Rev.00

RoHS Compliant

Datasheet of SAW Duplexer

1814 Band1 Balanced

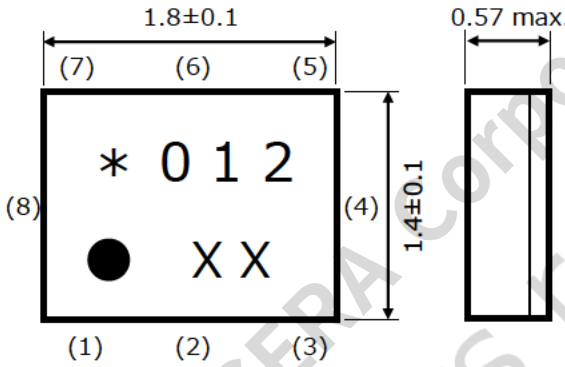
KYOCERA Part No. : SD18 1950R8UBQ1

Rating

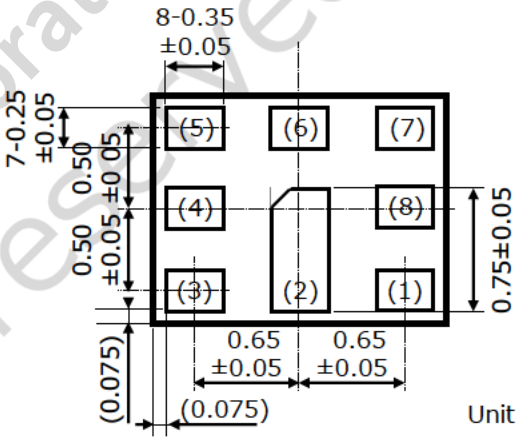
Items	Rating	Unit	Note
Operating Temperature Range	-30 to +85	deg.C	
Storage Temperature Range	-40 to +85	deg.C	
Max Input Power (Tx port)	+29	dBm	5,000hours, Ta=50deg.C, CW
Tx Port Nominal Impedance	50//7.5nH	ohm	Unbalance
Ant. Port Nominal Impedance	50//2.7nH	ohm	Unbalance
Rx Port Nominal Impedance	100//10nH	ohm	Balance

Dimensions

(Top View)



(Bottom View)



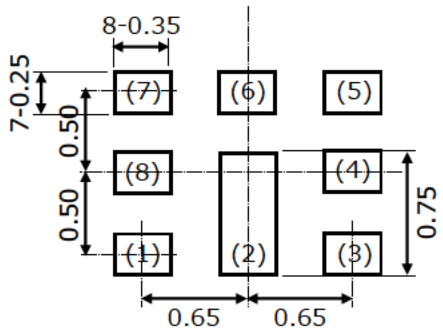
Unit : mm

* : Identification logo
012 : Identification no.
● : Index mark of pin 1
XX : Date code

Pin No.	Function
(1)	Rx
(3)	Tx
(6)	Ant.
(8)	Rx
Others	GND

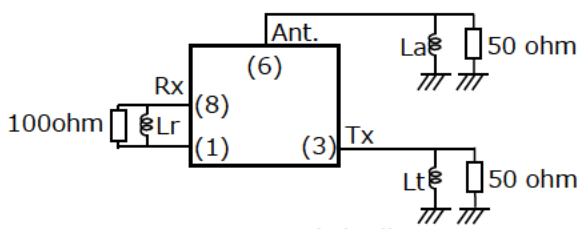
Recommendable Land Pattern

(Top View)



Measurement Circuit

(Top View)



