

KYOCERA SAW Duplexer
- 1814size Band1 Unbalanced-Rx -
Type Name : SD18-1950R8UBQ1

Dec., 25, 2025

KYOCERA Corporation

Corporate Electronic Components Group

Electronic Devices Division

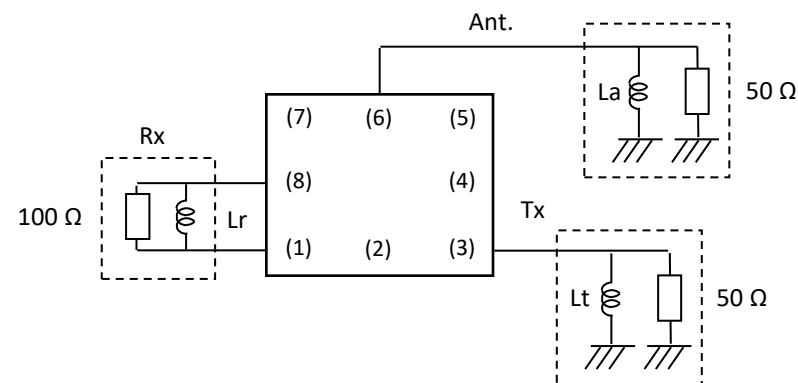
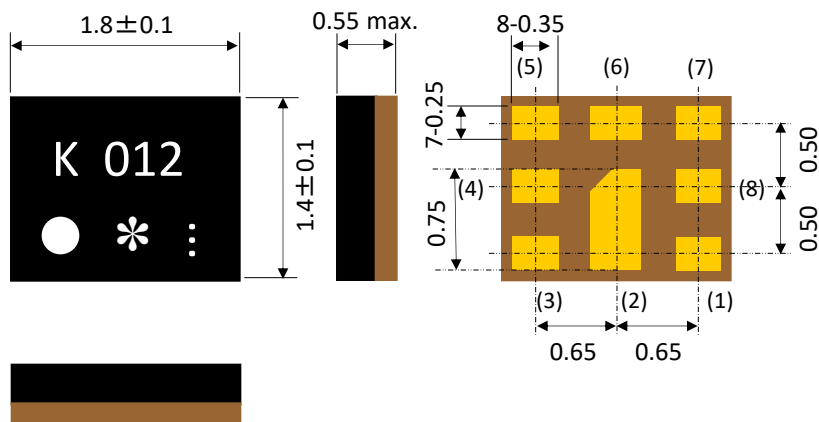
Dimensions & Test Circuit of SAW Duplexer

■ Dimensions

■ Test Circuit

(Top View)

(Bottom View)



- Unit : mm
 K : KYOCERA logo
 012 : 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

La : 2.7nH (Ideal)

Lr : 10nH (Ideal)

Lt : 7.5mH (Ideal)

Port extension (Time) : 93ps

Port extension (Loss) : 0.15dB

Characteristic table

[Tx to Ant]

Items		Frequency Range [MHz]		KYOCERA 1814 size SD18-1950R8UBQ1 Aug., 22, 2014			Unit	Notes	
				Specification					
				min.	typ.	max.			
Tx to Ant	Nominal Frequency	-		1950			MHz		
	Insertion Loss	1920.48	to 1979.52	-	1.6	2.0	dB	S21	
	Ripple (any 5MHz)	1920.48	to 1979.52	-	0.2	0.5	dB		
	VSWR	Tx	1920.48	to 1979.52	-	1.5	2.0	-	
		Ant	1920.48	to 1979.52	-	1.5	2.0	-	
	Absolute Attenuation	10	to 1574	30	43	-	dB		
		420	to 494	44	69	-	dB	450MHz Rx band	
		843	to 894	44	53	-	dB	JCDMA/CELL Rx band	
		1565.42	to 1573.374	42	43	-	dB	Wideband GPS, lower	
		1573.374	to 1577.466	42	43	-	dB	Regular GPS	
		1577.466	to 1585.42	42	43	-	dB	Wideband GPS, upper	
		1597.5515	to 1605.886	42	44	-	dB	GLONASS	
		1605.886	to 1805	25	36	-	dB		
		1805	to 1865	25	30	-	dB	Protected DCS band	
		1865	to 1880	10	30	-	dB	Protected DCS band	
		2010	to 2025	5	10	-	dB		
				(+15~+85°C)					
2110	to 2170	44	51	-	dB	IMT band			
2400	to 2500	36	42	-	dB	ISM			
2620	to 2690	20	39	-	dB	Protected 2.6GHz band			
3830	to 3970	25	33	-	dB	2fo			
5150	to 5950	18	28	-	dB	3fo			

