Document No. : SXC11894-00

KYOCERA SAW Duplexer

- 1814 Band20 Unbalanced-Rx -

Type Name : SD18-0847R8UUD1

Feb,7, 2023

KYOCERA Corporation

Corporate Electronic Components Group

RF Devices Division

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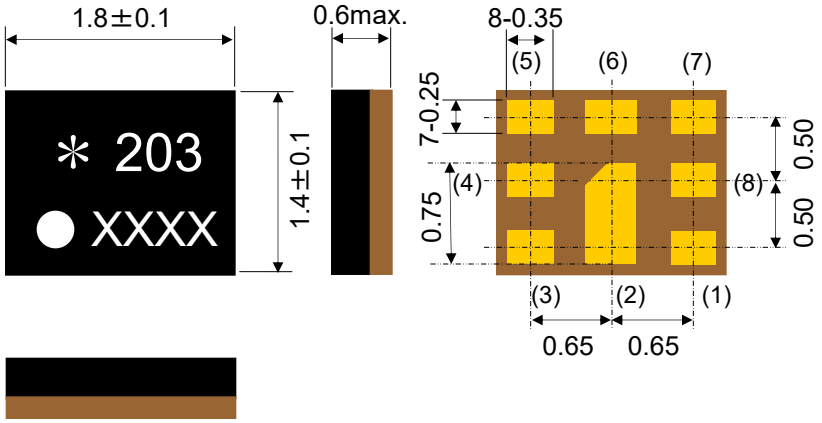
Dimensions & Test Circuit of SAW Duplexer

Dimensions

(Top View) (Bottom View)

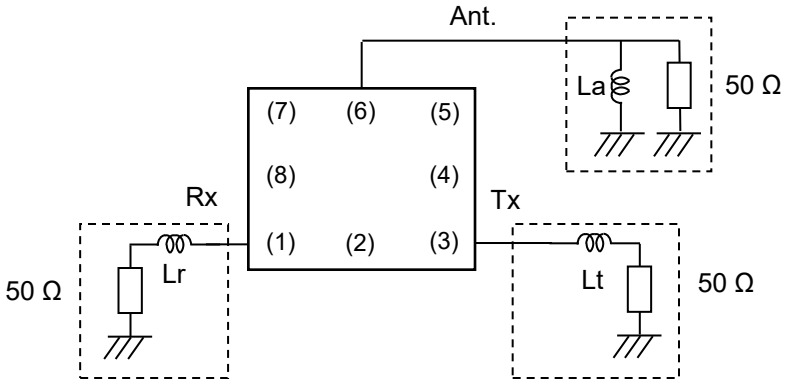


Unit : mm
* : Identification mark
203 : Identification no.
● : Index mark of pin 1
XXXX : Production cade

Pin allocation

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

Test Circuit



La : 12nH (Ideal)
Lt : 3.6nH(Ideal)
Lr : 3.6nH(Ideal)

Port extension (Time) : 100 ps
Port extension (Loss) : 0.1 dB

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Rating

Items	Rating	Unit	Note
Operating Temperature Range	-20 to +85	deg.C	
Storage Temperature Range	-40 to +85	deg.C	
Max Input Power (Tx Port)	+30	dBm	5,000Hours,CW,Ta=50deg.C
	+30	dBm	5,000Hours,DFT-s-OFDM-QPSK,Ta=50deg.C
Tx Port Nominal Impedance	50+3.6nH(series)	ohm	Unbalance
Ant. Port Nominal Impedance	50//12nH(shunt)	ohm	Unbalance
Rx Port Nominal Impedance	50+3.6nH(series)	ohm	Unbalance

