



*Total Solution Provider in Saw Device*

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# SD-082201-S33

SAW DUPLEXER For 822.5MHz / 867.5MHz  
Revision 0: February 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	-5	-	+85
Storage Temperature Range	°C	-40	-	+85
Maximum DC Voltage	V	0		
Maximum Input Power	W	0.5 W > 50,000 Hours, CW tone(Ta= +50°C)		
Input Impedance	Ω	50		
Output Tx Impedance	Ω	50		
Output Rx Impedance	Ω	50		
Package type & size	S33			
Length x Width	mm <sup>2</sup>	-	3.8 x 3.8	-
Height	mm	-	-	1.45

### Electrical Specification

Ant → Rx(822.5MHz)		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Insertion Loss	815.0 ~ 830.0	dB	-	1.6	3.0
Amplitude Ripple	815.0 ~ 830.0	dB <sub>p-p</sub>	-	0.5	1.2
VSWR	815.0 ~ 830.0	-	-	1.55	2.0
Absolute Attenuation	D.C ~ 740.0	dB	30	33	-
	742.0	dB	30	37	-
	800.0	dB	25	40	-
	845.0	dB	25	40	-
	860.0 ~ 875.0	dB	40	46	-
	943.0	dB	30	38	-
	1000.0 ~ 2000.0	dB	30	37	-
	2000.0 ~ 3000.0	dB	15	21	-
	3000.0 ~ 6000.0	dB	3	7	-
	2nd Harmonic	dB	40	50	-
	3rd Harmonic	dB	25	40	-

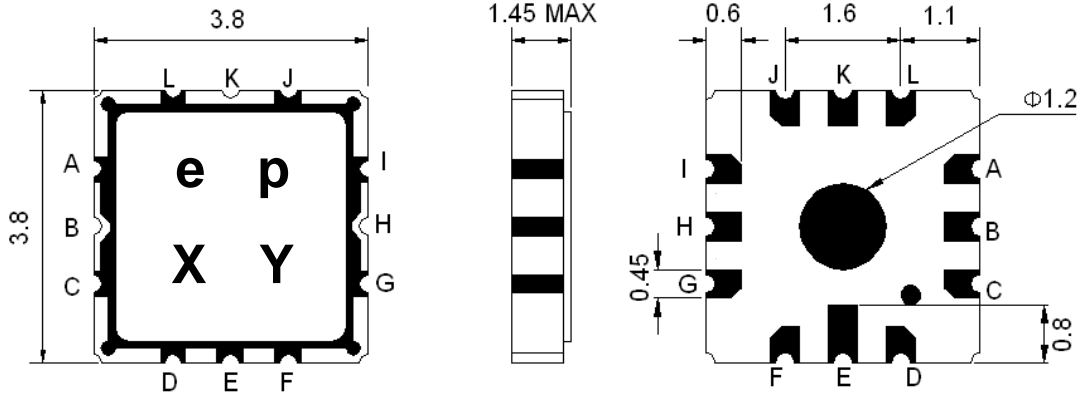


Tx(867.5MHz) → Ant		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Insertion Loss	860.0 ~ 875.0	dB	-	1.6	3.0
Amplitude Ripple	860.0 ~ 875.0	dB <sub>p-p</sub>	-	0.5	1.2
VSWR	860.0 ~ 875.0	-	-	1.55	2.0
Absolute Attenuation	D.C ~ 740.0	dB	30	36	-
	742.0	dB	30	38	-
	845.0	dB	25	40	-
	890.0	dB	25	45	-
	815.0 ~ 830.0	dB	40	43	-
	943.0	dB	35	44	-
	1000.0 ~ 2000.0	dB	30	36	-
	2000.0 ~ 3000.0	dB	25	29	-
	3000.0 ~ 6000.0	dB	3	7	-
	2nd Harmonic	dB	40	50	-
3rd Harmonic	dB	30	38	-	

Tx → Rx		Specifications			
Parameters Description	Condition [MHz]	Unit	Minimum	Typical	Maximum
Isolation	815.0 ~ 830.0	dB	40	43	-
	860.0 ~ 875.0	dB	40	48	-

