Document No. : SDC8012-04

KYOCERA SAW Duplexer

- B8 Balanced-Rx Duplexer -

Type Name : SD18-0897R8UBQ1

Feb., 6, 2024

KYOCERA Corporation

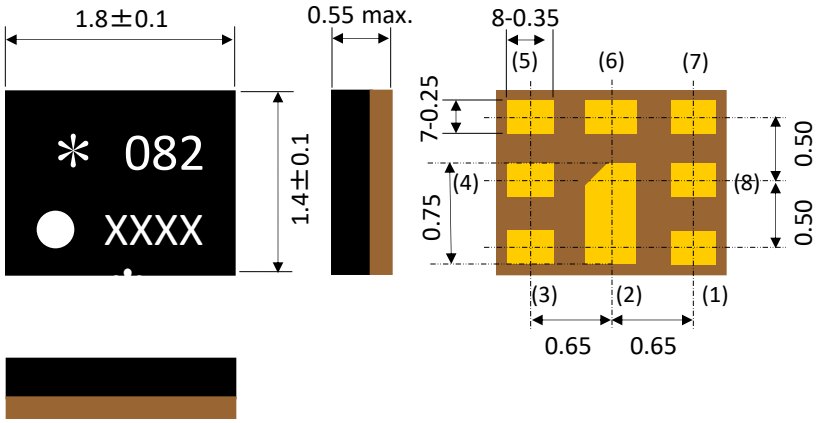
Corporate Electronic Components Group

Electronic Devices Division

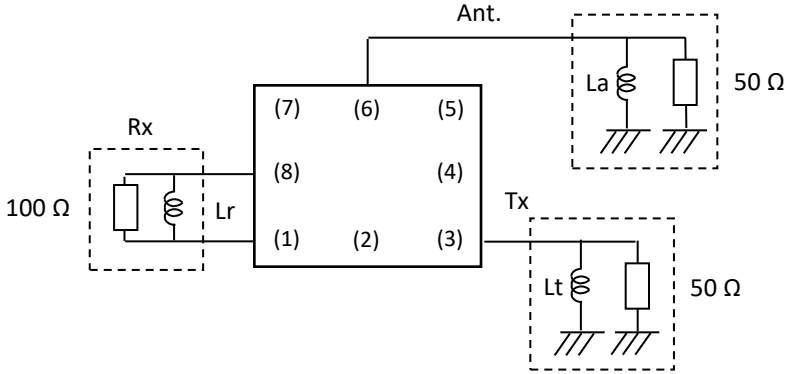
Dimensions & Test Circuit of SAW Duplexer

Dimensions

(Top View) (Bottom View)



Test Circuit



Unit : mm
* : Identification mark
082 : Identification no.
● : Index mark of pin 1
XXXX : Production code

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

La : 8.2nH (Ideal)
Lt : 18nH(Ideal)
Lr : 36nH (Ideal)

Port extension (Time) : 98ps

Port extension (Loss) : 0.11dB

Characteristic table

[Tx to Ant]

Items			Frequency Range [MHz]			KYOCERA 1814 size SD18-0897R8UBQ1 Dec., 17, 2014 Specification min.	typ.	max.	Unit	Notes
Tx to Ant	Nominal Frequency		-				897.5		MHz	
	Integrated Loss		882.4	to	912.6	-	(*)2.0	(*)2.7	dBint	WCDMA signal power loss
	Ripple (any 5MHz)		880	to	915	-	0.9	2.0	dB	
	VSWR	Tx	880	to	915	-	1.6	2.2	-	
		Ant	880	to	915	-	1.5	2.2	-	
	Absolute Attenuation		10	to	716	30	35	-	dB	
			716	to	728	32	35	-	dB	
			728	to	821	30	35	-	dB	
			927.4	to	957.6	(*)44	(*)51	-	dBint	
			1565.42	to	1573.374	40	45	-	dB	Wideband GPS, lower
			1573.374	to	1577.466	43	46	-	dB	Regular GPS
			1577.466	to	1585.42	40	46	-	dB	Wideband GPS, upper
			1597.5515	to	1605.886	43	46	-	dB	GLONASS
			1760	to	1830	38	51	-	dB	
			1830	to	1880	27	53	-	dB	
			2110	to	2170	27	48	-	dB	
			2400	to	2500	35	42	-	dB	
			2620	to	2745	35	39	-	dB	
			3520	to	3660	20	34	-	dB	
			4400	to	4575	20	29	-	dB	
			5150	to	5490	20	24	-	dB	
			5725	to	5850	20	28	-	dB	