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Characteristic table

Items			KYOCERA 1814 size specification				Unit	Notes
			Frequency (MHz)	Specification				
				Min.	Typ.	Max.		
Tx to Ant	Insertion Loss		832.25 - 861.75	-	1.5	2.3	dB	
	Ripple		832.25 - 861.75	-	0.8	1.8	dB	
	VSWR	Tx	832.25 - 861.75	-	1.4	2.0	-	
		Ant	832.25 - 861.75	-	1.5	2.0	-	
	Attenuation		10 - 771	35	39	-	dB	
			771 - 791	40	45	-	dB	
			791.25 - 820.75	45	54	-	dB	
			793.5 - 818.5	45	54	-	dB	
			925 - 960	38	42	-	dB	
			1559 - 1563	43	53	-	dB	
			1565.42 - 1573.37	45	53	-	dB	
			1573.37 - 1577.47	45	54	-	dB	
			1577.47 - 1585.42	45	53	-	dB	
			1597.55 - 1605.89	45	54	-	dB	
			1664 - 1724	40	56	-	dB	
			1805 - 1880	40	62	-	dB	
			1884.5 - 1919.6	40	58	-	dB	
			2110 - 2170	40	56	-	dB	
			2400 - 2500	35	43	-	dB	
			2496 - 2586	35	52	-	dB	
			2570 - 2620	35	52	-	dB	
			2620 - 2690	35	52	-	dB	
			3328 - 3448	30	51	-	dB	
			4160 - 4310	30	55	-	dB	
			4900 - 5950	20	33	-	dB	

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Characteristic table

Items			KYOCERA 1814 size specification					Unit	Notes
			Frequency (MHz)			Specification			
						Min.	Typ.	Max.	
Ant to Rx	Insertion Loss		791.25	-	820.75	-	1.9	3.3	dB	
	Ripple		791.25	-	820.75	-	1.1	3.0	dB	
	VSWR	Rx	791.25	-	820.75	-	1.5	2.2		
		Ant	791.25	-	820.75	-	1.5	2.3		
	Attenuation		10	-	760	35	46	-	dB	
			760	-	770	10	49	-	dB	
			832.25	-	861.75	48	55	-	dB	
			880	-	915	40	49	-	dB	
			1710	-	1785	40	48	-	dB	
			2373	-	2463	35	46	-	dB	
			2400	-	2500	35	45	-	dB	
			2500	-	2570	40	45	-	dB	
			4900	-	5950	25	31	-	dB	
Tx to Rx	Isolation		791.25	-	820.75	53	56	-	dB	
			832.25	-	861.75	53	59	-	dB	
			1574	-	1577	40	57	-	dB	
			1664	-	1724	20	57	-	dB	
			2496	-	2586	20	59	-	dB	

