

KYOCERA SAW Duplexer
- Covering B13 and B14 Unbalanced-Rx -
Type Name : SD18-0782T8UUA1

Jul.,5, 2022

KYOCERA Corporation

Corporate Electronic Components Group

RF Devices Division

Dimensions & Test Circuit of SAW Duplexer

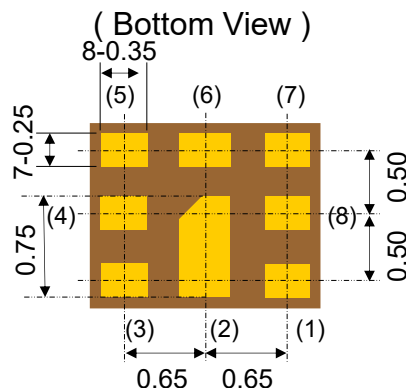
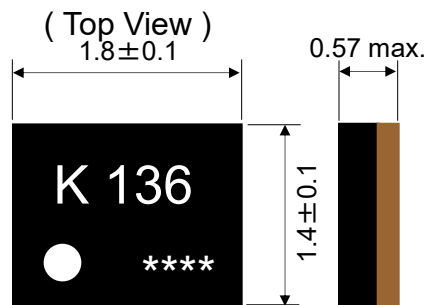
■ Type Name

SD18-0782T8UUA1

■ Feature

- Dual Band Covering for Band13 and Band14
- High Power Durability for 5G
 - DFT-s- OFDM : 31dBm
 - CP-OFDM : 30.5dBm
- Low Insertion Loss
- NS07 Attenuation 22dB min. relative to IL(dBint)

■ Dimensions



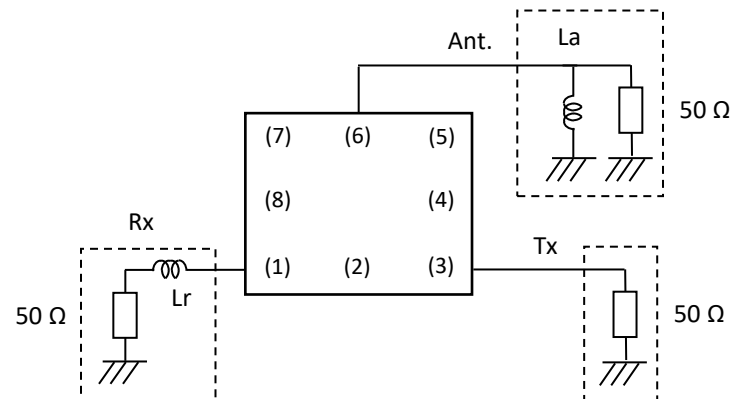
Unit : mm
K : KYOCERA logo
136 : Identification no.
● : Index mark of pin 1
**** : Production Code

Pin allocation

(1) : Rx
(3) : Tx
(6) : Ant.

Others : GND

■ Test Circuit



La : 15nH (Ideal)
Lr : 4.7nH (Ideal)

Items	Rating	Unit	Note	
Operating Temperature Range	-20 to +90	deg.C		
Storage Temperature Range	-40 to +90	deg.C		
Max Input Power	+31	dBm	@777.5 - 786.5MHz	5,000hours, Ta=50deg.C, DFT-s-OFDM 1RB
	+30.5	dBm		5,000hours, Ta=50deg.C, CP-OFDM 1RB
	+31	dBm	@788 - 798MHz	5,000hours, Ta=50deg.C, DFT-s-OFDM 1RB
	+30.5	dBm		5,000hours, Ta=50deg.C, CP-OFDM 1RB
Tx Port Nominal Impedance	50	ohm	Unbalance	
Ant. Port Nominal Impedance	50//La=15nH	ohm	Unbalance	
Rx Port Nominal Impedance	50+Lr=4.7nH	ohm	Unbalance	