Characteristic table

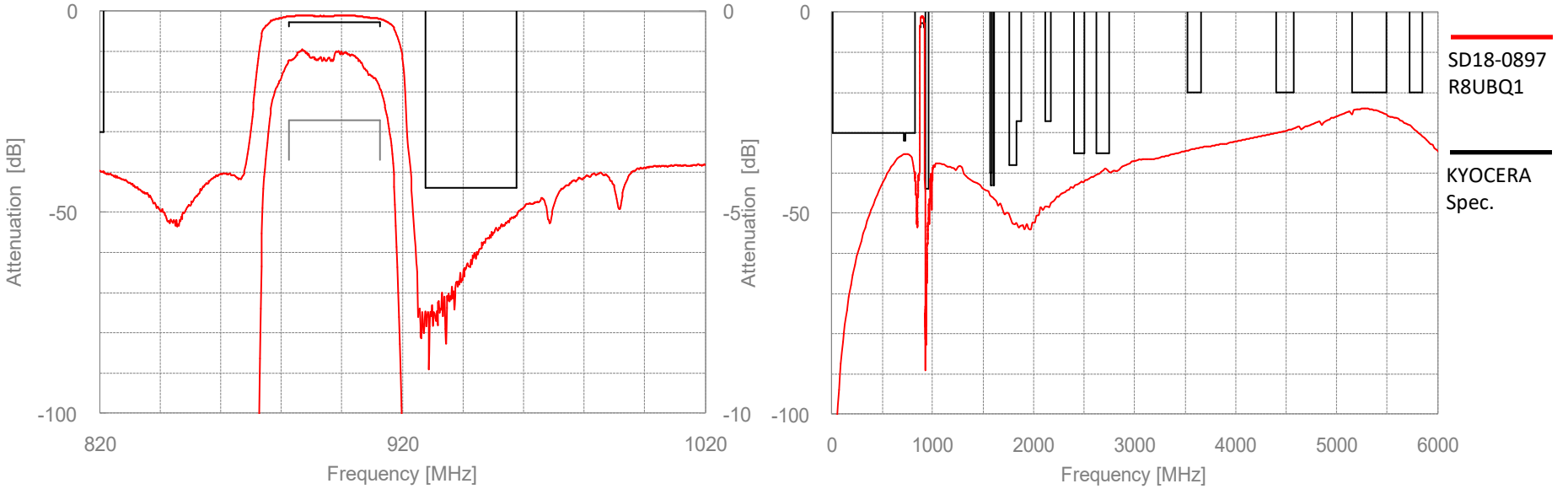
[Ant to Rx & Tx to Rx]