**Notes :** (1) No Matching Network .

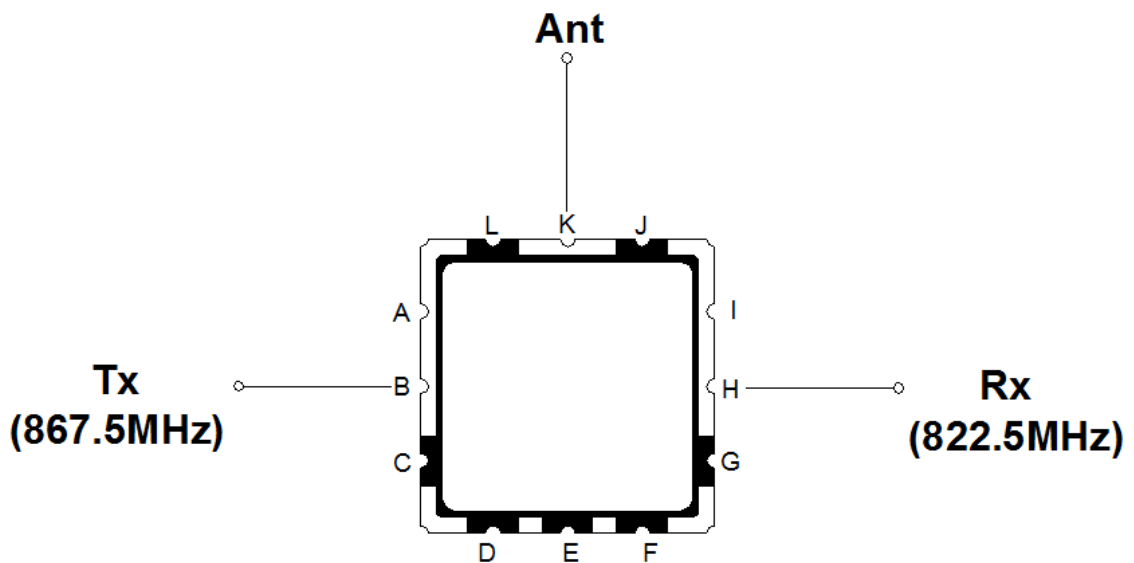
**Package Dimensions**



Marking Descriptions	
e	Wireless Application
p	Series Number
X	Date Code(Year)
Y	Date Code(Month)

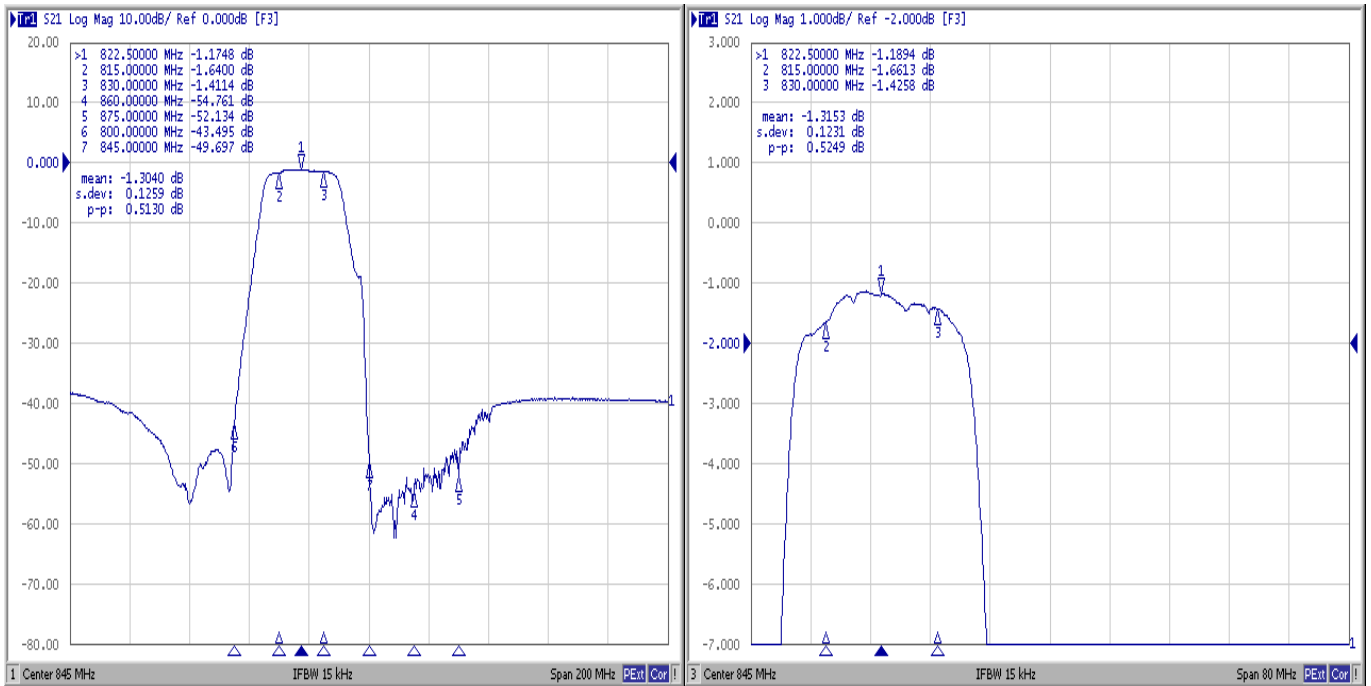
Pin Description	
A, C, D, E, F, G, I, J, L	Ground
K	Ant
B	Tx (867.5MHz)
H	Rx (822.5MHz)

