KYOCERA SAW Duplexer

- 1814 Band5 Balanced-Rx -

Type Name : SD18-0836R8UBQ1

Dec.,25, 2025

KYOCERA Corporation

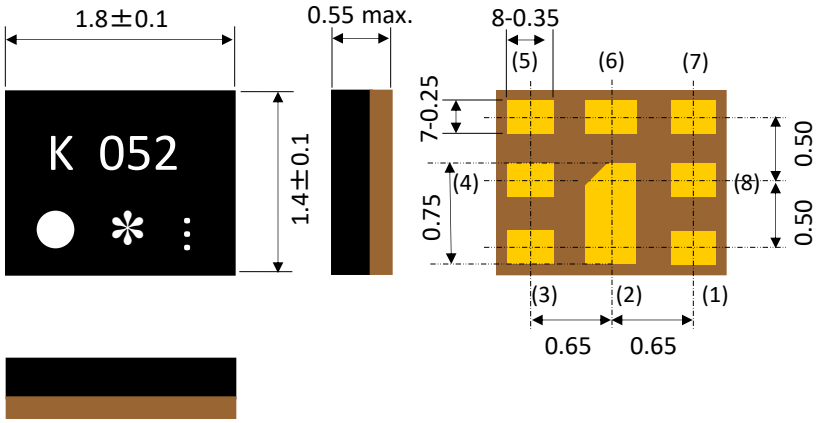
Corporate Electronic Components Group

Electronic Devices Division

Dimensions & Test Circuit of SAW Duplexer

Dimensions

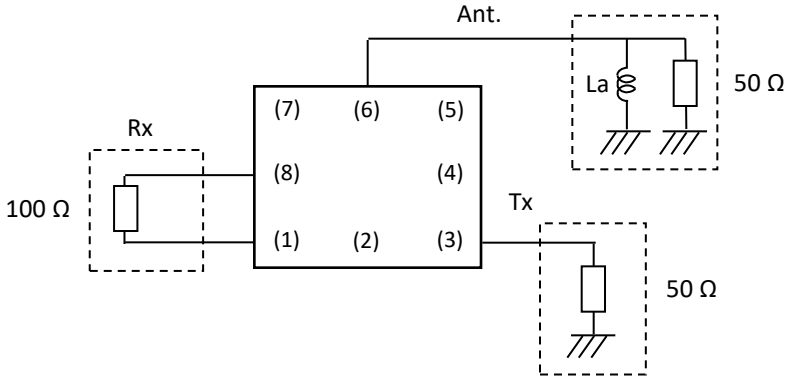
(Top View) (Bottom View)



Unit : mm
K : KYOCERA logo
052 : Identification no.
● : Index mark of pin 1
* : Monthly code
⋮ : Index mark of ten days
(⋮ 1-10, : 11-20, ・ 21-31)

Pin No.	Function
(1)	Rx
(2)	GND
(3)	Tx
(4)	GND
(5)	GND
(6)	Ant.
(7)	GND
(8)	Rx

Test Circuit



La : 9.1nH (Ideal)

Port extension (Time) : 93ps

Port extension (Loss) : 0.1dB

Characteristic table

[Tx to Ant]