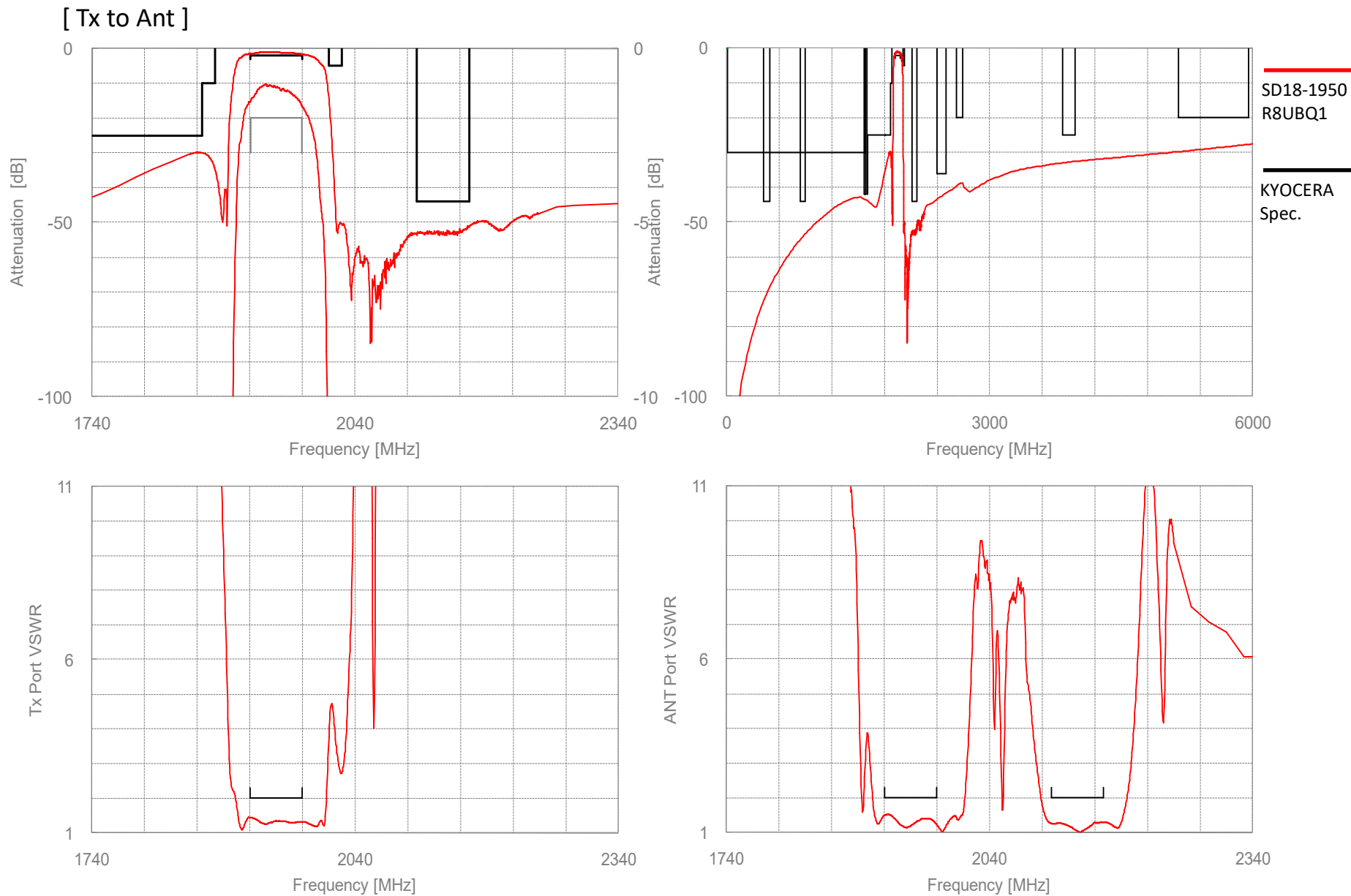
Characteristic table

[Ant to Rx & Tx to Rx]

