



SK3050DB

Band 5, Rx Balanced SAW Duplexer
Revision 0: June 2017

MSL 3 Device



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

□ Electrical Characteristics

Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operation Temperature Range	°C	-20	-	+85
Storage Temperature Range	°C	-40	-	+85
Maximum DC Voltage	V	0		
Input Power at Tx Port	dBm	29dBm, Ta=+50deg.C, 50000h, CW		
Antenna Impedance(unbalanced) ⁽¹⁾	Ω	50//9.1nH		
Tx Impedance(unbalanced)	Ω	50		
Rx Impedance(balanced) ⁽¹⁾	Ω	100//56nH		
Package type		C64		
Length x Width	mm ²	1.8 x 1.4		
Height	mm	0.65		

Electrical Specification

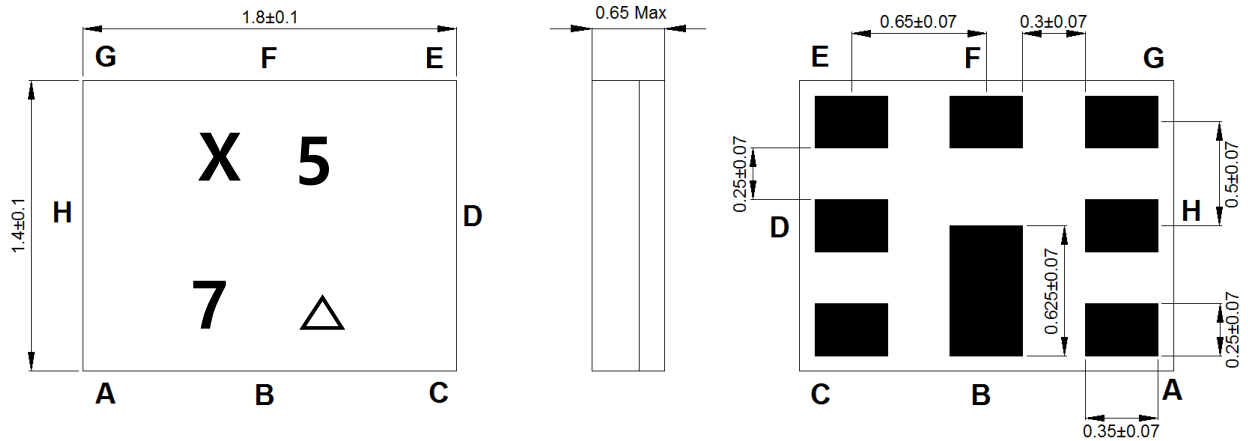
Tx to Ant		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Insertion Loss	824.0 ~ 849.0	dB	-	1.7	2.0
Ripple	824.0 ~ 849.0	dB	-	0.8	1.2
VSWR of Tx Port	824.0 ~ 849.0	-	-	1.6	2.0
VSWR of Ant Port	824.0 ~ 849.0	-	-	1.6	2.0
Attenuation	779.0 ~ 804.0	dB	35	41	-
	869.0 ~ 894.0	dB	44	48	-
	1565.42 ~ 1605.89	dB	40	46	-
	1648.0 ~ 1698.0	dB	38	44	-
	1710.0 ~ 1785.0	dB	35	42	-
	1805.0 ~ 1880.0	dB	33	40	-
	1920.0 ~ 1980.0	dB	30	38	-
	2110.0 ~ 2170.0	dB	30	36	-
	2400.0 ~ 2557.0	dB	25	32	-
	4900.0 ~ 5950.0	dB	25	37	-

Ant to Rx		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Insertion Loss	869.0 ~ 894.0	dB	-	1.9	2.3
Ripple	869.0 ~ 894.0	dB	-	0.6	1.2
Phase Balance	869.0 ~ 894.0	deg	-10	+1.0/+3.4	+10
Amplitude Balance	869.0 ~ 894.0	dB	-1.0	-0.1/+0.2	+1.0
VSWR of Ant Port	869.0 ~ 894.0	-	-	1.7	2.0
VSWR of Rx Port	869.0 ~ 894.0	-	-	1.7	2.0
Attenuation	824.0 ~ 849.0	dB	50	55	-
	1710.0 ~ 1788.0	dB	45	52	-
	1850.0 ~ 1920.0	dB	45	51	-
	1920.0 ~ 1980.0	dB	45	51	-
	2400.0 ~ 2500.0	dB	44	48	-
	3476.0 ~ 3576.0	dB	40	47	-
	4900.0 ~ 5950.0	dB	30	40	-

Tx to Rx		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Isolation	824.0 ~ 849.0	dB	55	59	-
	869.0 ~ 894.0	dB	50	53	-

Notes : (1) With Matching Network.