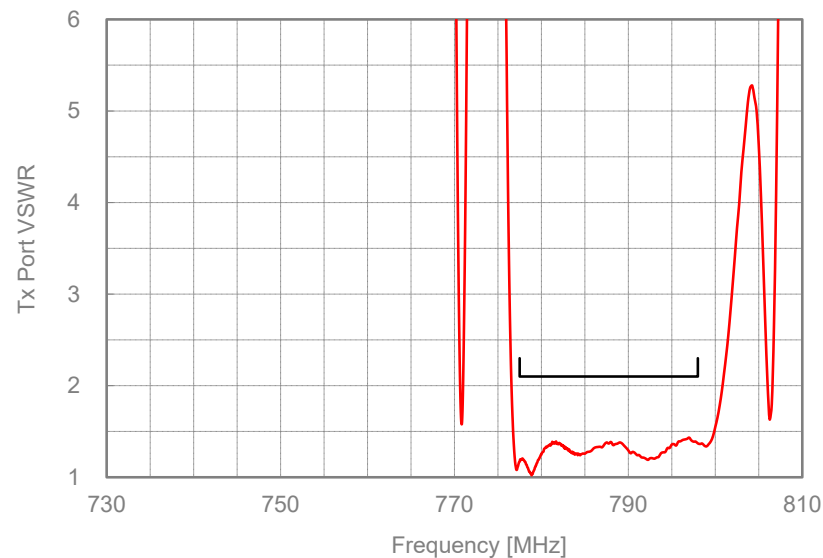
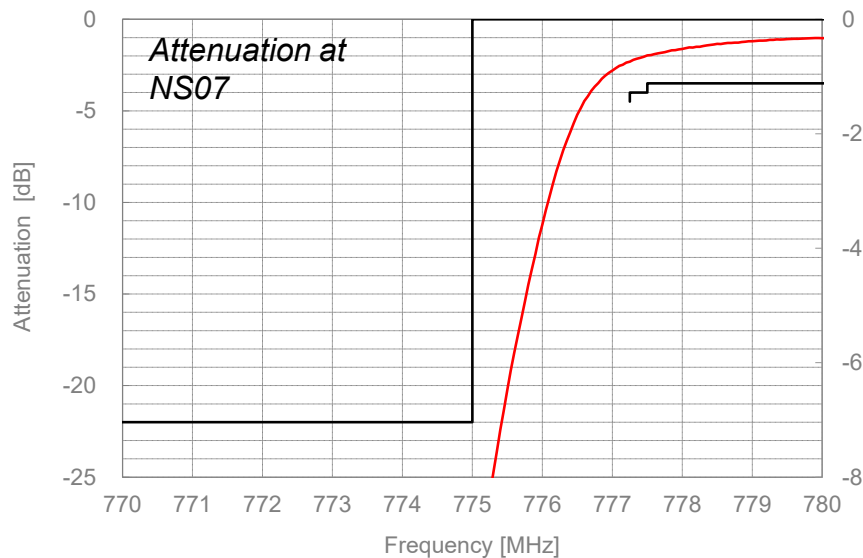
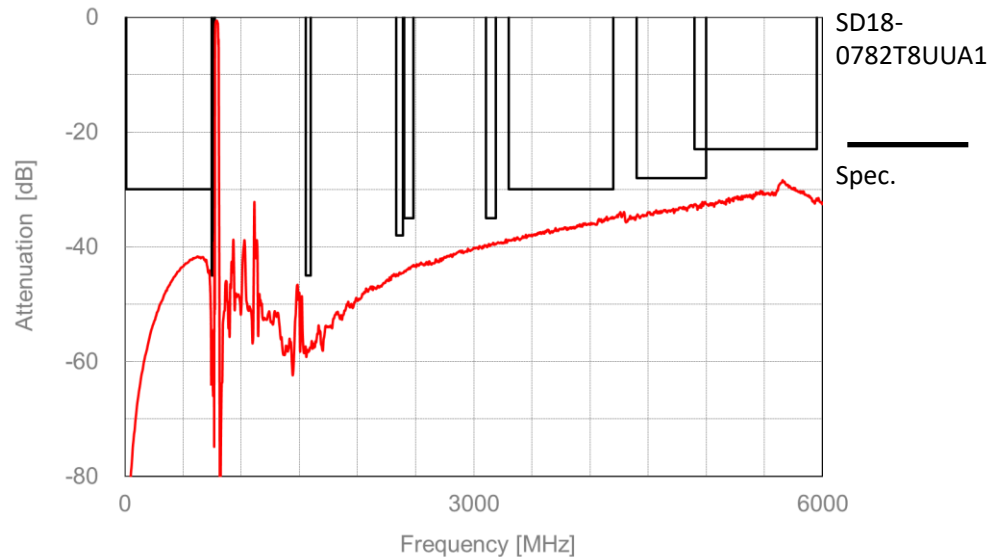
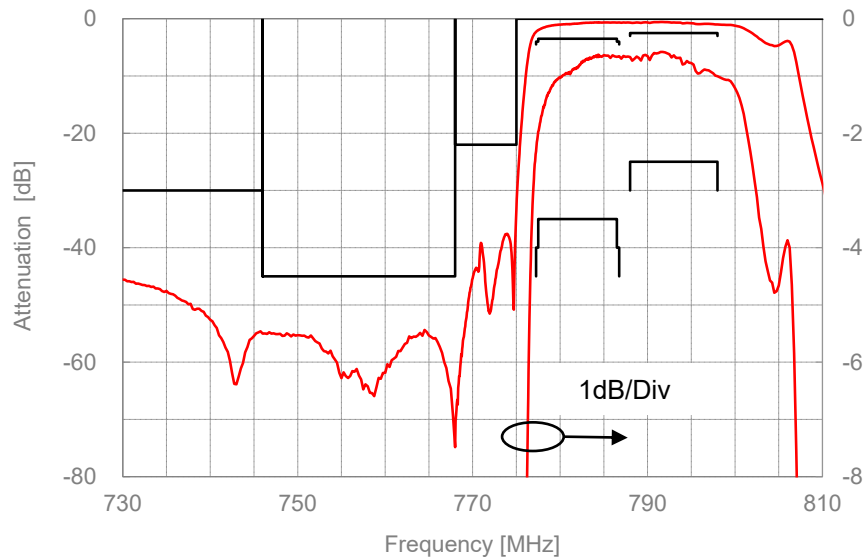
Characteristic table