Items			Frequency Range [MHz]			KYOCERA 1814 size SD18-0836R8UBQ1 Dec., 17, 2014 Specification min.	typ.	max.	Unit	Notes
Tx to Ant	Nominal Frequency		-				836.5		MHz	
	Insertion Loss		824	to	849	-	1.5	2.0	dB	S21
	Ripple (any 5MHz)		824	to	849	-	0.4	1.0	dB	
	VSWR	Tx	824	to	849	-	1.4	2.0	-	
		Ant	824	to	849	-	1.5	2.0	-	
	Absolute Attenuation		10	to	420	30	43	-	dB	
			420	to	494	37	40	-	dB	450MHz Rx band
			494	to	701	30	37	-	dB	
			701	to	728	35	38	-	dB	
			728	to	764	36	38	-	dB	700MHz Rx band
			764	to	804	30	43	-	dB	
			860	to	869	5	18	-	dB	
			869	to	894	44	49	-	dB	US-cell Rx band
			1565.42	to	1573.374	45	52	-	dB	Wideband GPS, lower
			1573.374	to	1577.466	45	52	-	dB	Regular GPS
			1577.466	to	1585.42	45	53	-	dB	Wideband GPS, upper
			1597.5515	to	1605.886	45	54	-	dB	GLONASS
			1638	to	1708	40	54	-	dB	2fo
			1844.9	to	1879.9	30	55	-	dB	
			1884.5	to	1919.6	30	56	-	dB	
			1930	to	1990	44	54	-	dB	PCS Rx band
			2110	to	2170	44	52	-	dB	AWS/IMT Rx band
			2400	to	2557	45	51	-	dB	ISM, 3fo
			3286	to	3406	20	42	-	dB	4fo
			4110	to	4255	12	19	-	dB	5fo
			4934	to	5350	10	15	-	dB	6fo
			5725	to	5953	10	21	-	dB	7fo

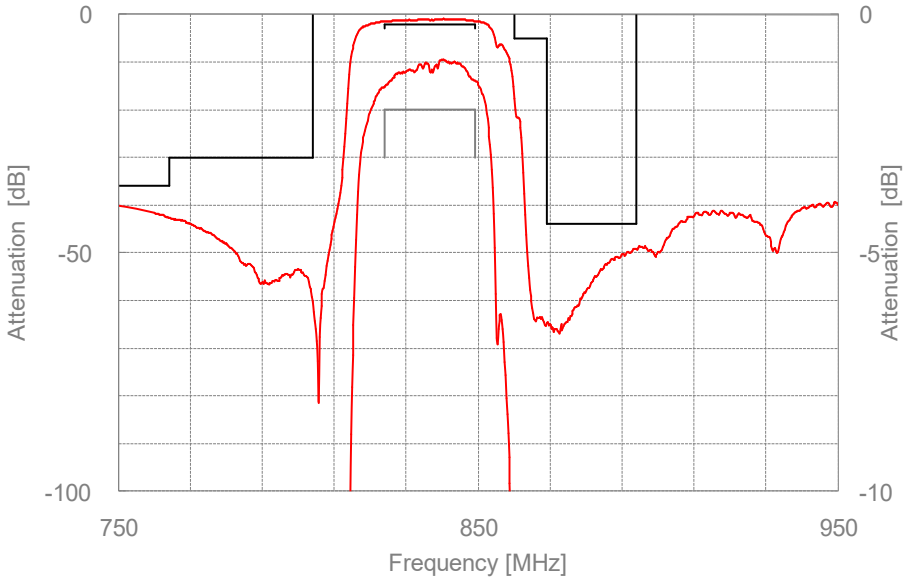
Characteristic table

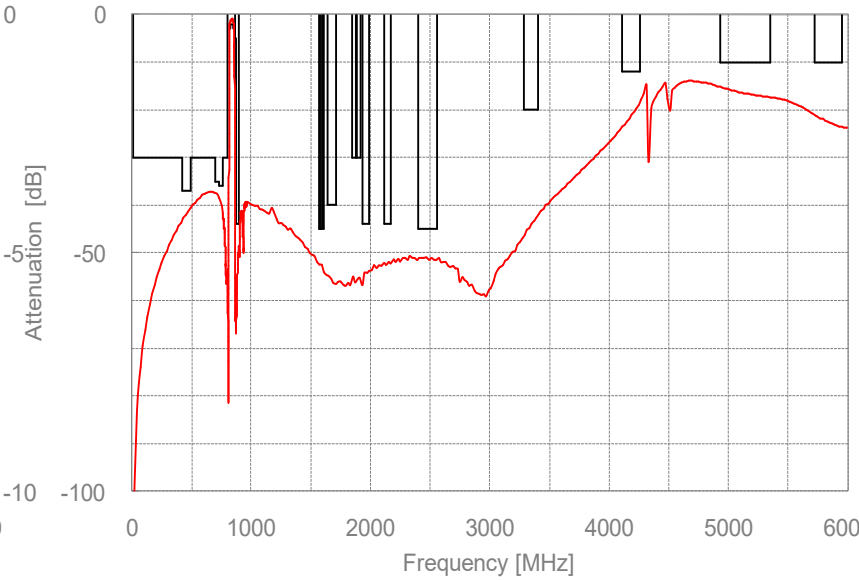
[Ant to Rx & Tx to Rx]