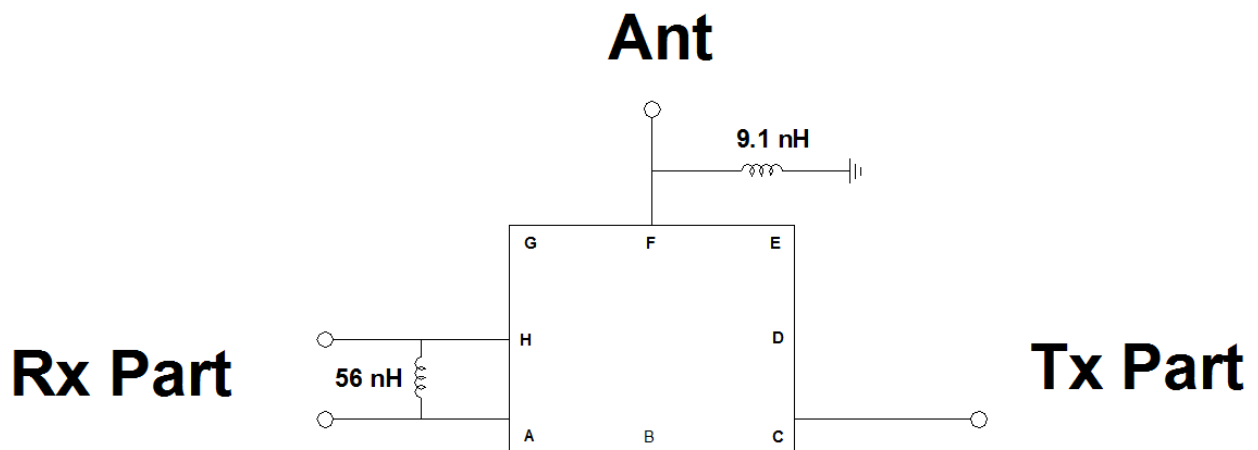
Package Dimensions



Marking Descriptions	
X	S or W
5	Band Class
7	Series Number
△	Date Code(Year+Month)

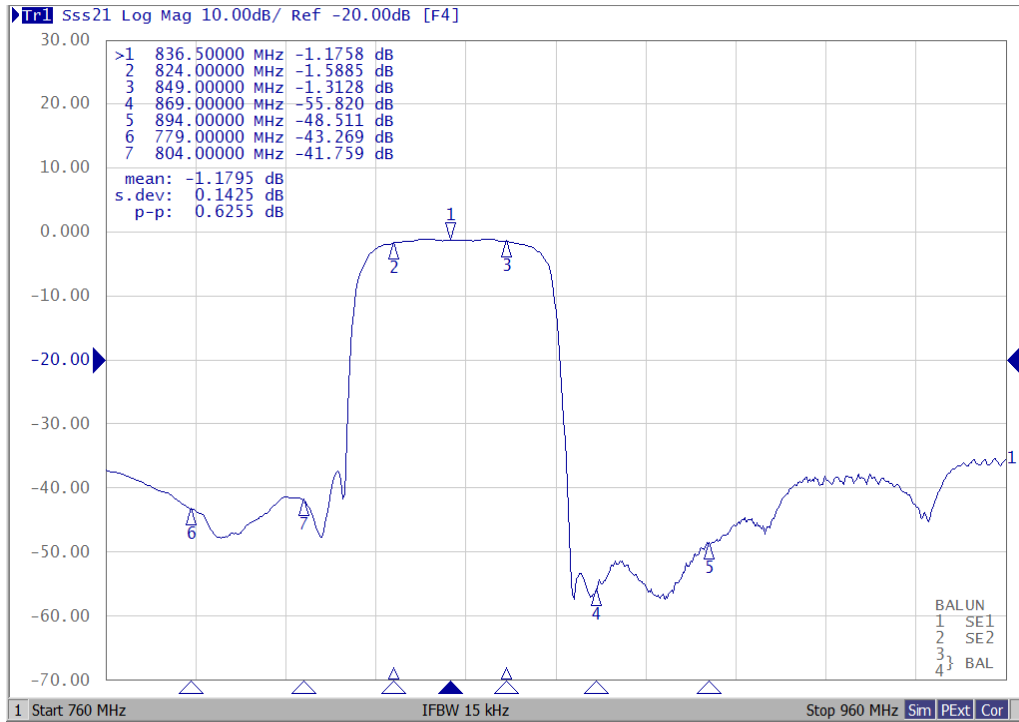
Pin Description	
B,D,E,G	Ground
F	Ant
C	Tx (836.5MHz)
A,H	Rx (881.5MHz)