Items			Frequency Range [MHz]		SD18-0782T8UUA1			Unit	Notes
					Specification				
					min.	typ.	max.		
Tx to Ant	Insertion loss		777.5 to 786.5	-	2.0	3.5	dB	Band13	
			788 to 798	-	1.0	2.5	dB	Band14	
			777.25 to 786.75	-	2.3	4.0	dB		
	VSWR	Tx	777.5 to 798	-	1.4	2.1	-		
		Ant	777.5 to 798	-	1.4	2.1	-		
	Absolute attenuation		10 to 746	30	41	-	dB		
			746 to 768	45	54	-	dB	Rx	
			768 to 775	22 *	32 *	-	dB	NS07 Relative to IL(dBint*)	
			1554 to 1596	43	57	-	dB	2fTx	
			2331 to 2394	38	45	-	dB	3fTx	
			2400 to 2484	35	43	-	dB	ISM	
			3108 to 3192	35	40	-	dB	4fTx	
			3300 to 4200	30	36	-	dB	n77	
			4400 to 5000	28	34	-	dB	n79	
			4900 to 5950	23	30	-	dB	ISM 5G	
Ant to Rx	Insertion loss		746 to 756	-	1.3	2.9	dB	Band13	
			758 to 768	-	1.6	2.9	dB	Band14	
	VSWR	Rx	746 to 756	-	1.8	2.2	-		
		Ant	746 to 756	-	1.7	2.1	-		
	Absolute attenuation		777 to 787	30	54	-	dB	Tx	
			2400 to 2500	40	58	-	dB	ISM 2.4G	
			3300 to 4200	35	44	-	dB	n77	
			4400 to 5000	30	43	-	dB	n79	
			4900 to 5950	20	34	-	dB	ISM 5G	
Tx to Rx Isolation	Isolation		746 to 768	53	56	-	dB		
			777 to 798	52	55	-	dB		

*dBint : Integrated to LTE Modulation (4.5MHz)