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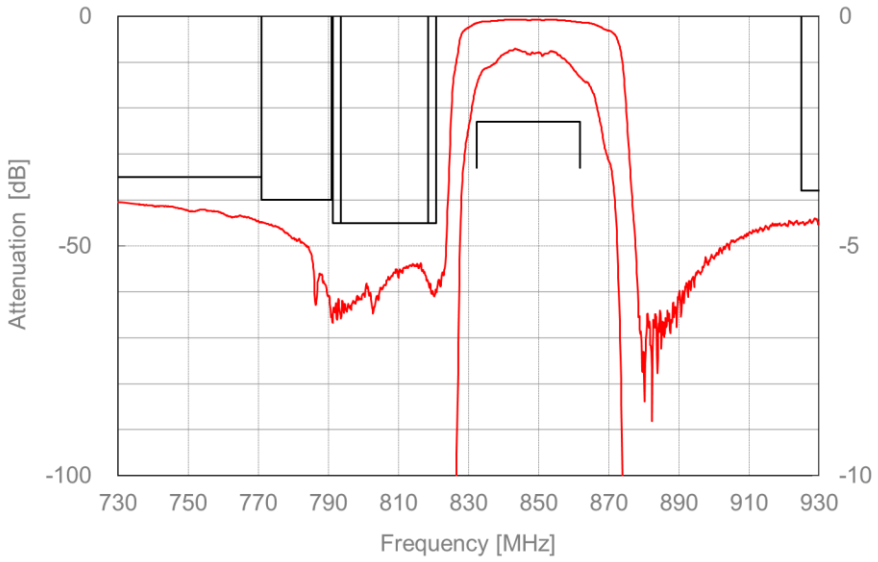
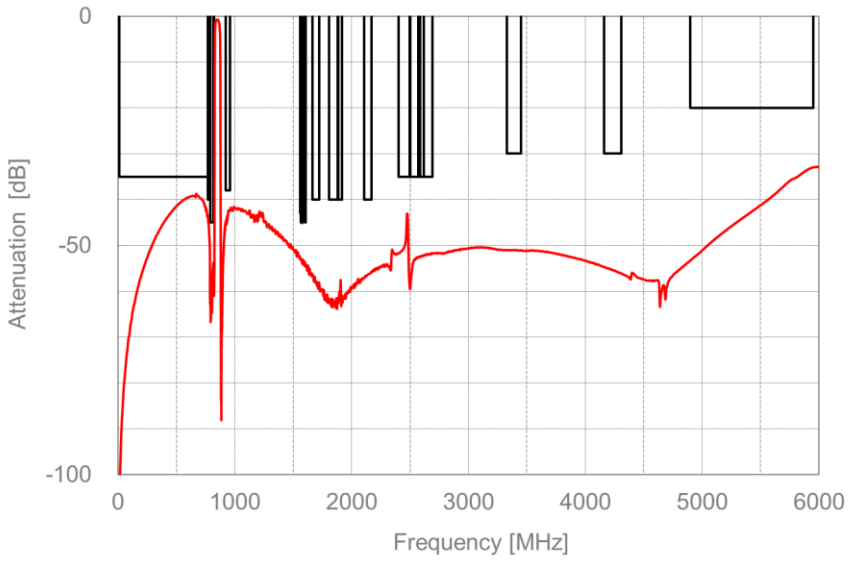
Typical Curve Data

[Tx to Ant]





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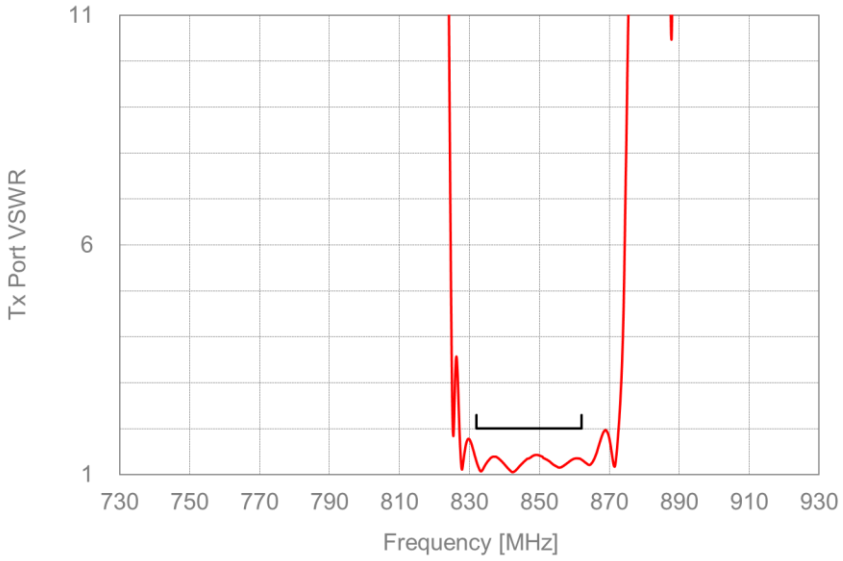
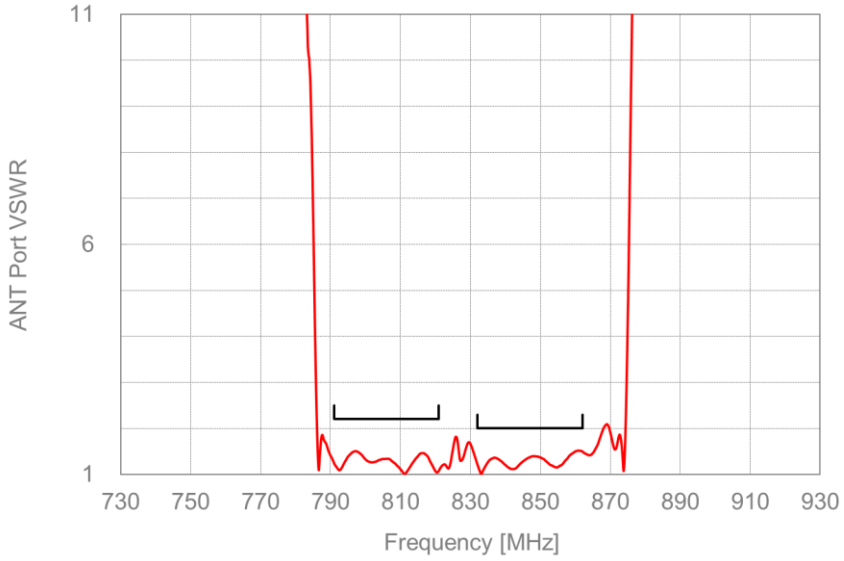
Spec.