Testing Environment



□ Frequency Characteristics

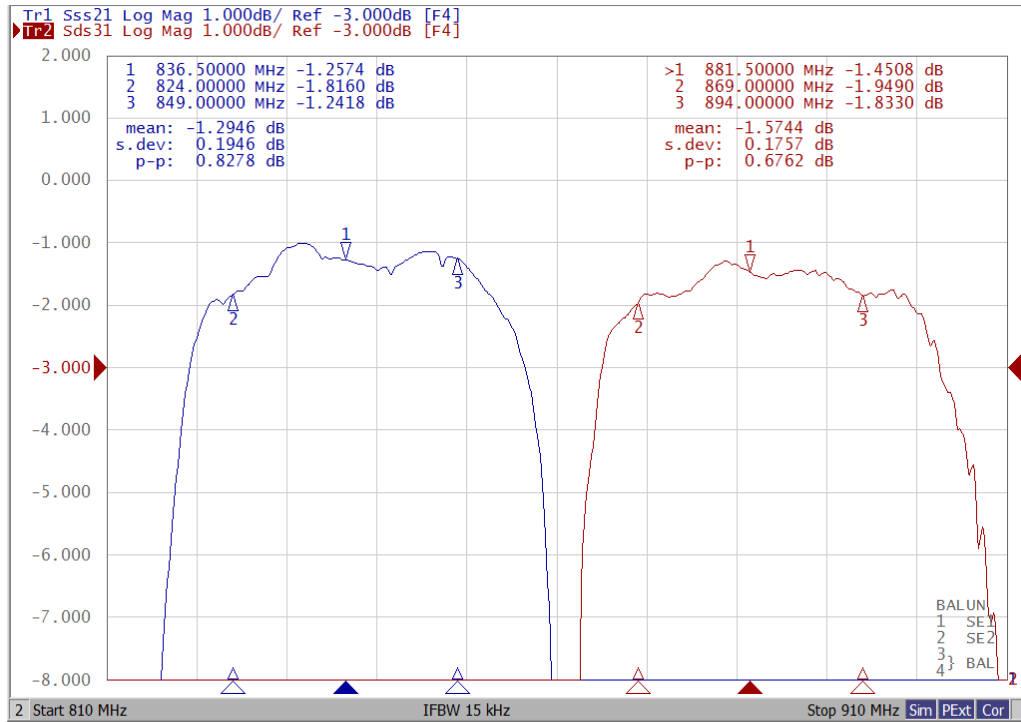
Tx to Ant