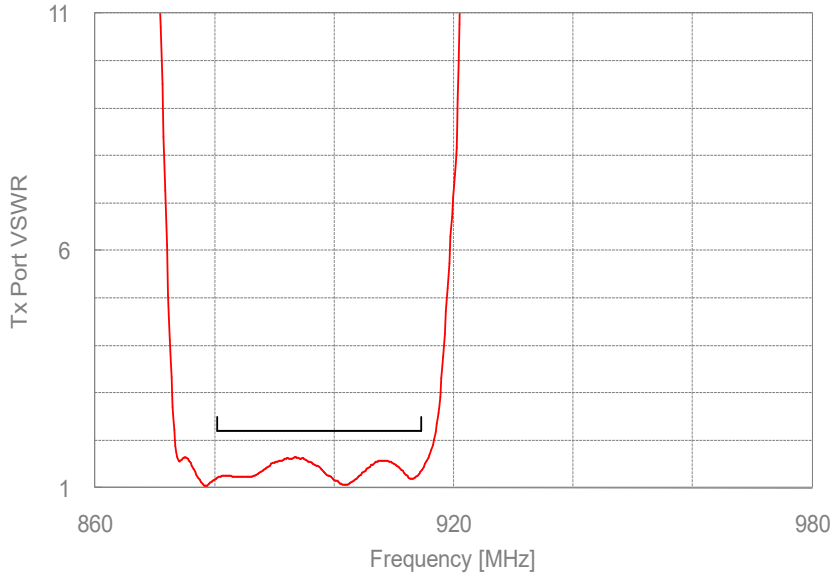
Items			Frequency Range [MHz]			KYOCERA 1814 size SD18-0897R8UBQ1 Dec., 17, 2014 Specification min.	typ.	max.	Unit	Notes
Ant to Rx	Nominal Frequency		-			942.5			MHz	
	Insertion Loss		925	to	960	-	2.2	3.3	dB	
	Ripple (any 5MHz)		925	to	960	-	0.6	2.0	dB	
	Amplitude Imbalance		925	to	960	-1.2	0/3.0	+1.2	dB	
	Phase Imbalance		925	to	960	-10	-3.5/3.0	+10	deg	
	VSWR	Rx	925	to	960	-	1.8	2.2	-	
		Ant	925	to	960	-	1.7	2.2	-	
	Absolute Attenuation		10	to	880	35	63	-	dB	
			882.4	to	912.6	(*)45	(*)60	-	dBint	
			1045	to	1750	15	63	-	dB	
			1750	to	4810	35	53	-	dB	
Tx to Rx	Differential Mode		882.4	to	912.6	(*)55	(*)61	-	dBint	
			927.4	to	957.6	(*)50	(*)52	-	dBint	
	Common Mode		882.4	to	912.6	(*)50	(*)53	-	dBint	
Input power						+29			dBm	5,000Hours, Ta=50deg.C, WCDMA Modulation
Impedance			Tx port (Unbalance)			50//18nH			ohm	
			Ant port (Unbalance)			50//8.2nH			ohm	
			Rx port (Balance)			100//36nH			ohm	
Package size						1.8x1.4, T=0.55max.			mm	
Operating temperature range			UMTS			-20 to +85			deg.C	

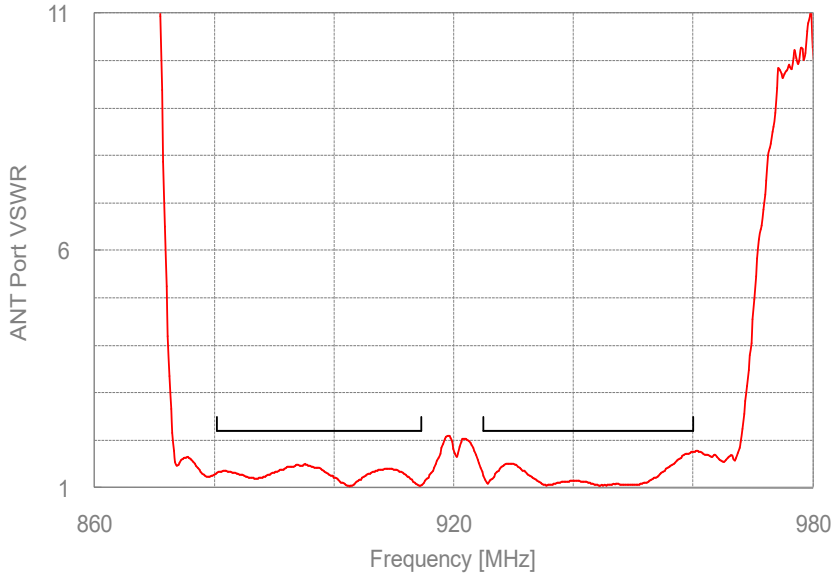
(*) Integrated over +/-1.92MHz around the WCDMA and +/-0.625MHz around the NCDMA channel center frequency

Typical Curve Data

[Tx to Ant]