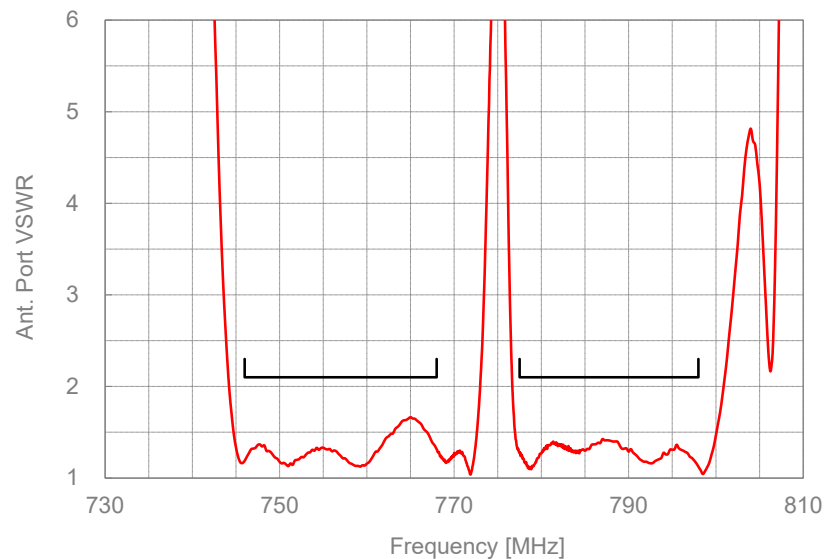
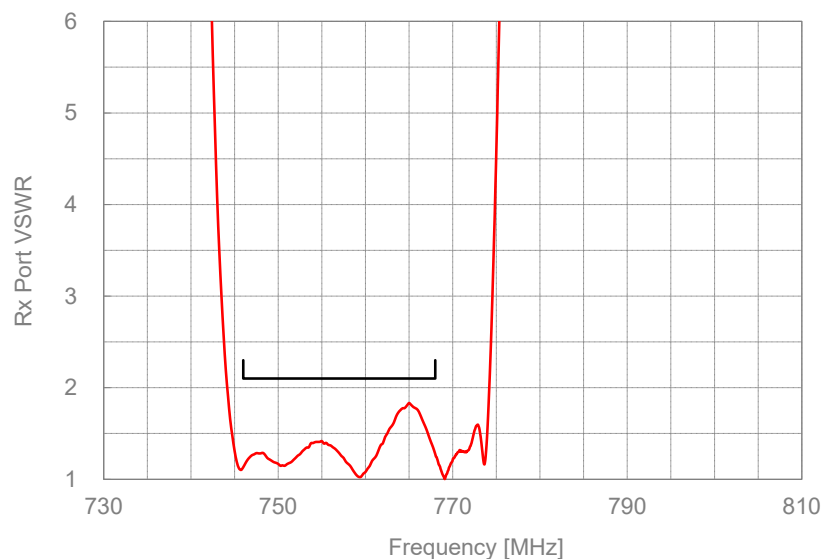
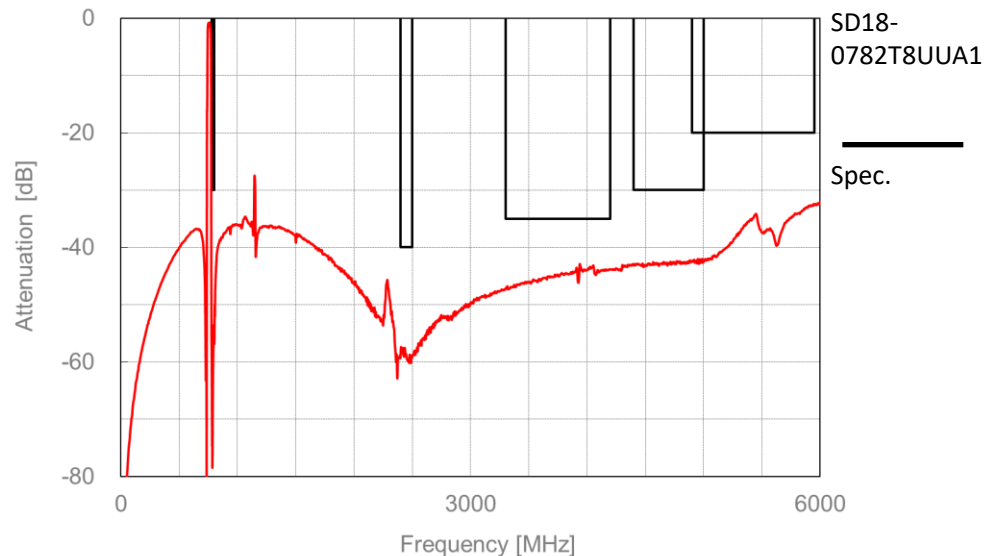
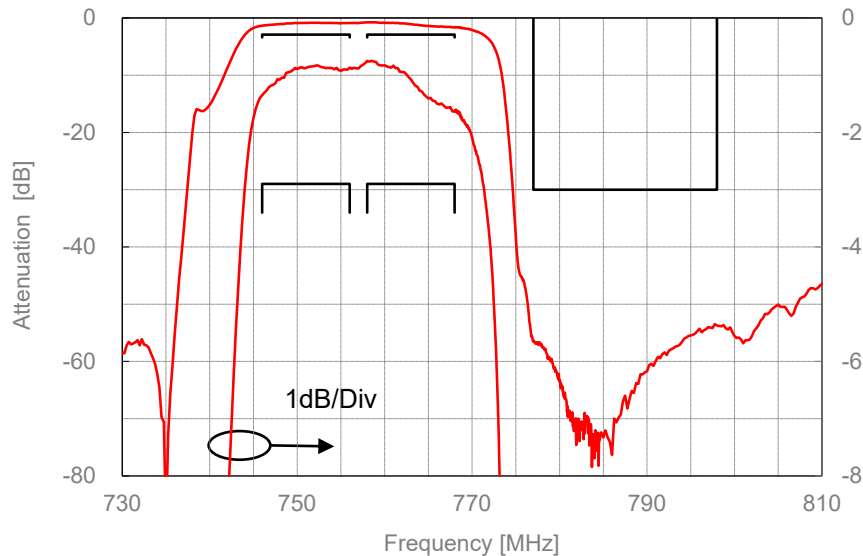
Typical Curve Data

