



Total Solution Provider in Saw Device

SD-0740T1-C45

Band 17, SAW Duplexer
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, 50000h, CW Tone		
Antenna Impedance(single ended)	Ω	50//12nH(Q=∞)		
Tx Impedance(single ended)	Ω	50		
Rx Impedance (balanced) ⁽¹⁾	Ω	100		
Package type		C45		
Length x Width	mm ²	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	704.0 ~ 716.0	dB	-	1.9	2.6
Ripple	704.0 ~ 716.0	dB _{p-p}	-	0.8	1.5
VSWR of Ant Port	704.0 ~ 716.0	-	-	1.5	2.0
VSWR of Tx Port	704.0 ~ 716.0	-	-	1.7	2.1
Attenuation	DC ~ 686.0	dB	30	42	-
	686.0 ~ 698.0	dB	1	3.5	-
	722.0 ~ 728.0	dB	2	5.5	-
	728.0 ~ 734.0	dB	18	48	-
	734.0 ~ 746.0	dB	45	58	-
	746.0 ~ 768.0	dB	30	42	-
	768.0 ~ 805.0	dB	25	39	-
	869.0 ~ 894.0	dB	30	39	-
	1408.0 ~ 1432.0	dB	35	51	-
	1574.0 ~ 1577.0	dB	45	51	-
	1805.0 ~ 1880.0	dB	30	42	-
	1930.0 ~ 1990.0	dB	30	40	-
	2110.0 ~ 2170.0	dB	34	38	-
	2400.0 ~ 2500.0	dB	30	34	-
2500.0 ~ 3000.0	dB	15	30	-	

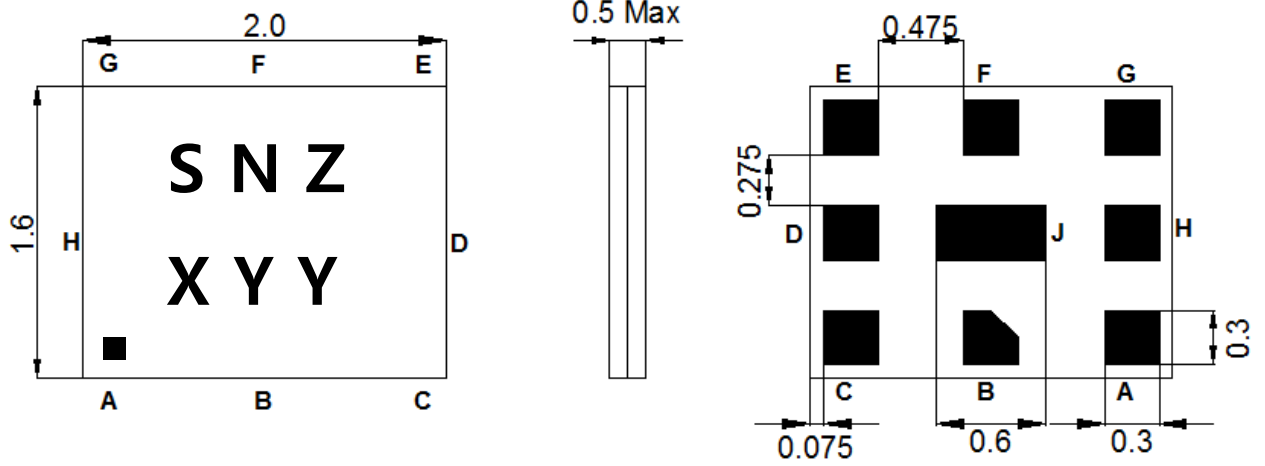


Ant to Rx		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Insertion Loss	734.0 ~ 746.0	dB	-	2.0	2.6
Ripple	734.0 ~ 746.0	dB _{p-p}	-	0.8	1.4
VSWR of Ant Port	734.0 ~ 746.0	-	-	1.5	2.0
VSWR of Rx Port	734.0 ~ 746.0	-	-	1.6	2.0
Attenuation	DC ~ 704.0	dB	53	61	-
	704.0 ~ 716.0	dB	50	64	-
	716.0 ~ 722.0	dB	40	59	-
	722.0 ~ 727.0	dB	15	39	-
	727.0 ~ 728.0	dB	2	38	-
	776.0 ~ 805.0	dB	35	38	-
	805.0 ~ 6000.0	dB	30	49	-
Amplitude balance(S ₃₁ /S ₄₁)	734.0 ~ 746.0	dB	-1.3	-0.7/+0.7	+1.3
Phase balance $\Phi(S_{31}) - \Phi(S_{41}) + 180^\circ$	734.0 ~ 746.0	deg	-10	-3/+3	+10

Tx to Rx		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Isolation	704.0 ~ 716.0	dB	55	63	-
	734.0 ~ 746.0	dB	50	60	-

Notes : (1) With Matching Network .