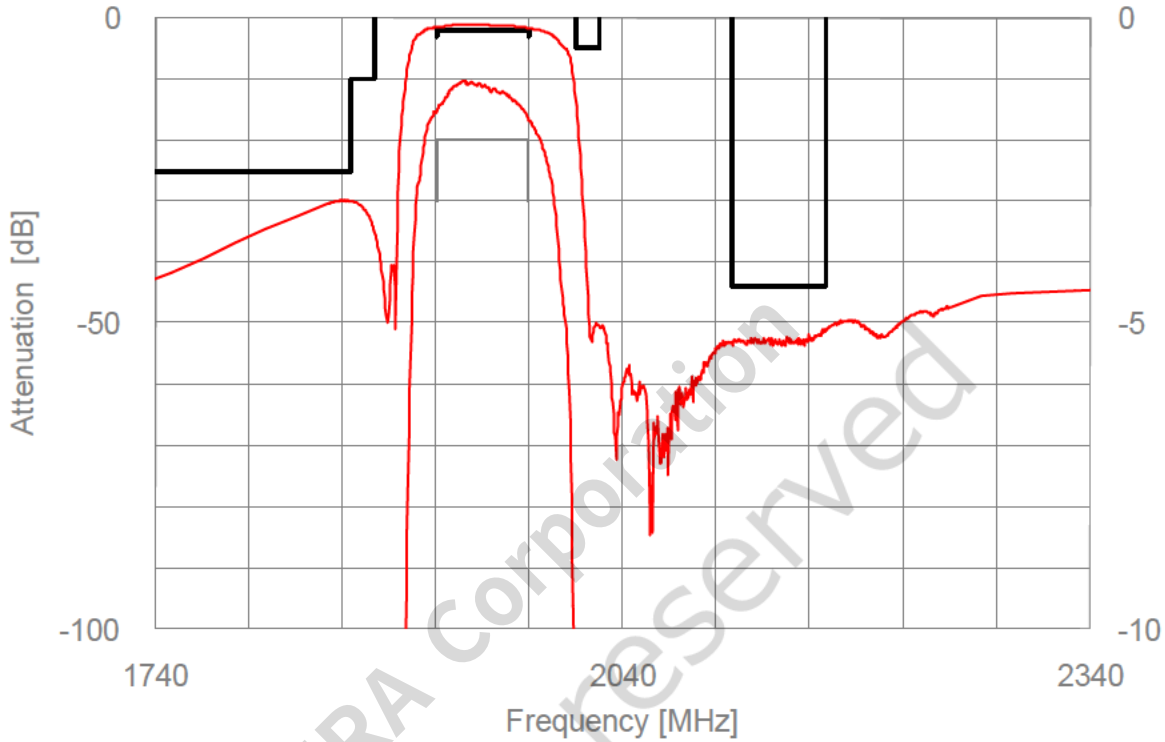
La : 2.7nH (Ideal)
Lr : 10nH (Ideal)
Lt : 7.5nH (Ideal)