[Tx to Ant]



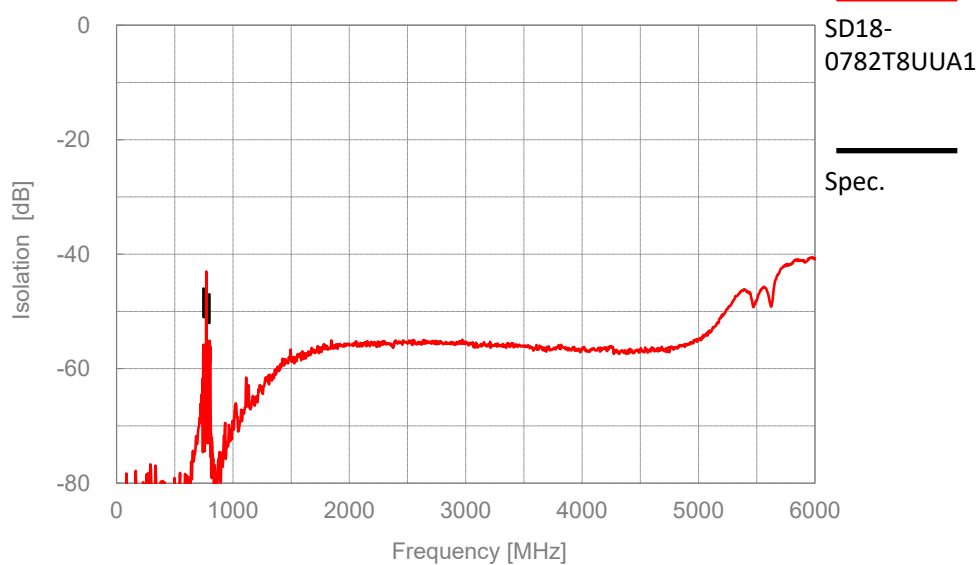
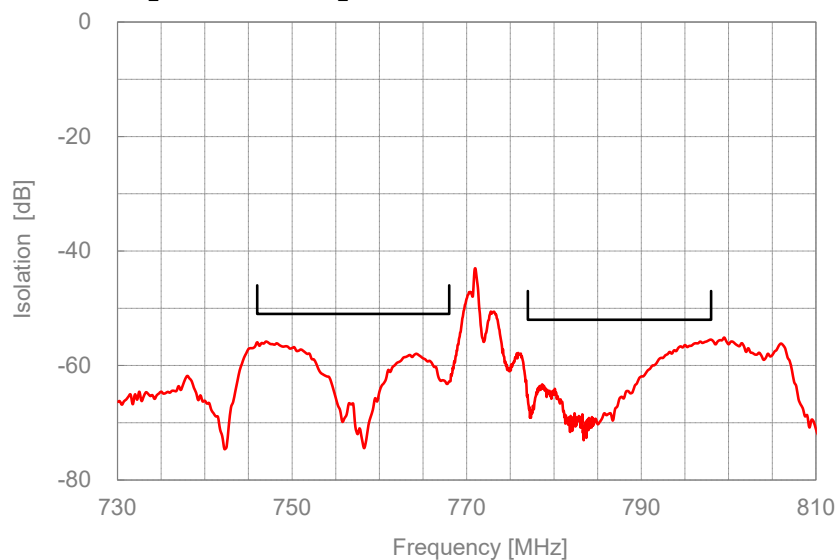
Typical Curve Data