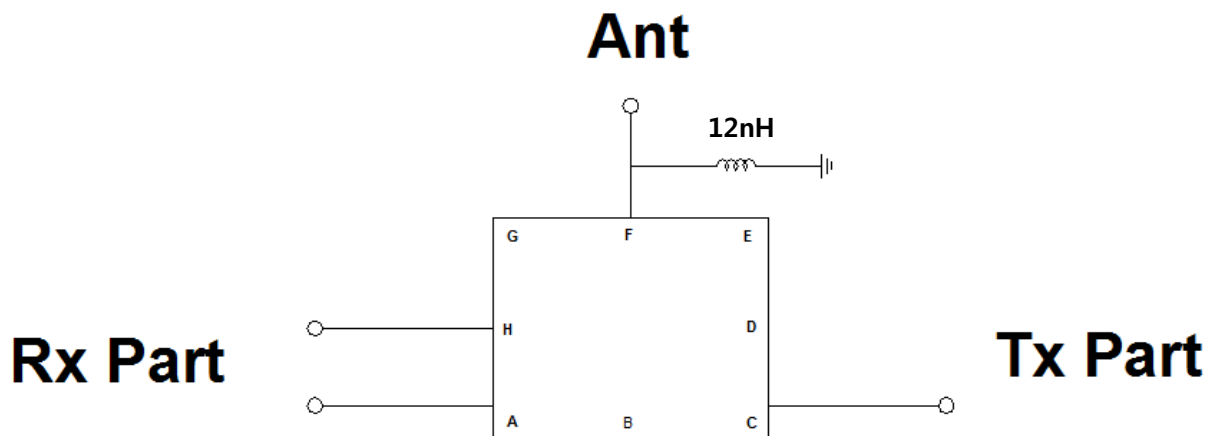
Package Dimensions



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

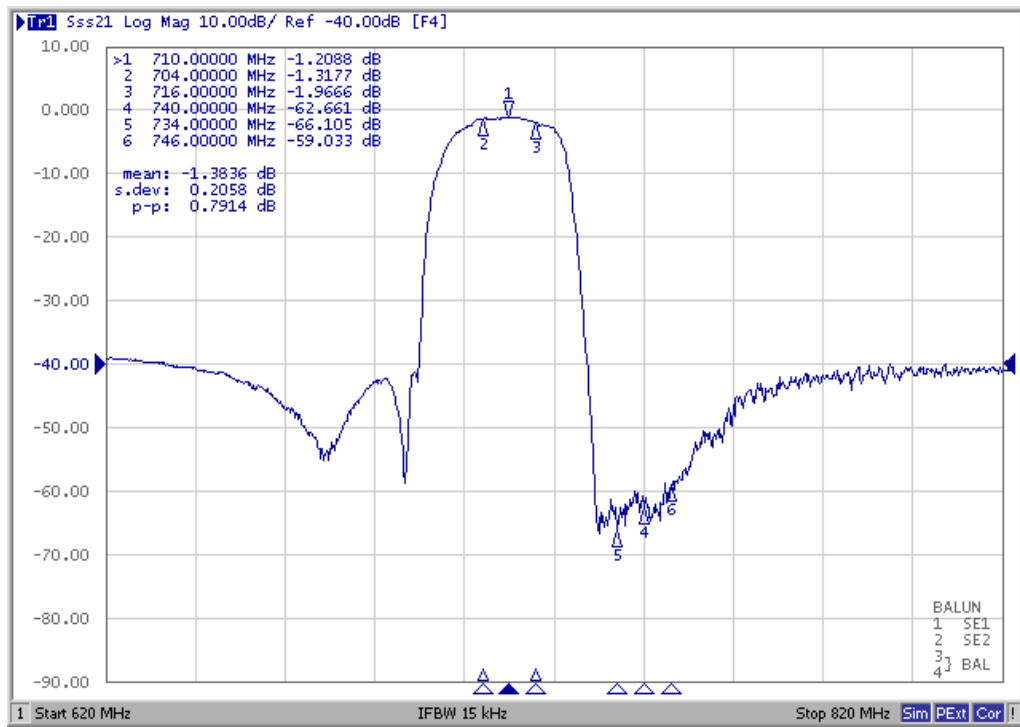
Pin Description	
B,D,E,G	Ground
F	Ant
C	Tx (710MHz)
A, H	Rx (740MHz)