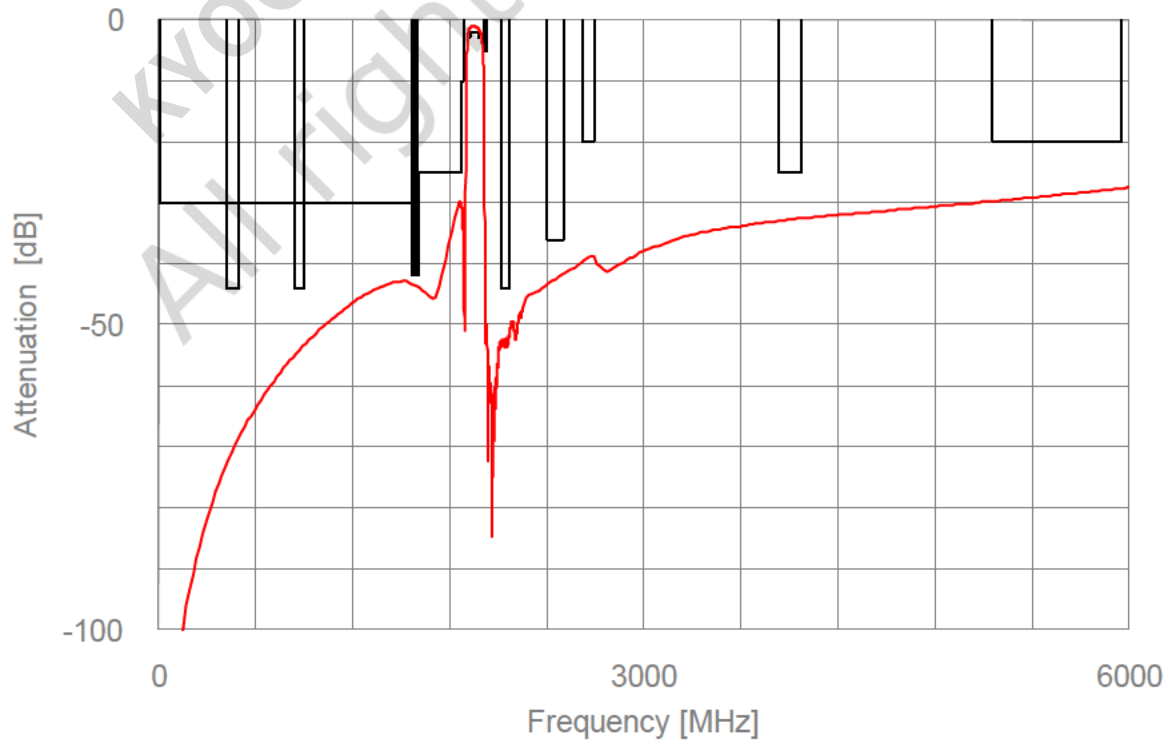
Electrical Characteristics

Items			Frequency (MHz)			Characteristics min.	typ.	max.	Unit	Note
Tx to Ant	Nominal Center Frequency		-				1950		MHz	
	Insertion Loss		1920.48	to	1979.52	-	1.6	2.0	dB	
	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	
			843	to	894	44	53	-	dB	
			1565.42	to	1573.374	42	43	-	dB	
			1573.374	to	1577.466	42	43	-	dB	
			1577.466	to	1585.42	42	43	-	dB	
			1597.5515	to	1605.886	42	44	-	dB	
			1605.886	to	1805	25	36		dB	
			1805	to	1865	25	30	-	dB	
			1865	to	1880	10	30		dB	
			2010	to	2025	5	10	-	dB	+15 to +85deg.C
			2110	to	2170	44	51	-	dB	