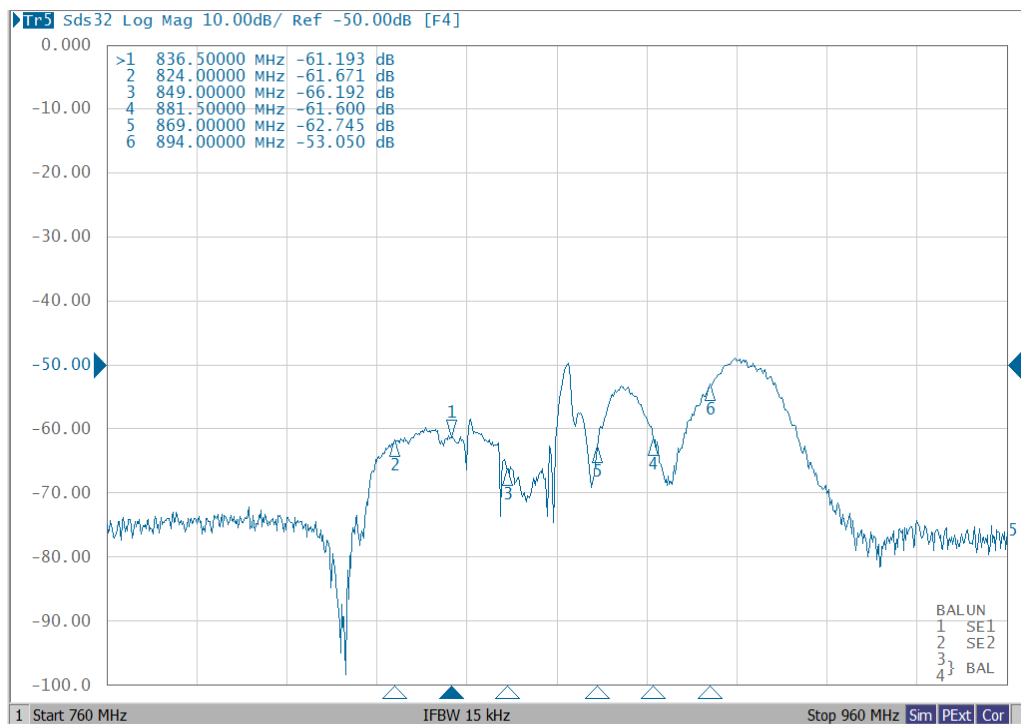
Ant to Rx



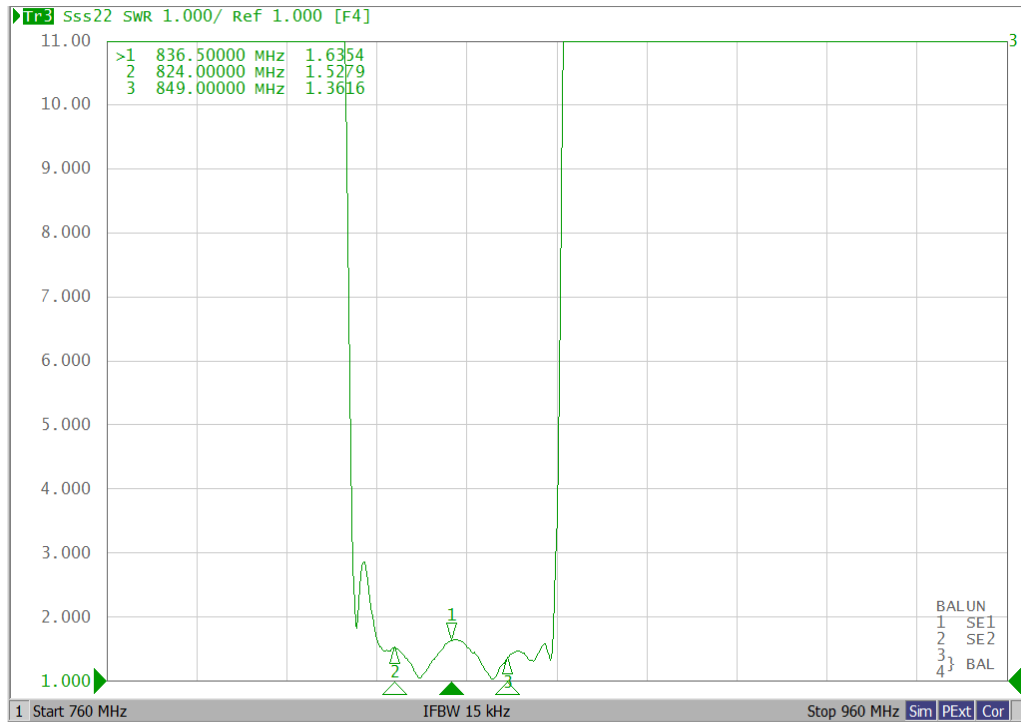
Ripple



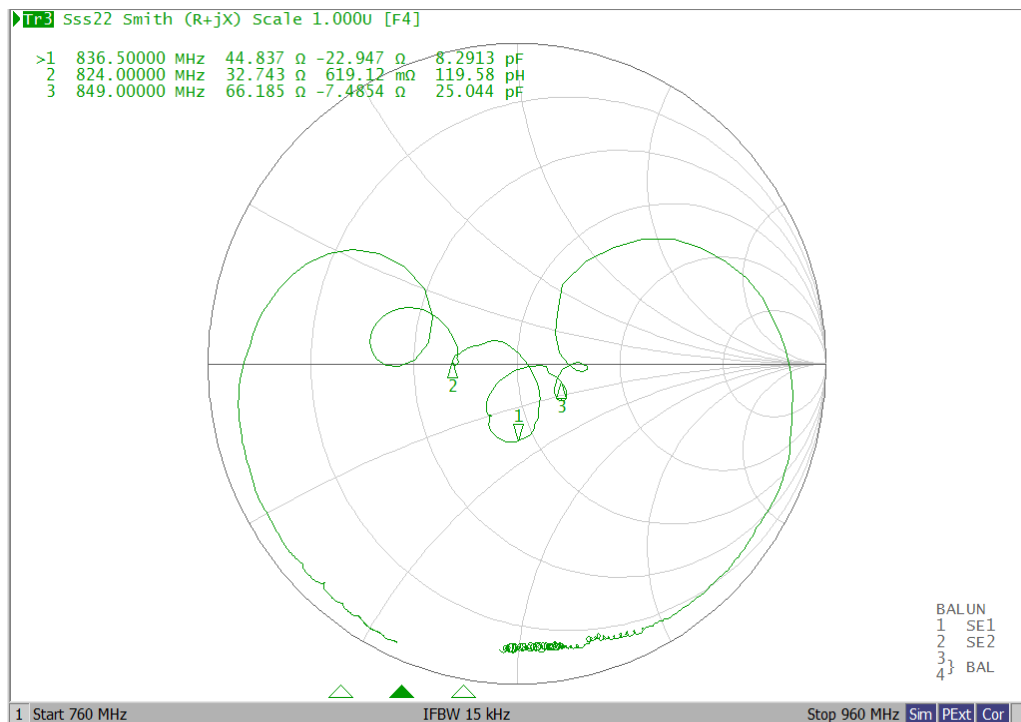