Testing Environment

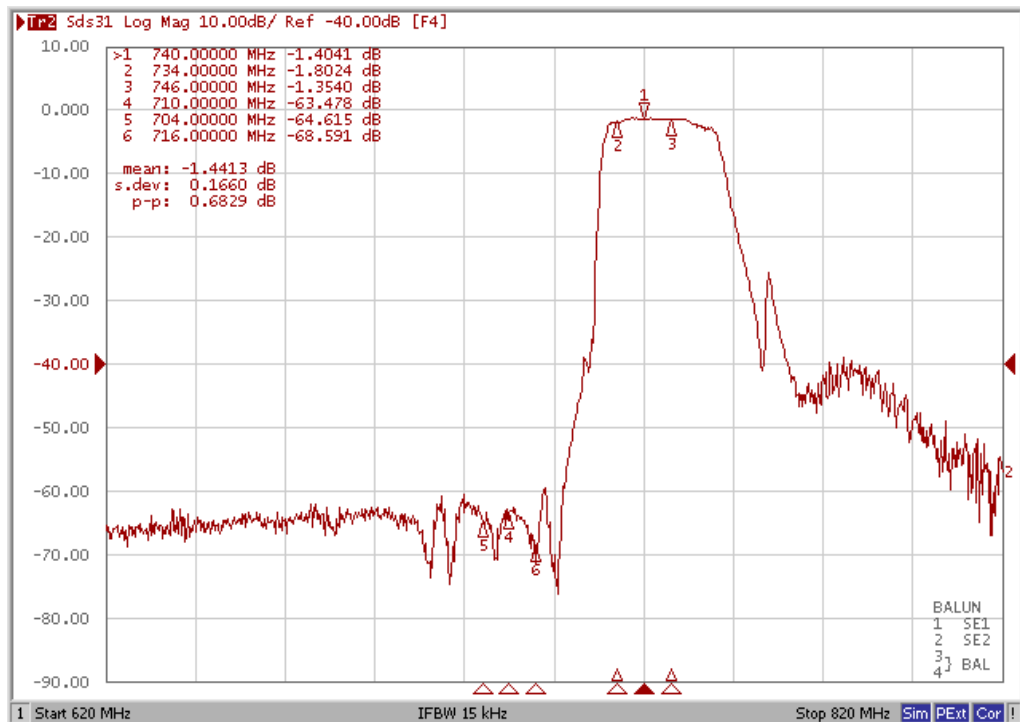


□ Frequency Characteristics

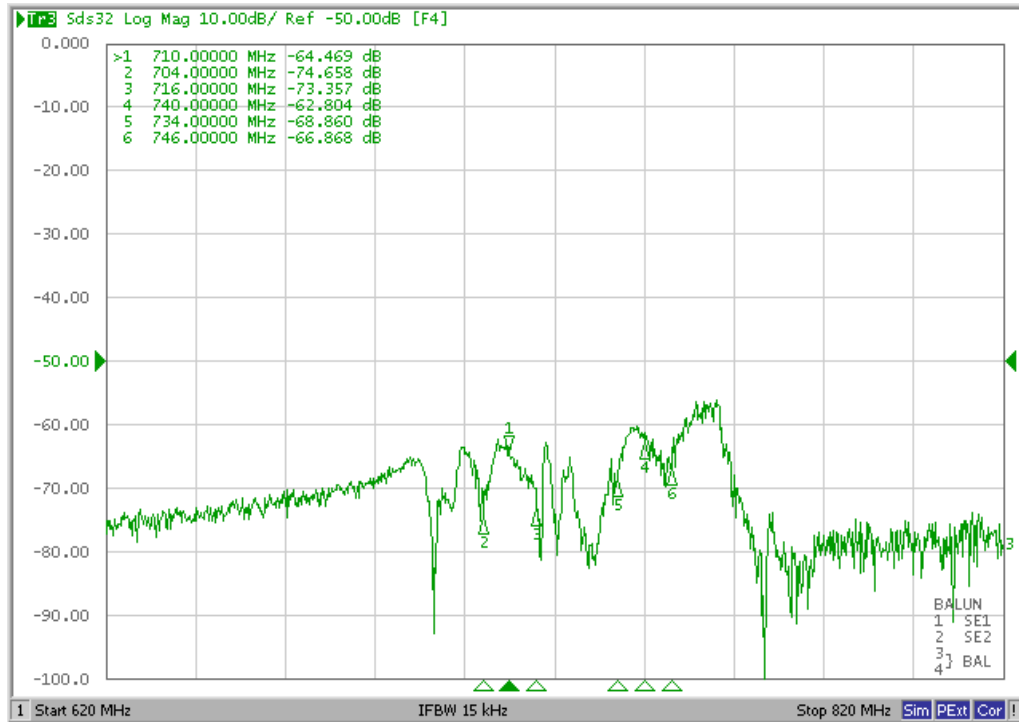