**Testing Environment**

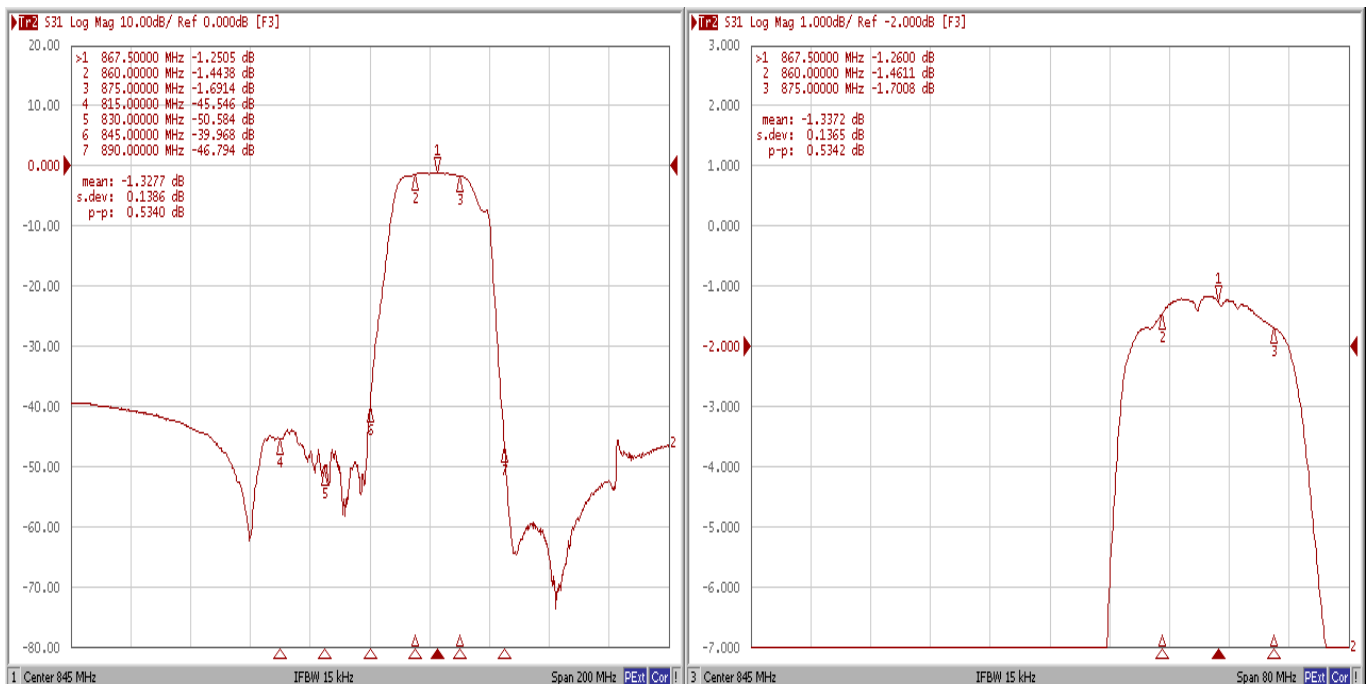


### Frequency Characteristics

Ant to Rx

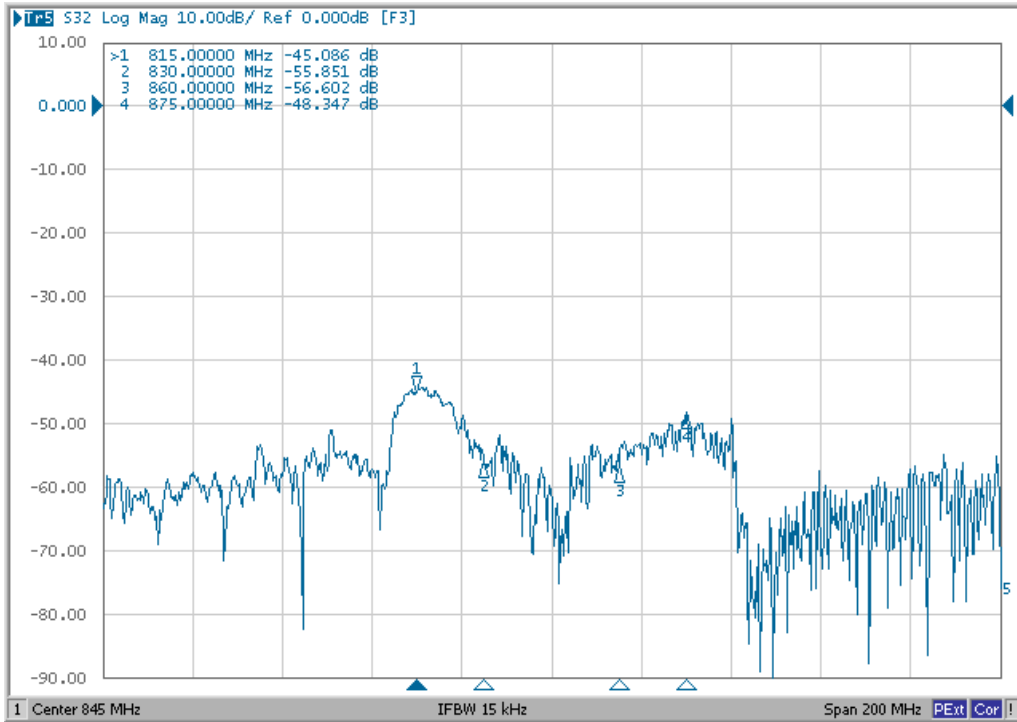


Tx to Ant