Isolation



VSWR (Tx Port)



Smith Chart (Tx Port)



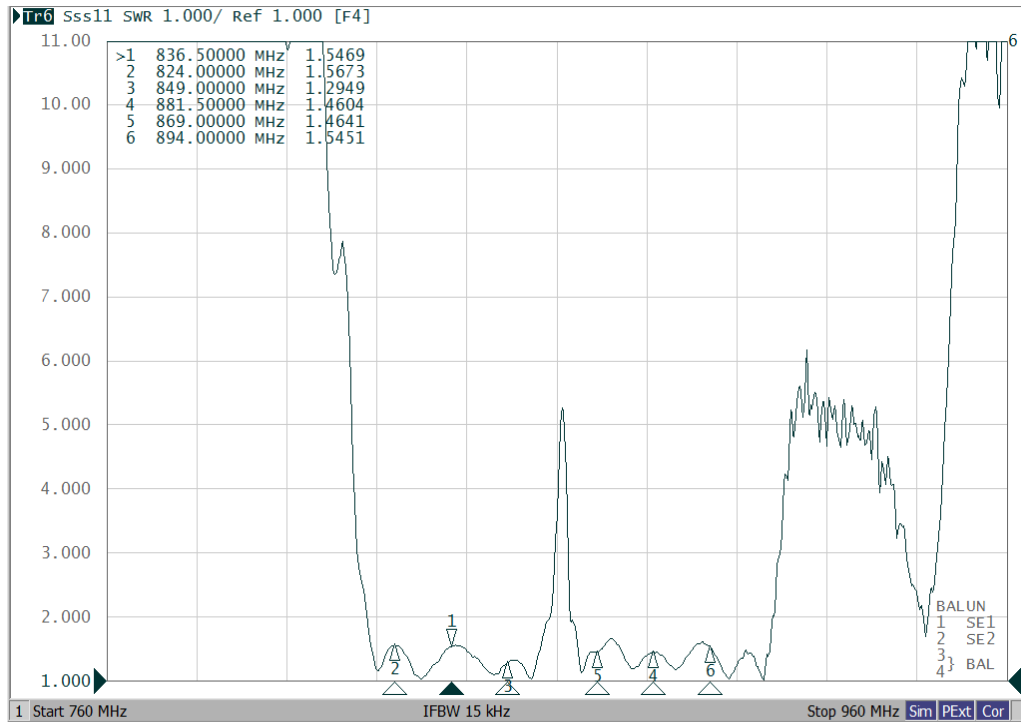
VSWR (Rx Port)