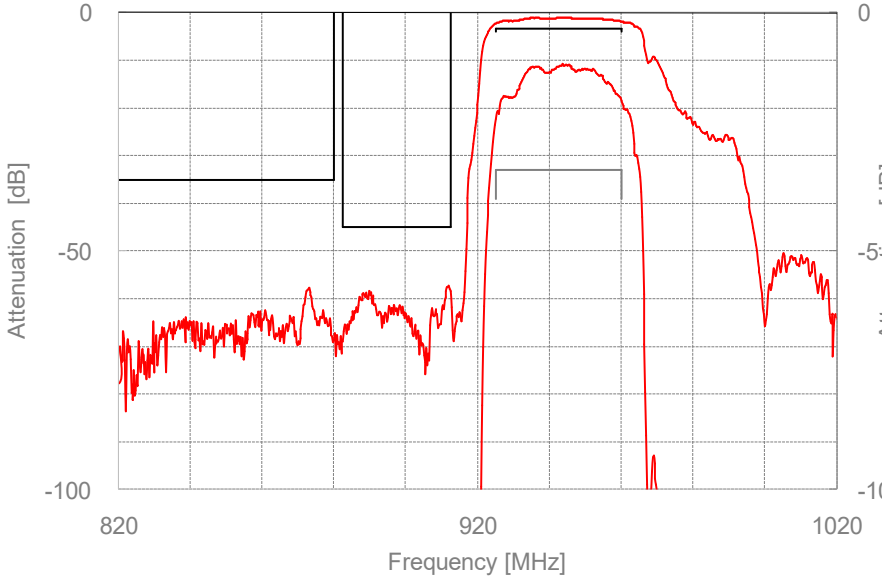


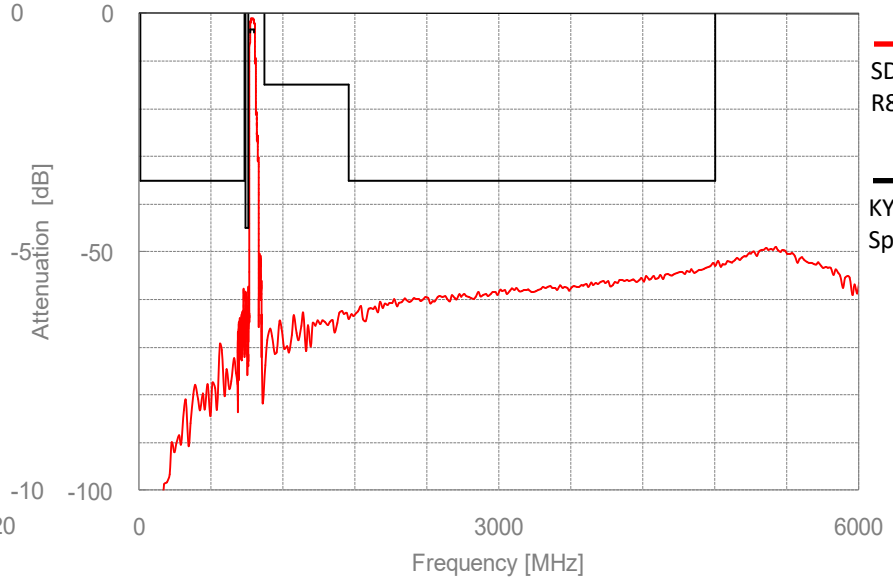




Typical Curve Data

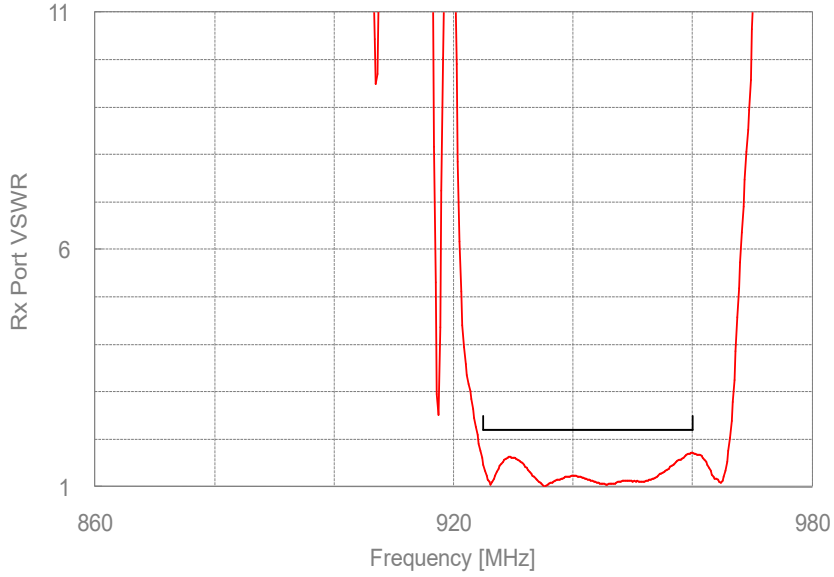
[Ant to Rx]