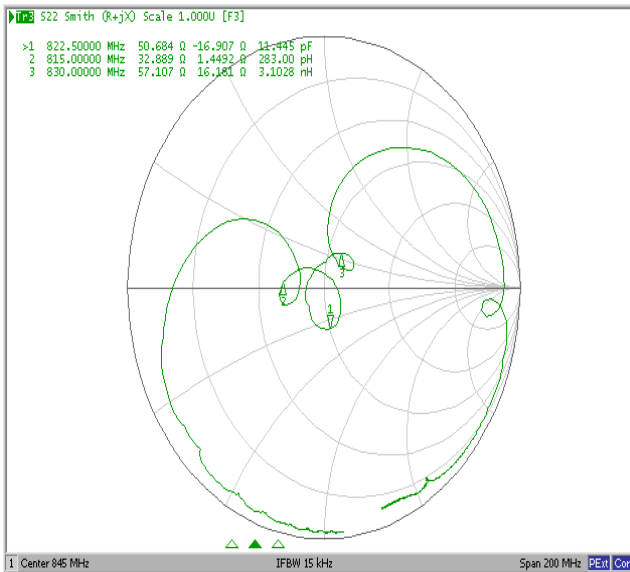


Isolation

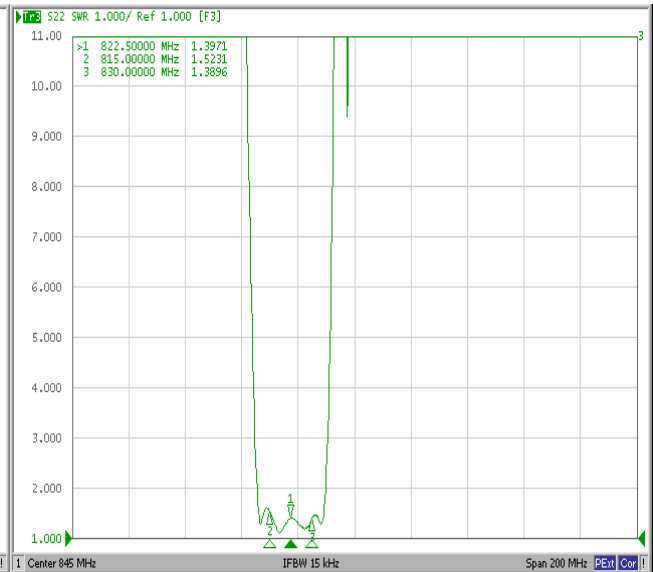


Rx Part

Smith Chart



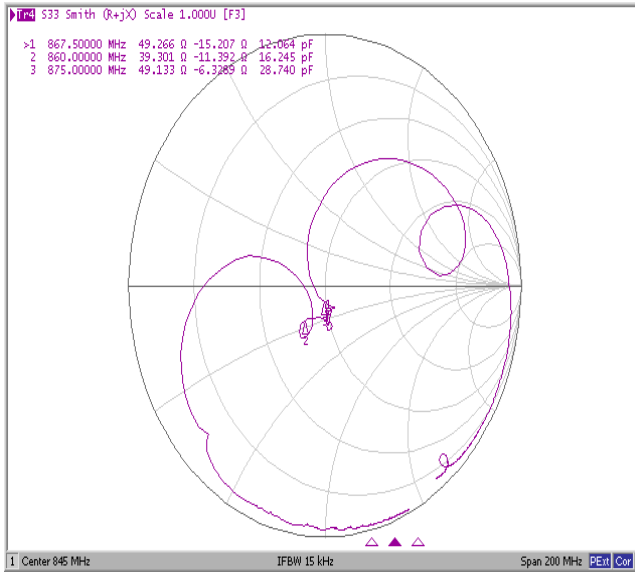
VSWR



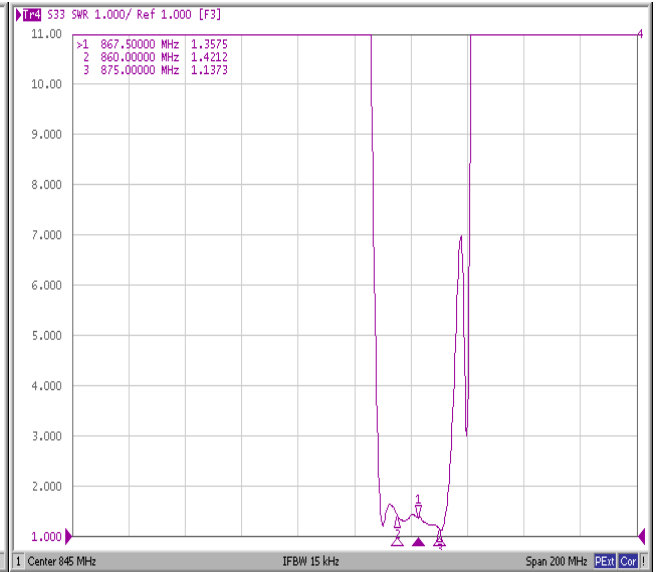