			2400	to	2500	36	42	-	dB	
			2620	to	2690	20	39	-	dB	
			3830	to	3970	25	33	-	dB	
			5150	to	5950	18	28	-	dB	
Ant to Rx	Nominal Center 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	
	VSWR	Ant	2110.48	to	2169.52	-	1.3	2.0	-	
		Rx	2110.48	to	2169.52	-	1.2	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	
	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.	
Tx to Rx	Differential Mod Isola ion		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 Isolation		1920.48	to	1979.52	50	52	-	dB	

Electrical Characteristics

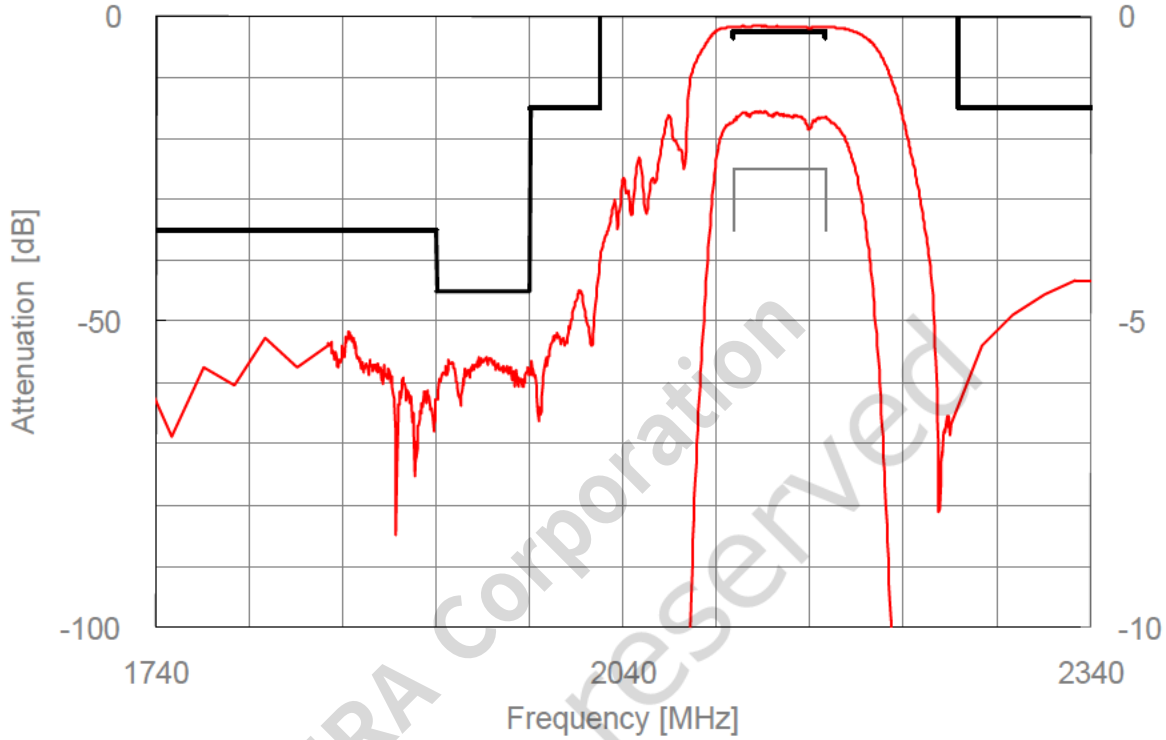
[Tx to Ant]