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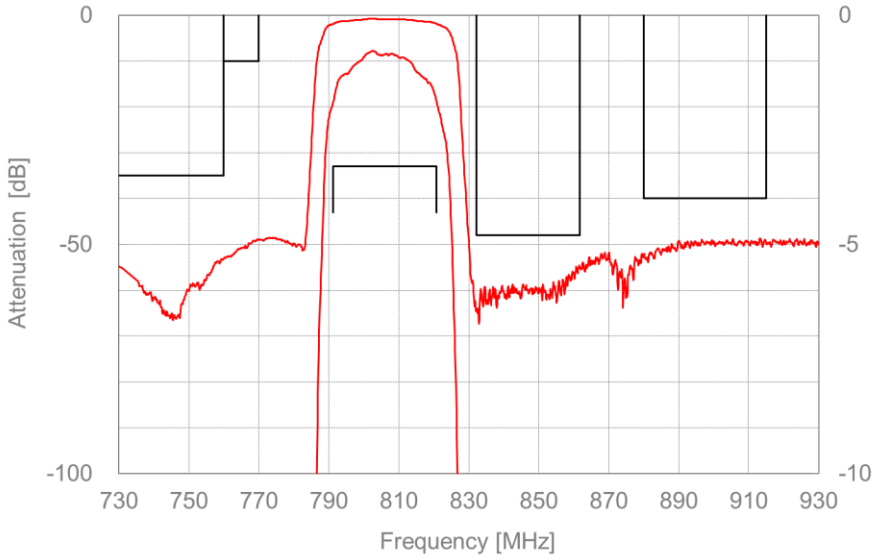
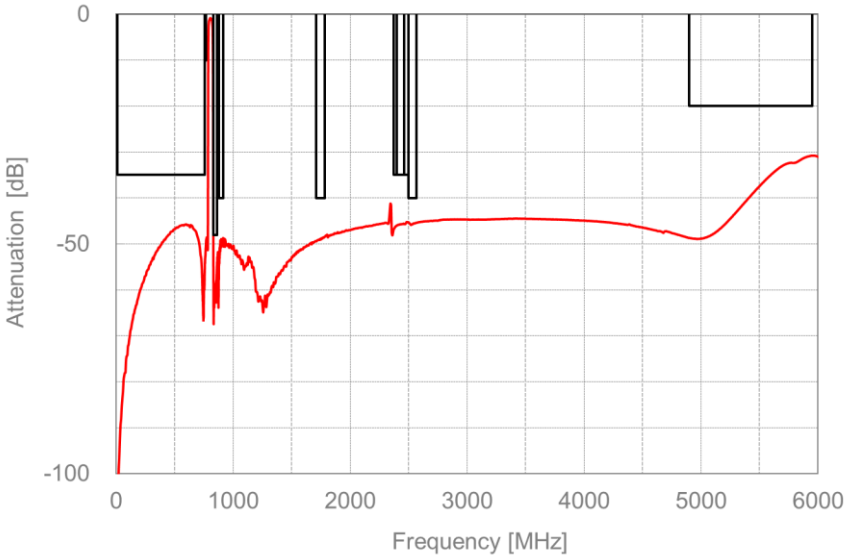
Typical Curve Data