Tx to Ant



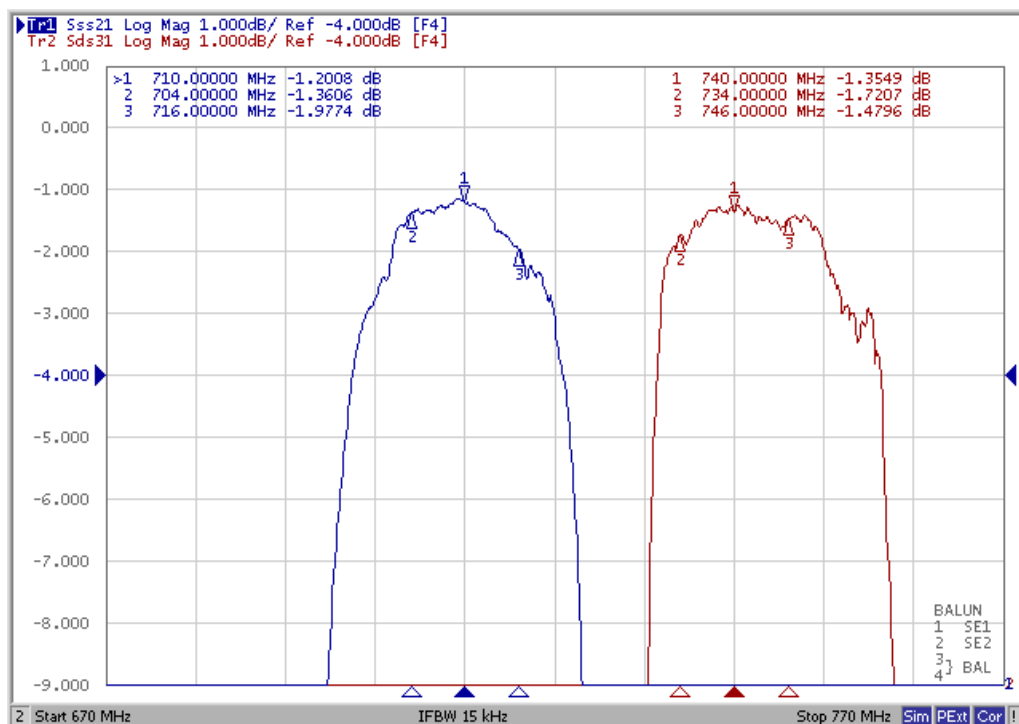
Ant to Rx



Isolation

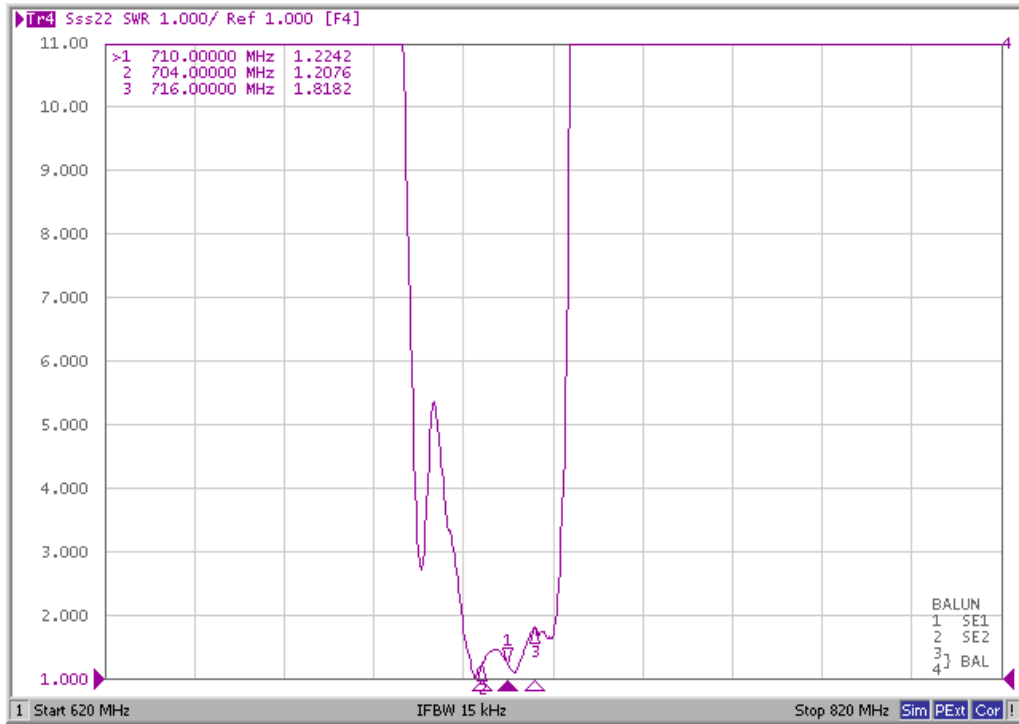