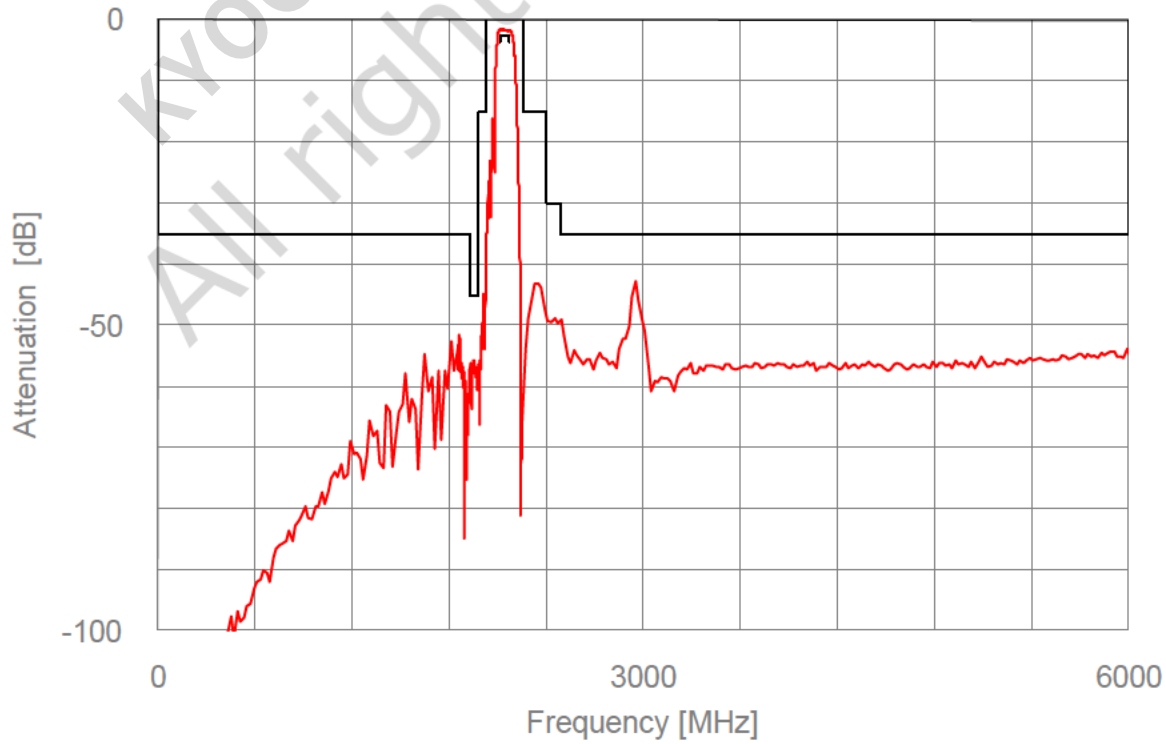




Electrical Characteristics

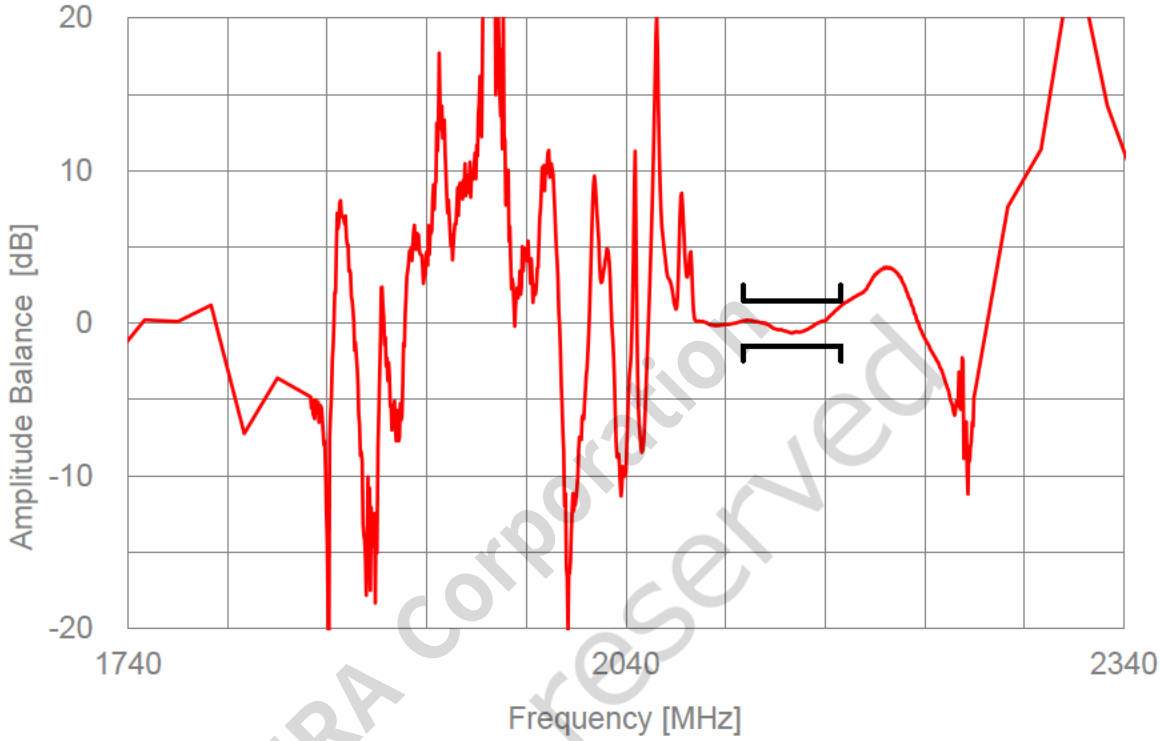
[Ant to Rx]