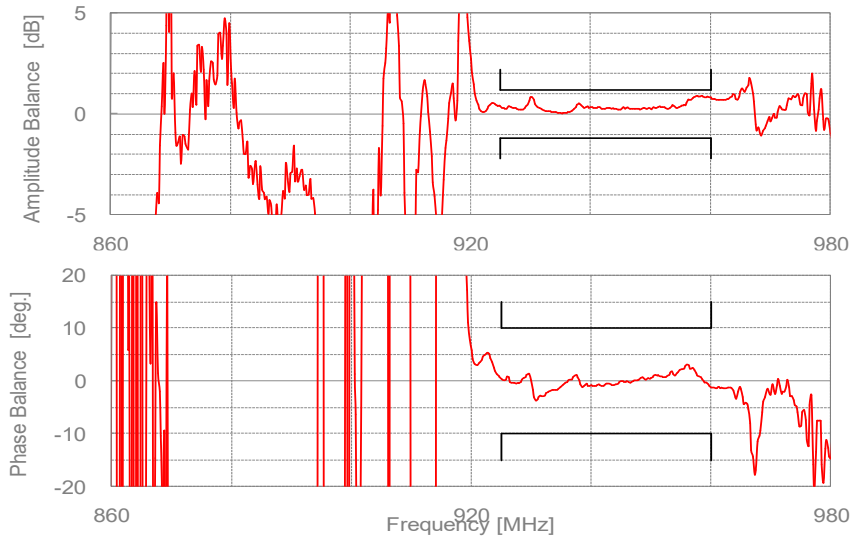




SD18-0897
R8UBQ1

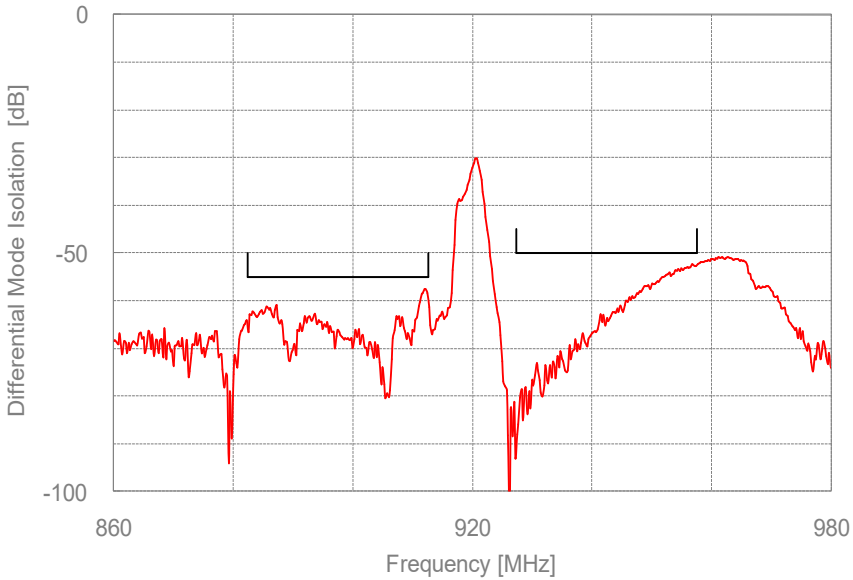
KYOCERA
Spec.