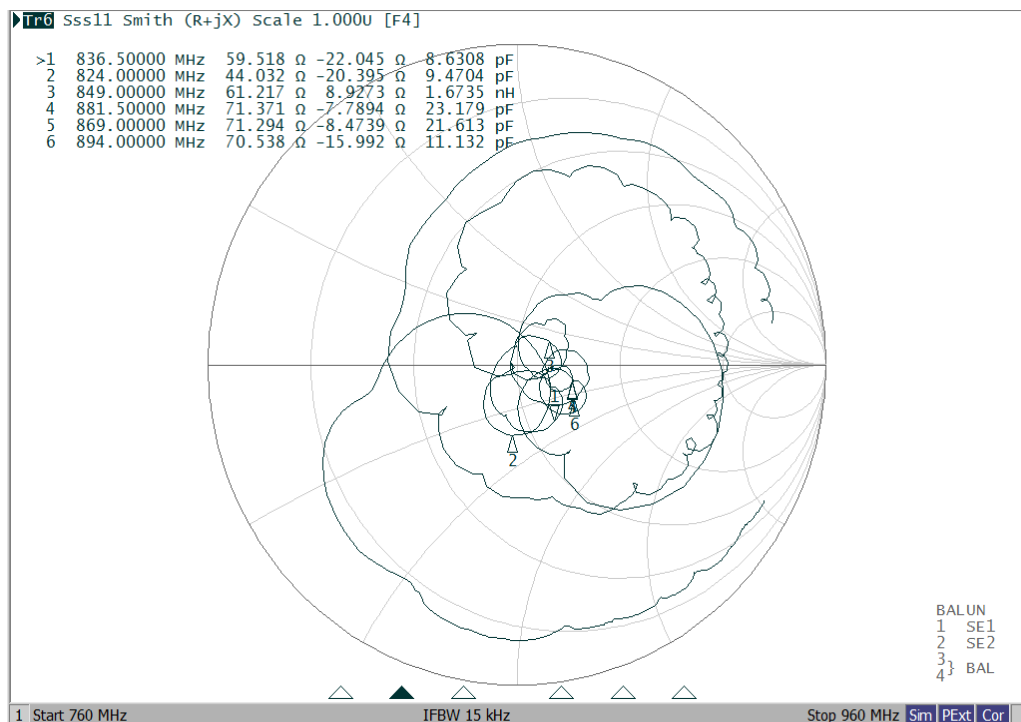
Smith Chart (Rx Port)