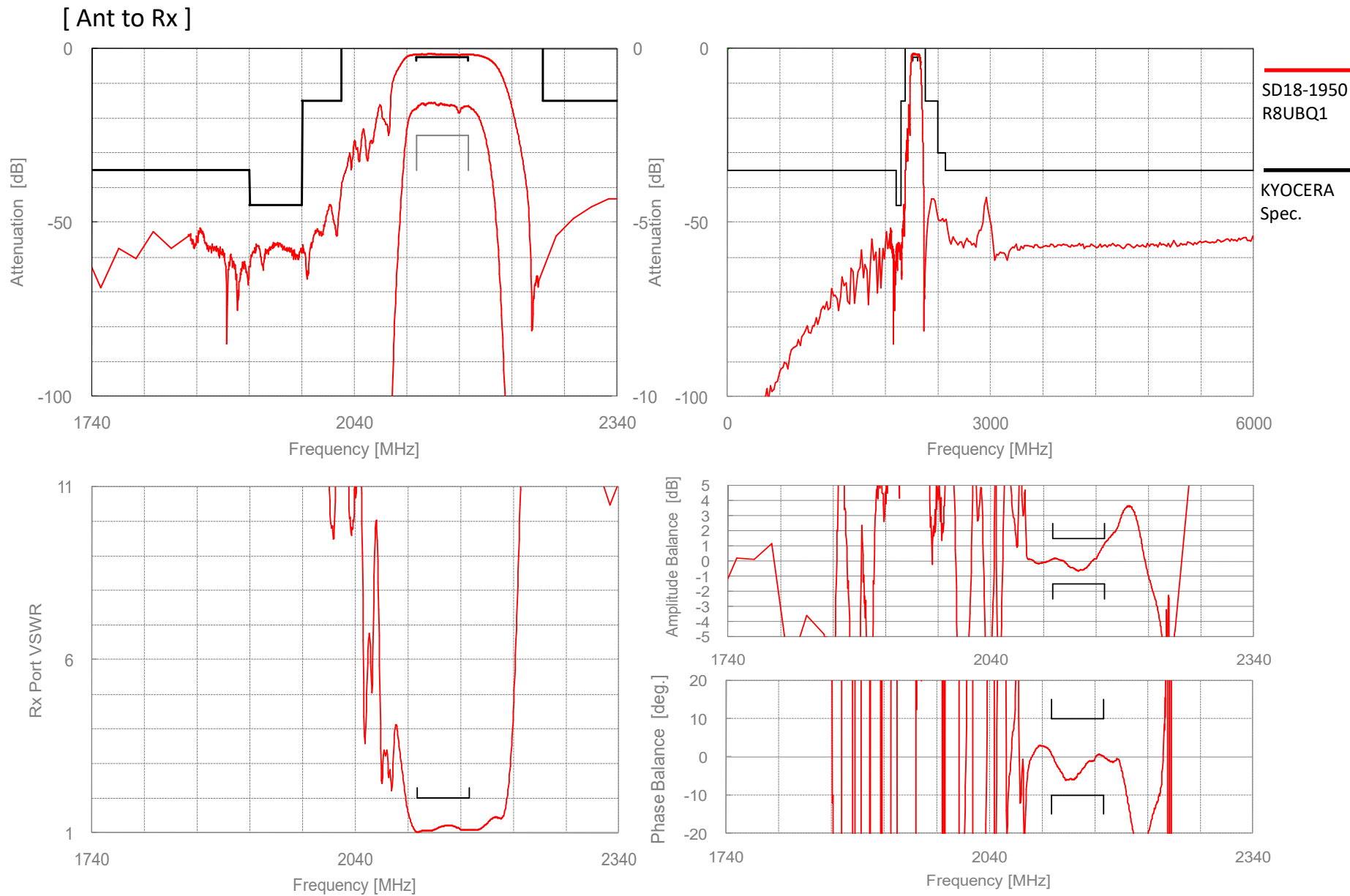
Items		Frequency Range [MHz]		KYOCERA 1814 size SD18-1950R8UBQ1 Aug., 22, 2014			Unit	Notes	
				Specification					
				min.	typ.	max.			
Ant to Rx	Nominal Frequency	-		2140			MHz		
	Insertion Loss	2110.48	to 2169.52	-	1.8	2.5	dB		
	Ripple (any 5MHz)	2110.48	to 2169.52	-	0.2	0.5	dB		
	Amplitude Imbalance	2110.48	to 2169.52	-1.5	-0.6/0.9	+1.5	dB		
	Phase Imbalance	2110.48	to 2169.52	-10	-6.1/1.8	+10	deg		
	VSWR	Rx	2110.48	to 2169.52	-	1.2	2.0	-	
		Ant	2110.48	to 2169.52	-	1.3	2.0	-	
	Absolute Attenuation	1	to 1920	35	55	-	dB		
		1920	to 1980	45	56	-	dB		
		1980	to 2025	15	44	-	dB		
2255		to 2400	15	43	-	dB			
2400		to 2484	30	48	-	dB			
	2484	to 6000	35	45	-	dB			
Tx to Rx	Differential Mode	1574	to 1577	40	62	-	dB		
		1920.48	to 1979.52	53	54	-	dB		
		2112.4	to 2167.6	54	57	-	dB		
		2111.25	to 2168.75	54	57	-	dB		
		3830	to 3970	20	58	-	dB		
	5750	to 5950	20	62	-	dB			
Common Mode	1920.48	to 1979.52	50	52	-	dB			
Input power			+29			dBm	5,000Hours, Ta=50deg.C, CW		
Impedance	Tx port (Unbalance)		50//7.5nH			ohm			
	Ant port (Unbalance)		50//2.7nH			ohm			
	Rx port (Balance)		100//10nH			ohm			
Package size			1.8x1.4, T=0.55max.			mm			
Operating temperature range	UMTS		-30 to +85			deg.C			
	CDMA 1X								