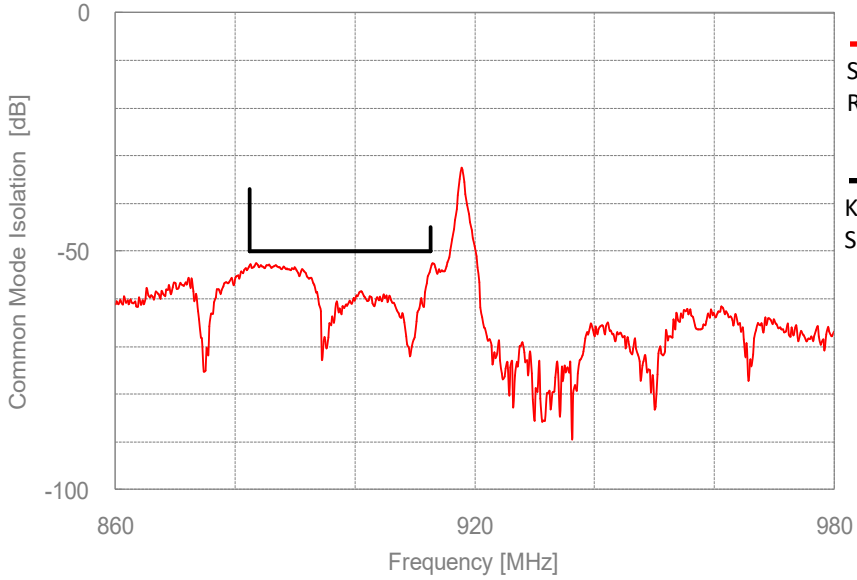




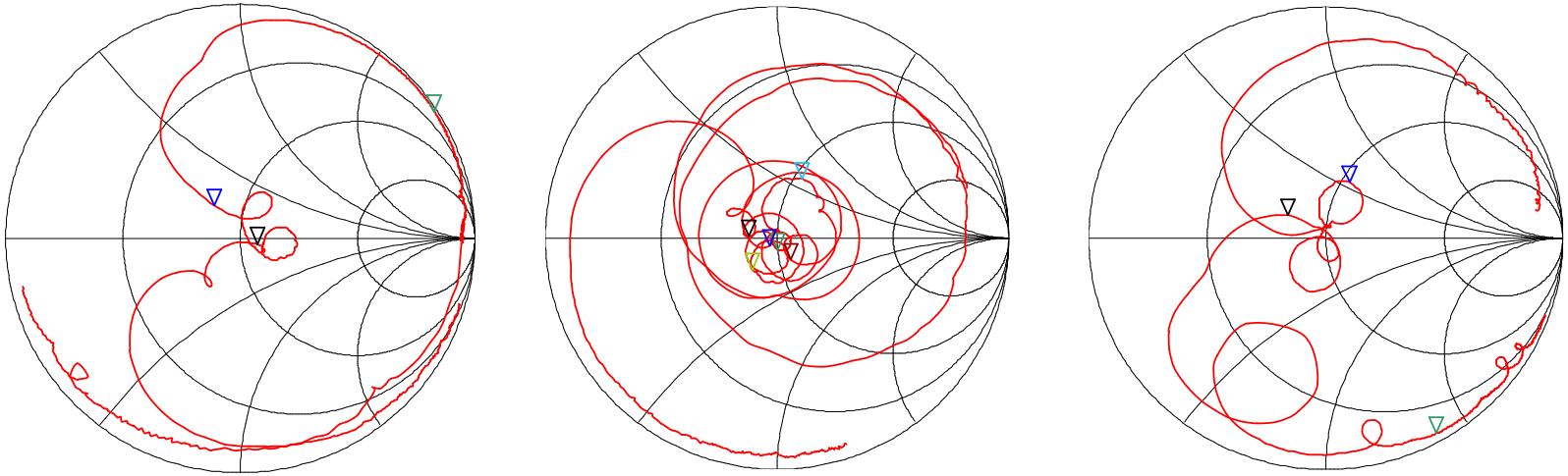
Typical Curve Data

[Tx to Rx]





[Port impedance]



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