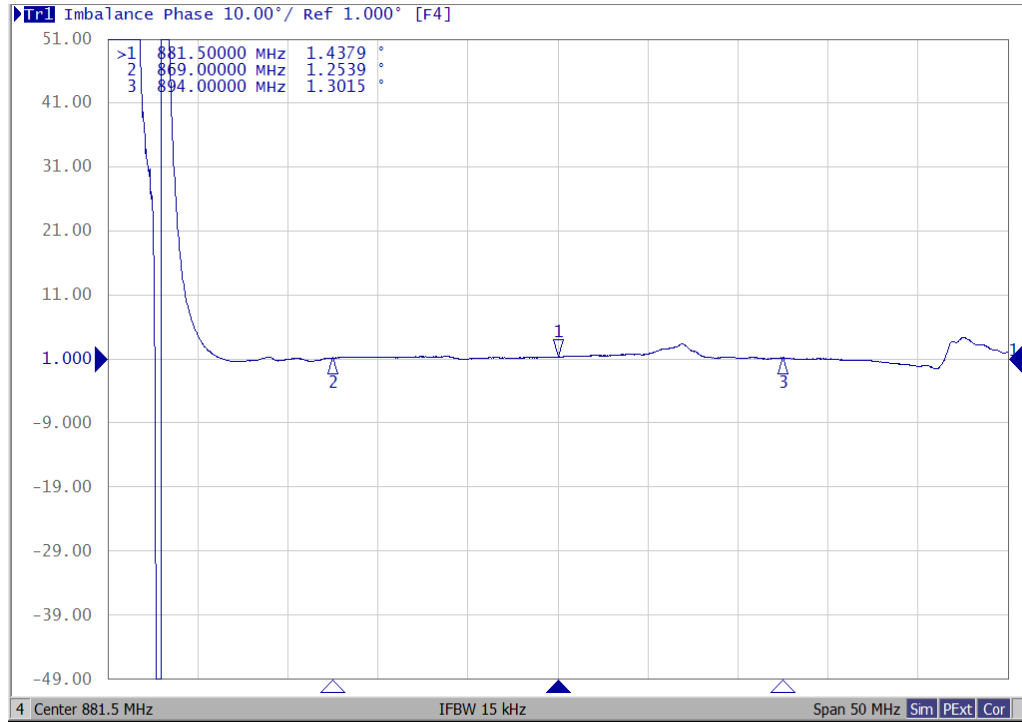
VSWR (ANT Port)



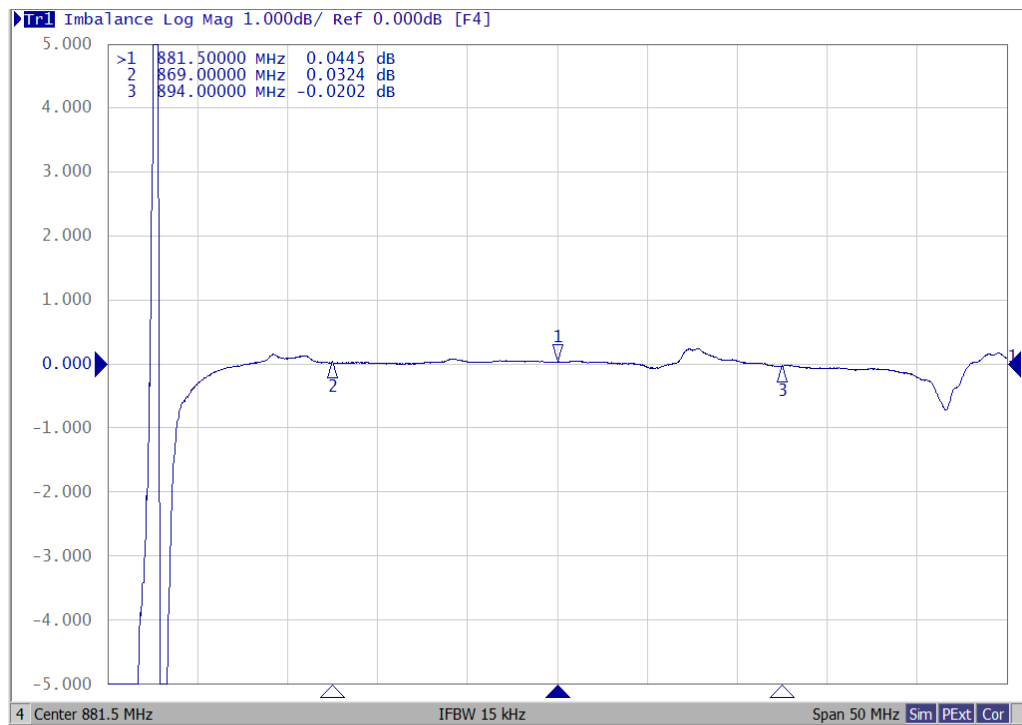
Smith Chart (ANT Port)



Phase Balance



Amplitude Balance



Wide Span