Ripple

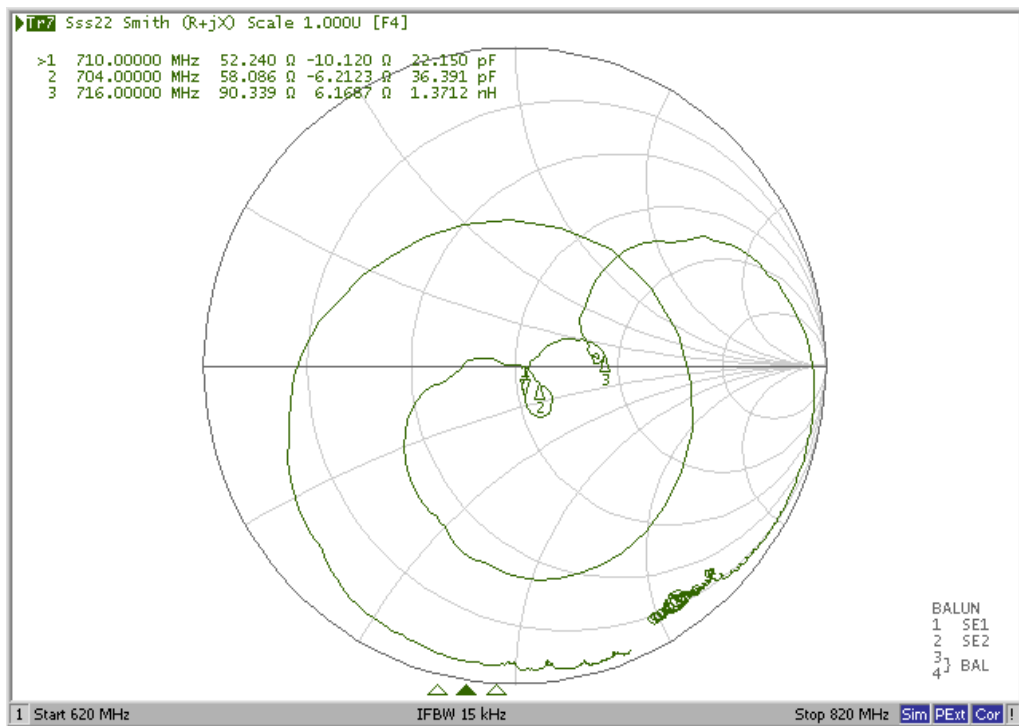




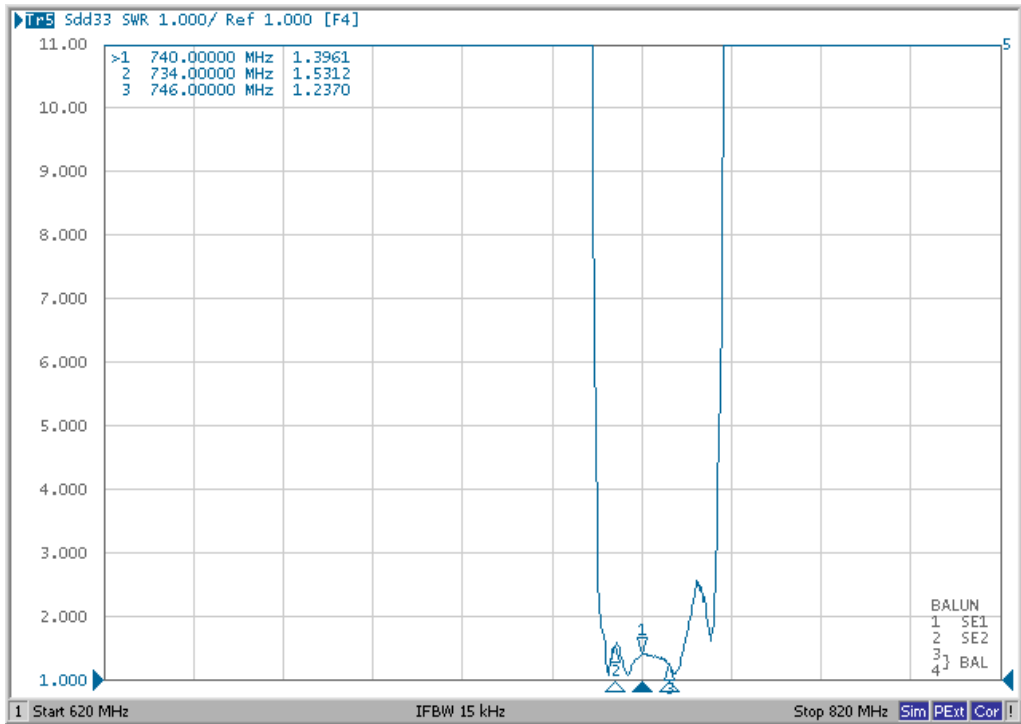
VSWR (Tx Port)