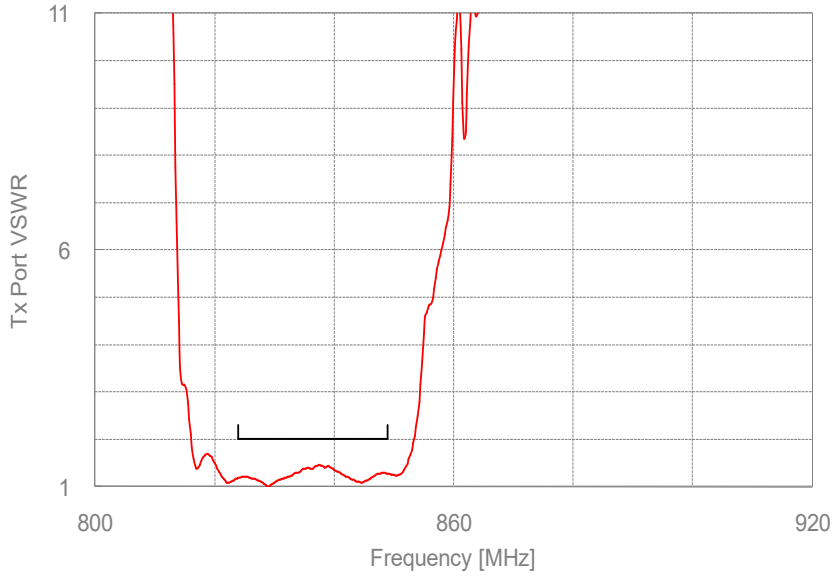
Items			Frequency Range [MHz]			KYOCERA 1814 size SD18-0836R8UBQ1 Dec., 17, 2014 Specification min.	typ.	max.	Unit	Notes
Ant to Rx	Nominal Frequency		-				881.5		MHz	
	Insertion Loss		869	to	894	-	1.9	2.2	dB	
	Ripple (any 5MHz)		869	to	894	-	0.4	1.2	dB	
	Amplitude Imbalance		869	to	894	-1.5	-0.4/1.1	+1.5	dB	
	Phase Imbalance		869	to	894	-10	-5.9/2.7	+10	deg	
	VSWR	Rx	869	to	894	-	1.7	2.0	-	
		Ant	869	to	894	-	1.7	2.0	-	
	Absolute Attenuation		0.2	to	447	45	69	-	dB	
			447	to	824	30	57	-	dB	
			824	to	849	45	59	-	dB	
			849	to	854	10	58	-	dB	
			909	to	1000	10	22	-	dB	
			1000	to	1850	28	60	-	dB	
			1850	to	1920	40	62	-	dB	
			1920	to	6000	35	52	-	dB	
Tx to Rx	Differential Mode		824	to	849	55	61	-	dB	
			871.4	to	891.6	50	52	-	dB	WCDMA Rx band
			869.7	to	893.37	50	52	-	dB	CDMA 1x Rx band
			1574	to	1577	40	66	-	dB	GPS
			1638	to	1708	20	66	-	dB	Tx second harmonic
			2462	to	2557	20	67	-	dB	Tx third harmonic
	Common Mode		824	to	849	50	54	-	dB	
Input power							+29		dBm	5,000Hours, Ta=50deg.C, CW
Impedance			Tx port (Unbalance)				50		ohm	
			Ant port (Unbalance)				50//9.1nH		ohm	
			Rx port (Balance)				100		ohm	
Package size							1.8x1.4, T=0.55max.		mm	
Operating temperature range			UMTS				-30 to +85		deg.C	
			CDMA 1X							