(*) Integrated over +/-1.92MHz around the WCDMA and +/-0.625MHz around the NCDMA channel center frequency

Typical Curve Data

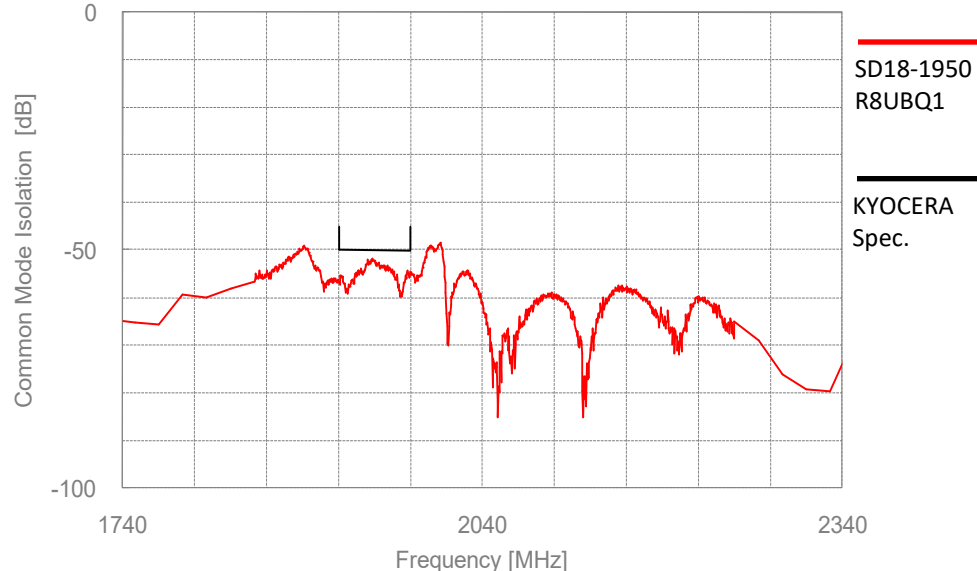
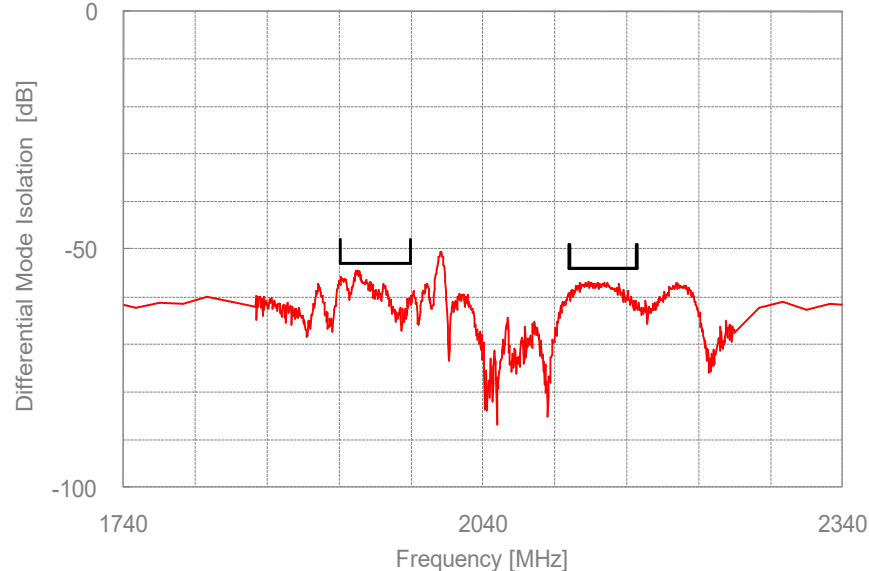