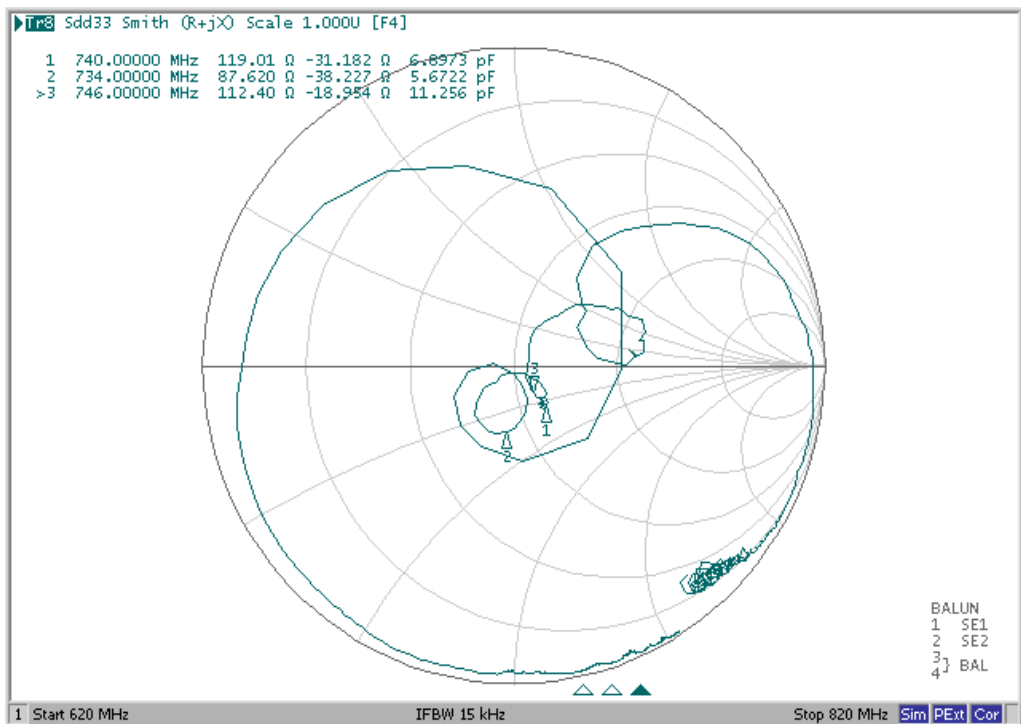
Smith Chart (Tx Port)



VSWR (Rx Port)

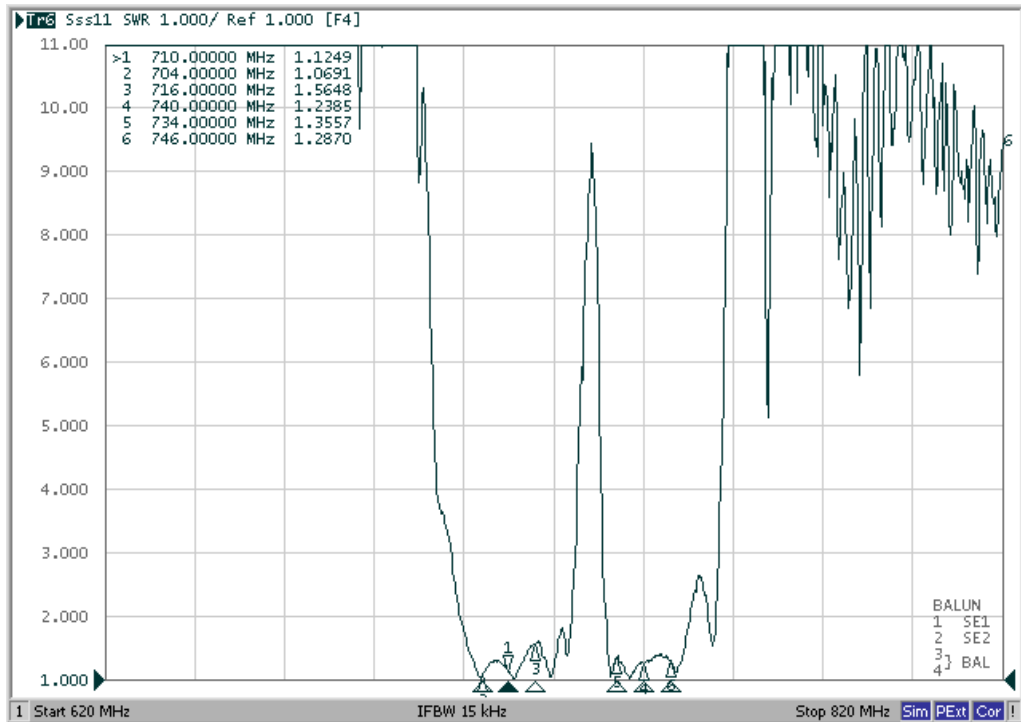


Smith Chart (Rx Port)