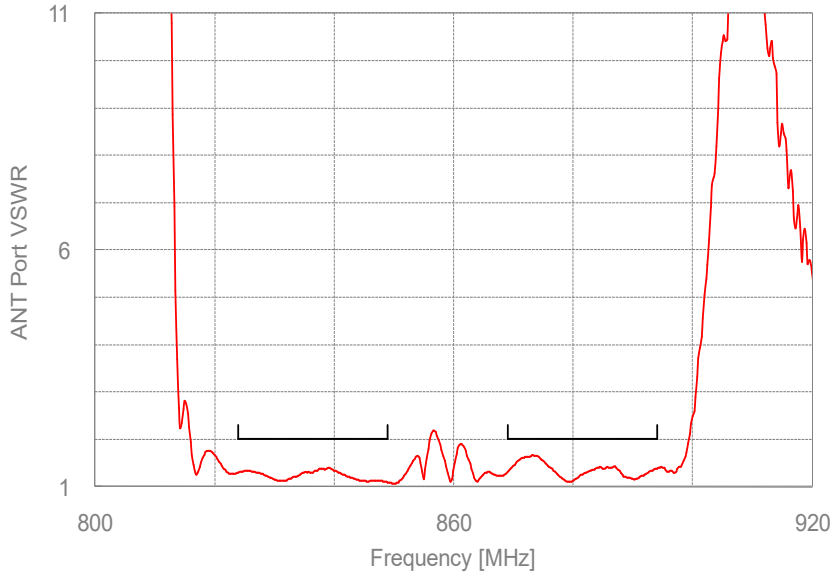
Typical Curve Data

[Tx to Ant]