Typical Curve Data

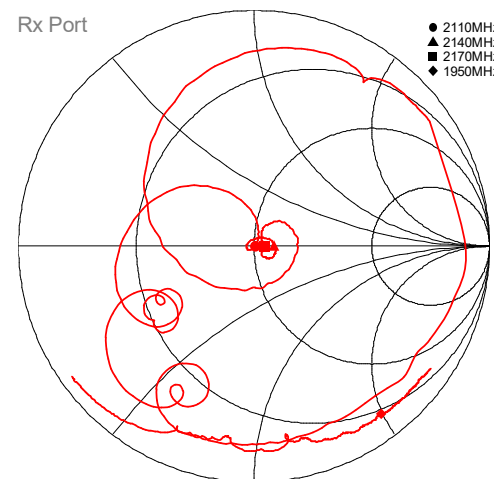
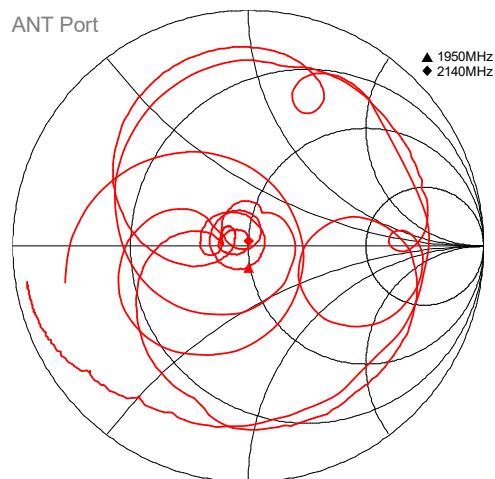
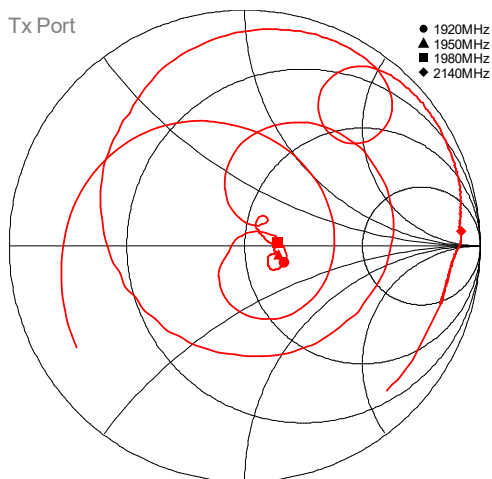


Typical Curve Data

[Tx to Rx]



[Port impedance]



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