[Ant to Rx]





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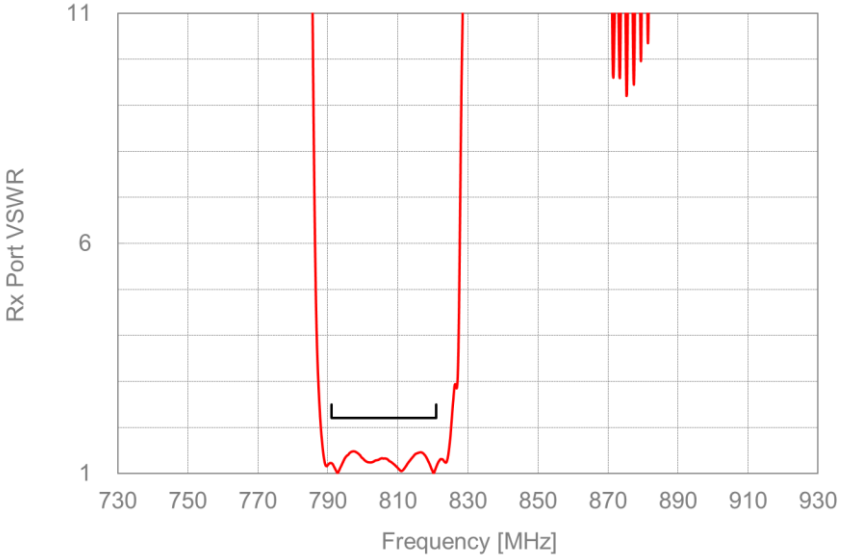
Spec.



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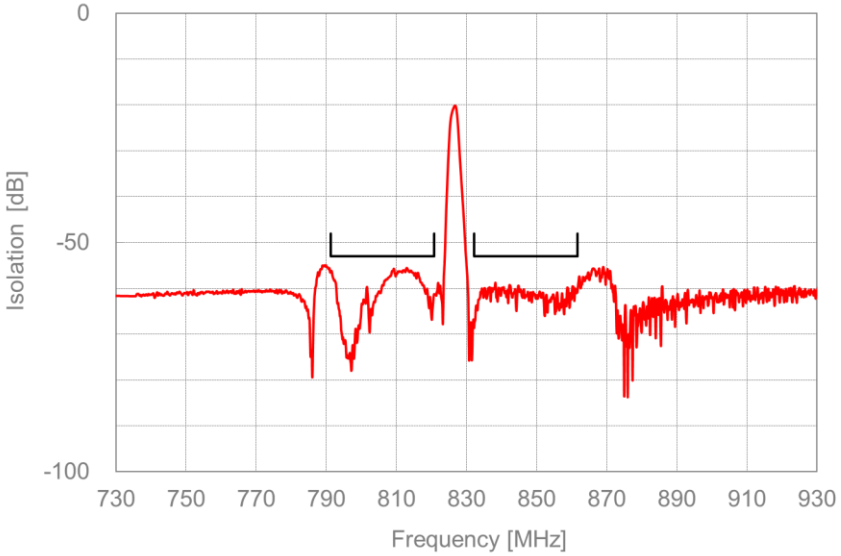
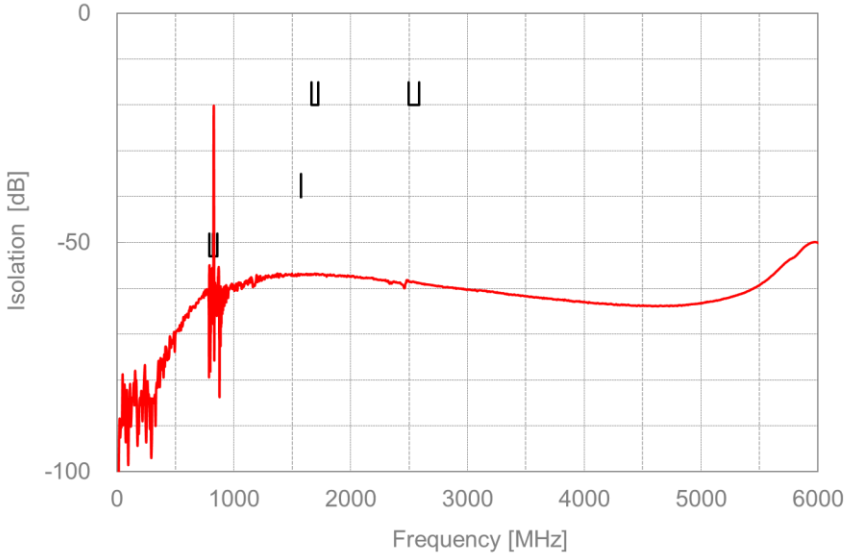
Typical Curve Data