Tx Part

Smith Chart

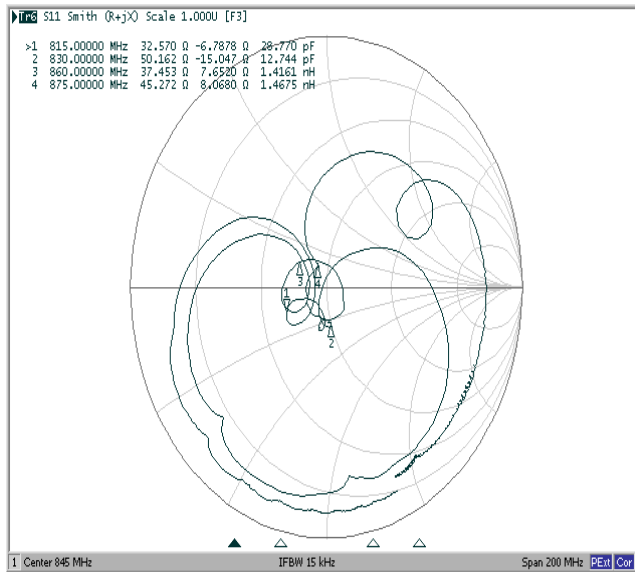


VSWR

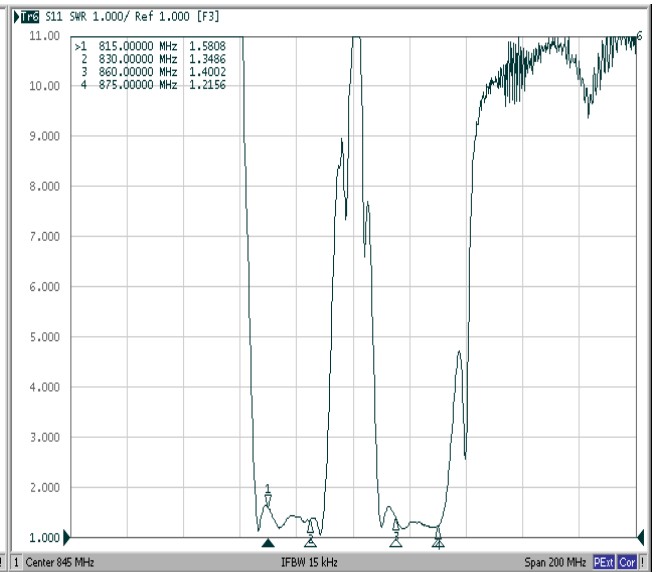


Antenna

Smith Chart



VSWR





Wide Span