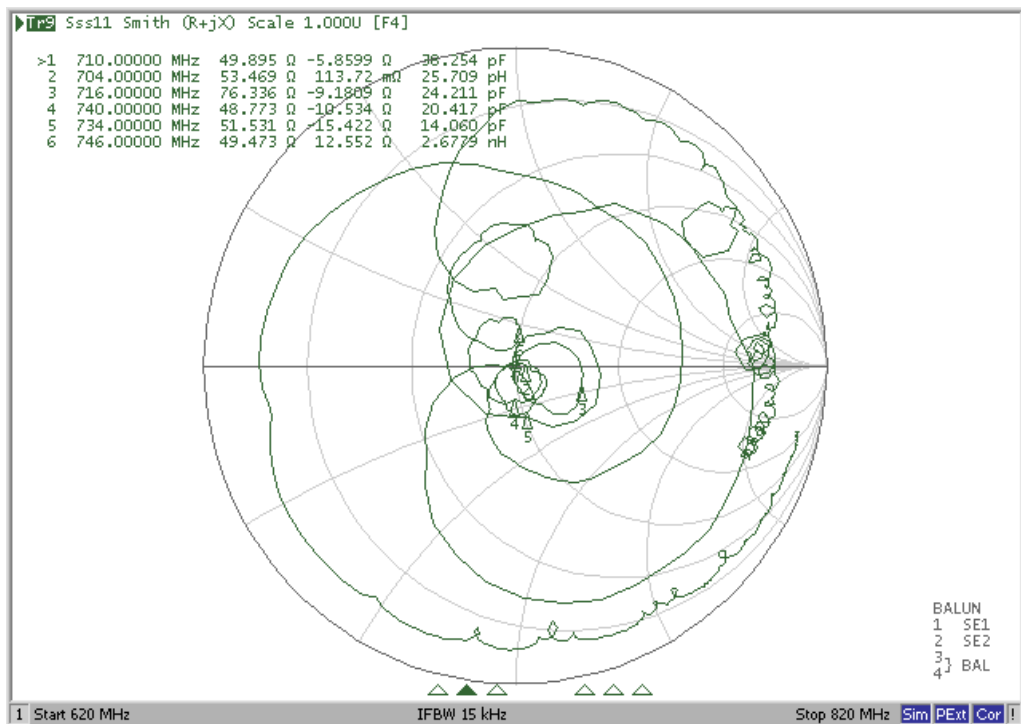




VSWR (ANT Port)

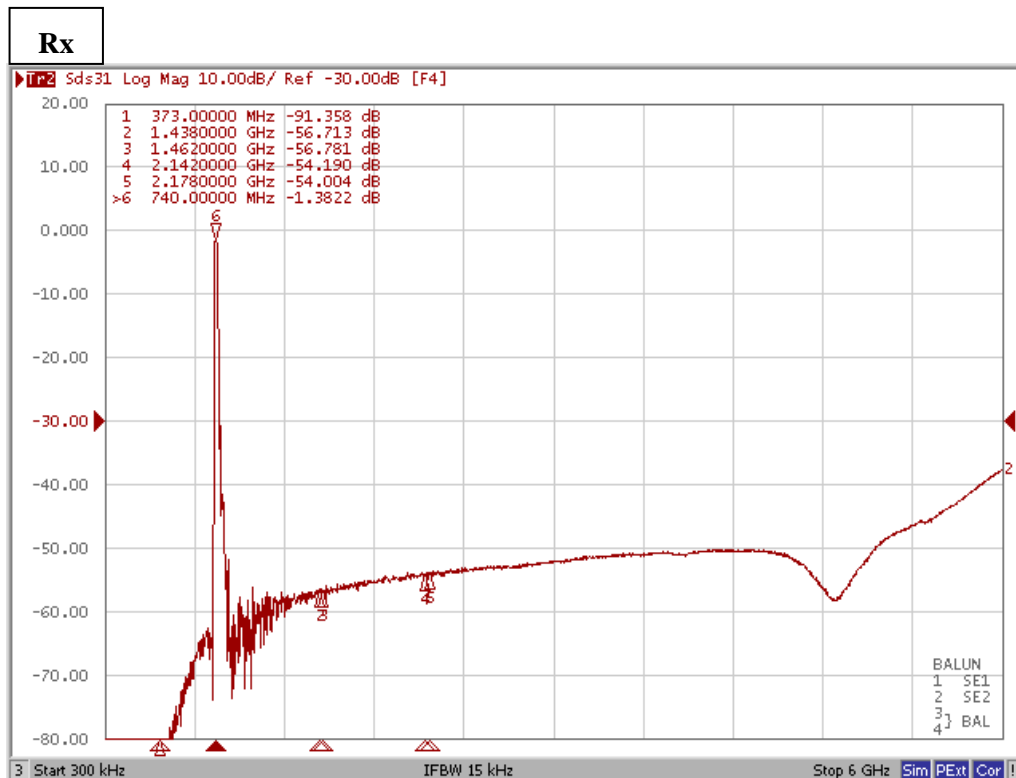
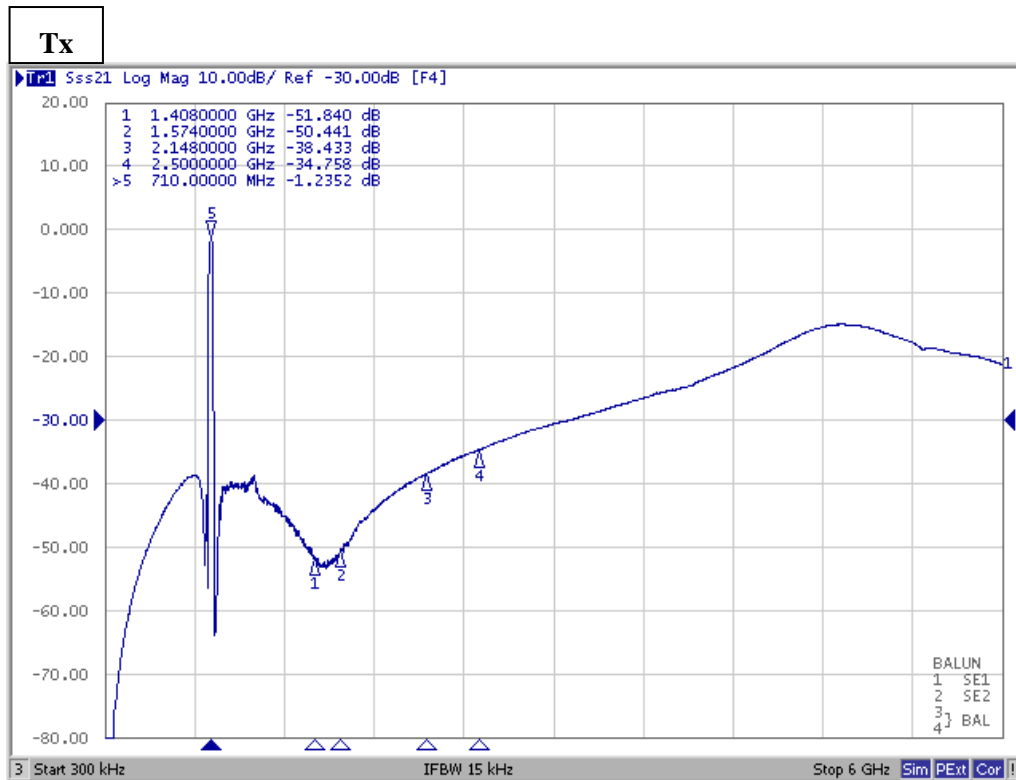