[Tx to Rx]





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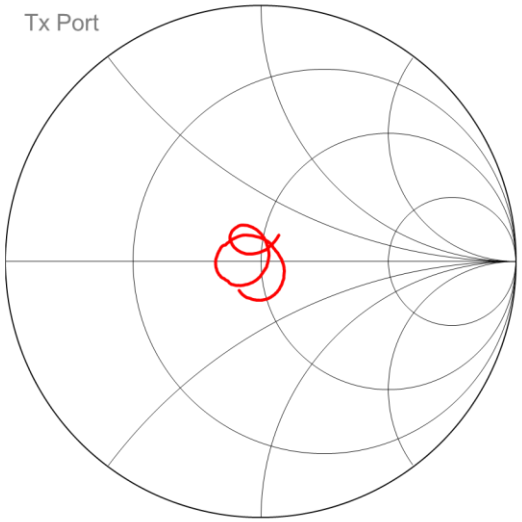
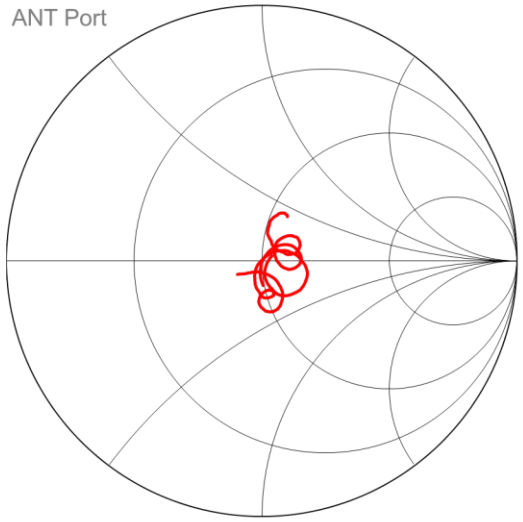
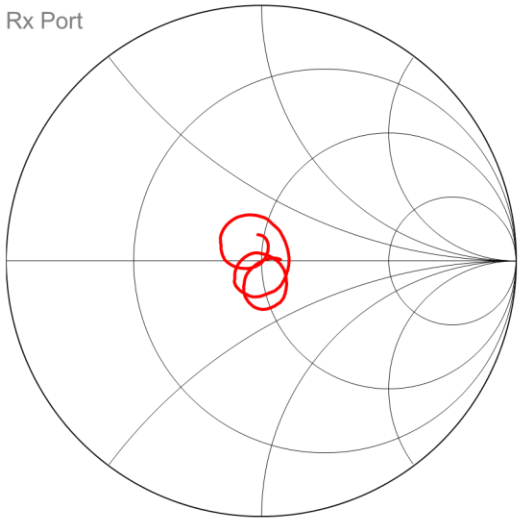
Spec.

[Port impedance]







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