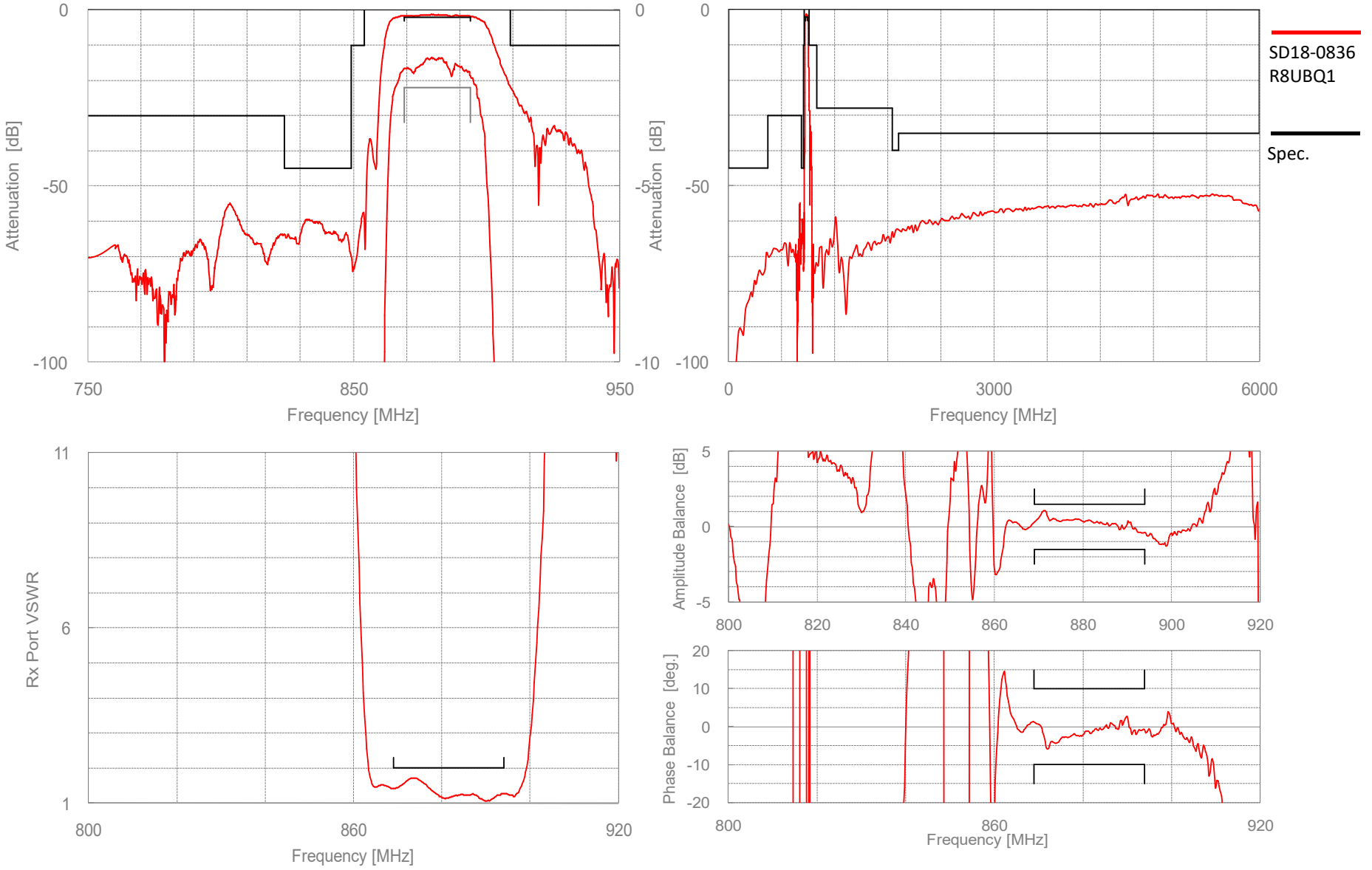






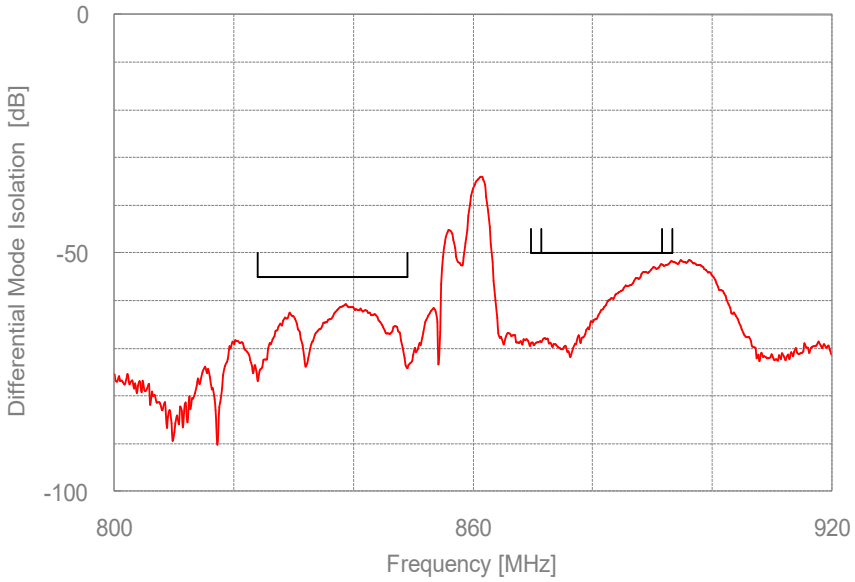
Typical Curve Data

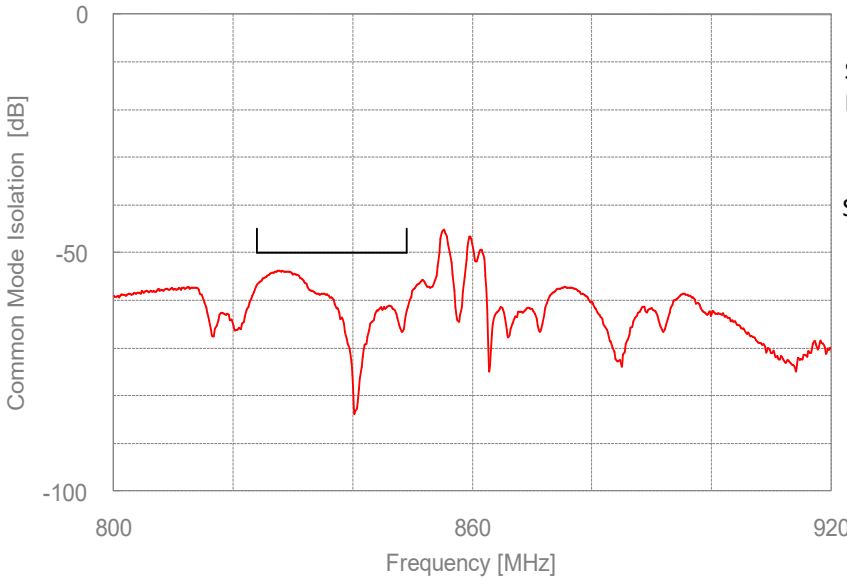
[Ant to Rx]



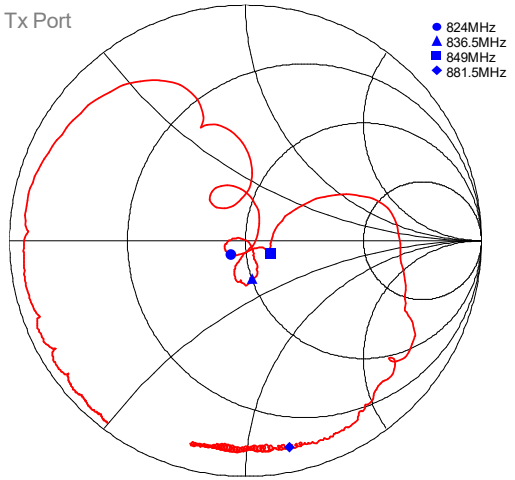