Smith Chart (ANT Port)



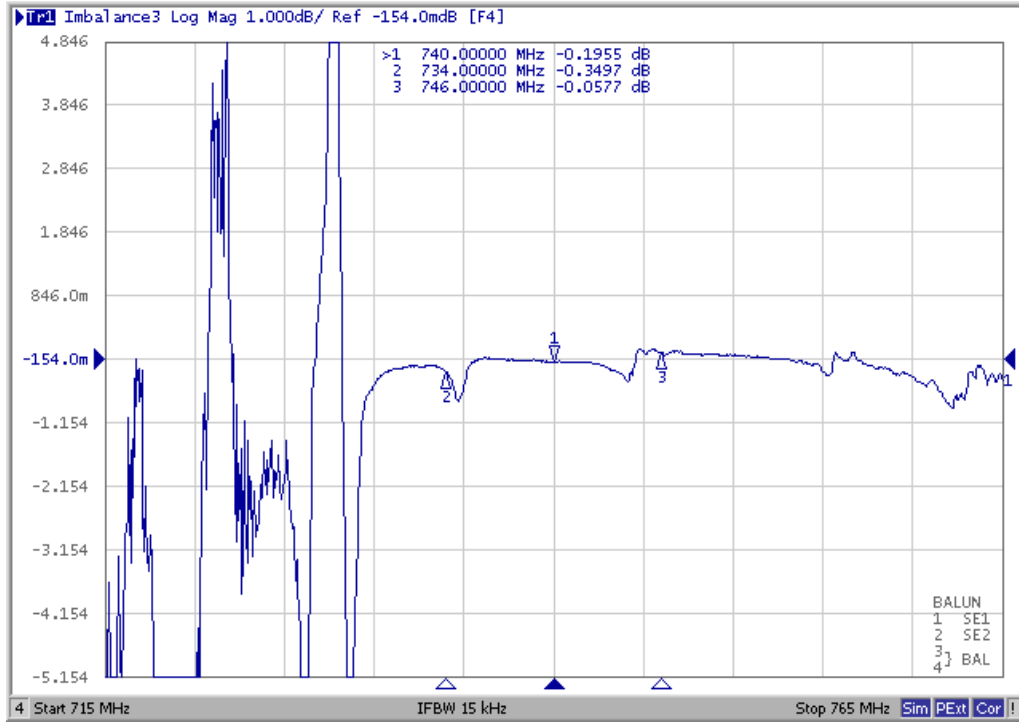


Wide Span





Amplitude balance of Ant to Rx+/Rx-



Phase balance of Ant to Rx+/Rx-

