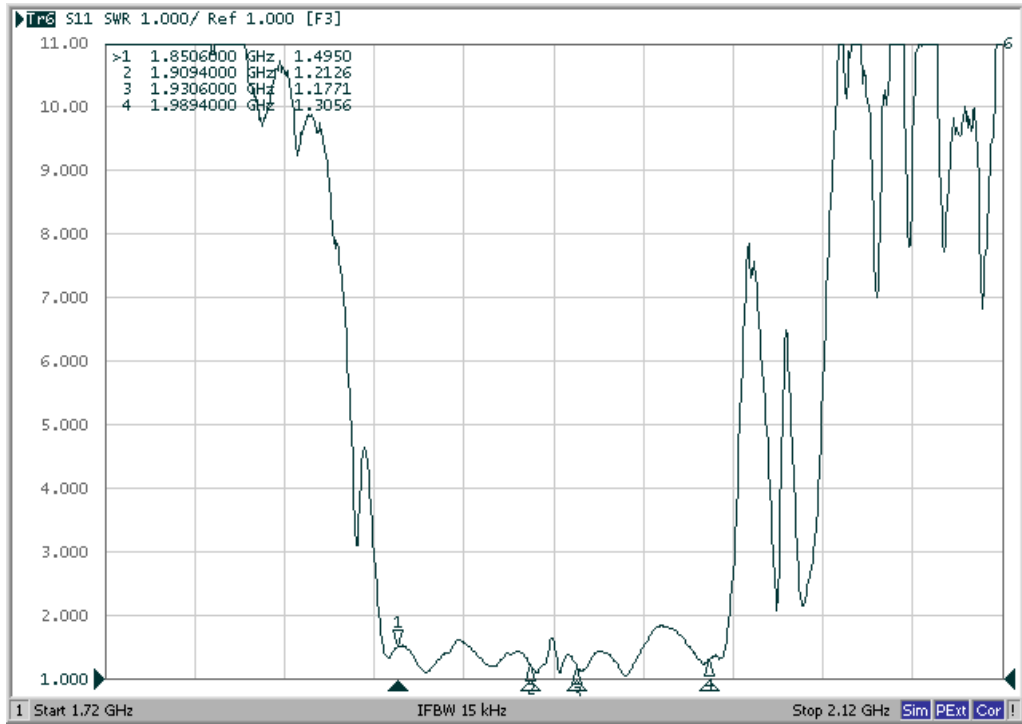
VSWR (Rx Port)



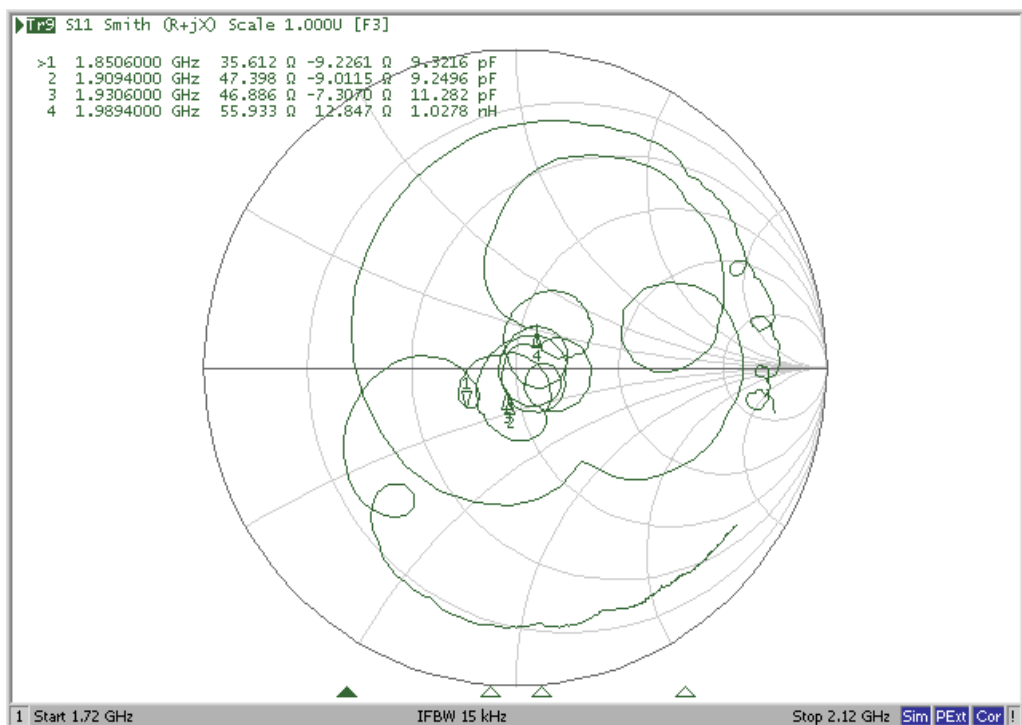
Smith Chart (Rx Port)



VSWR (ANT Port)



Smith Chart (ANT Port)





Wide Span