Typical Curve Data

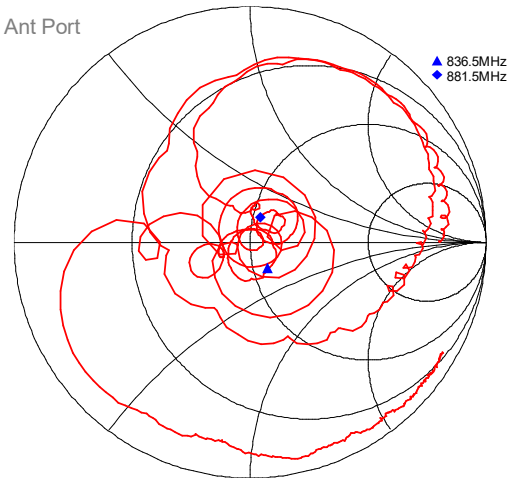
[Tx to Rx]

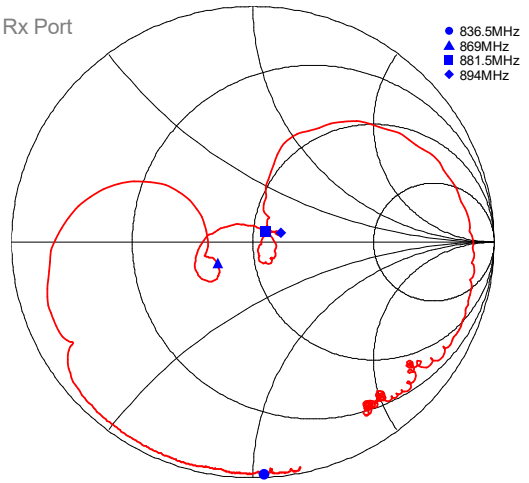




[Port impedance]







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