[Ant to Rx]

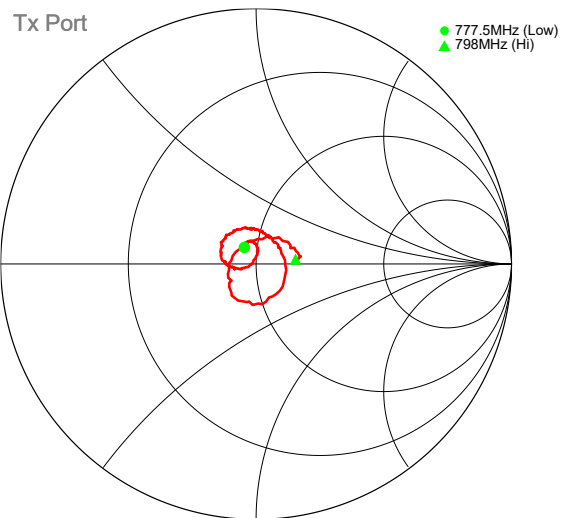


Typical Curve Data

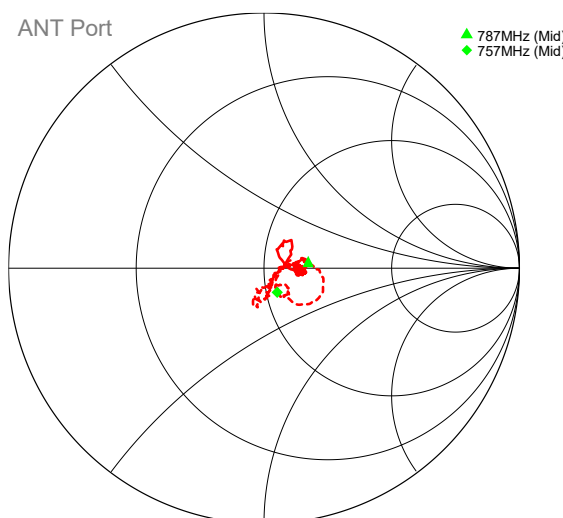
[Tx to Rx]



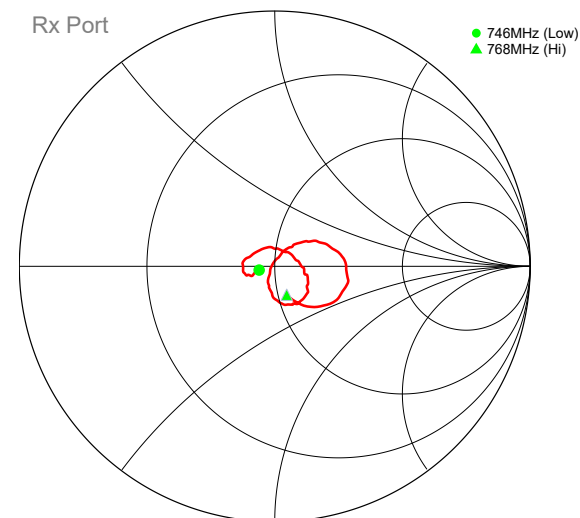
[Tx Port]



[Ant Port]



[Rx Port]



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