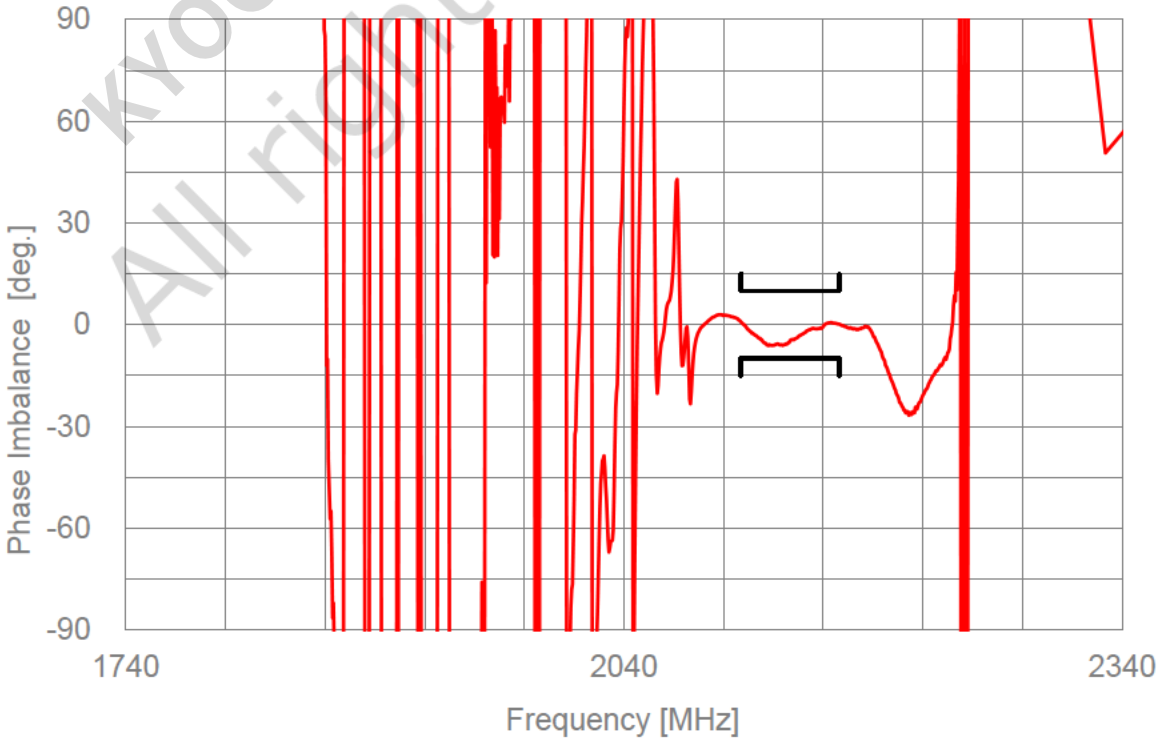




Electrical Characteristics

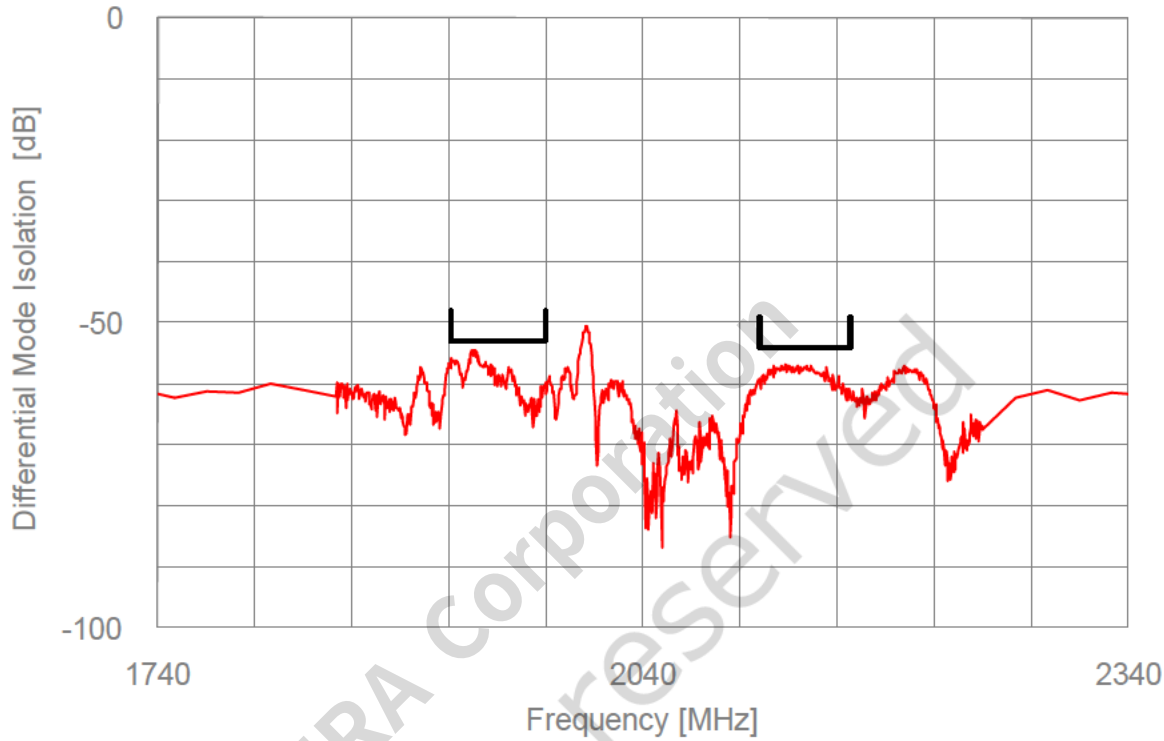
[Ant to Rx]

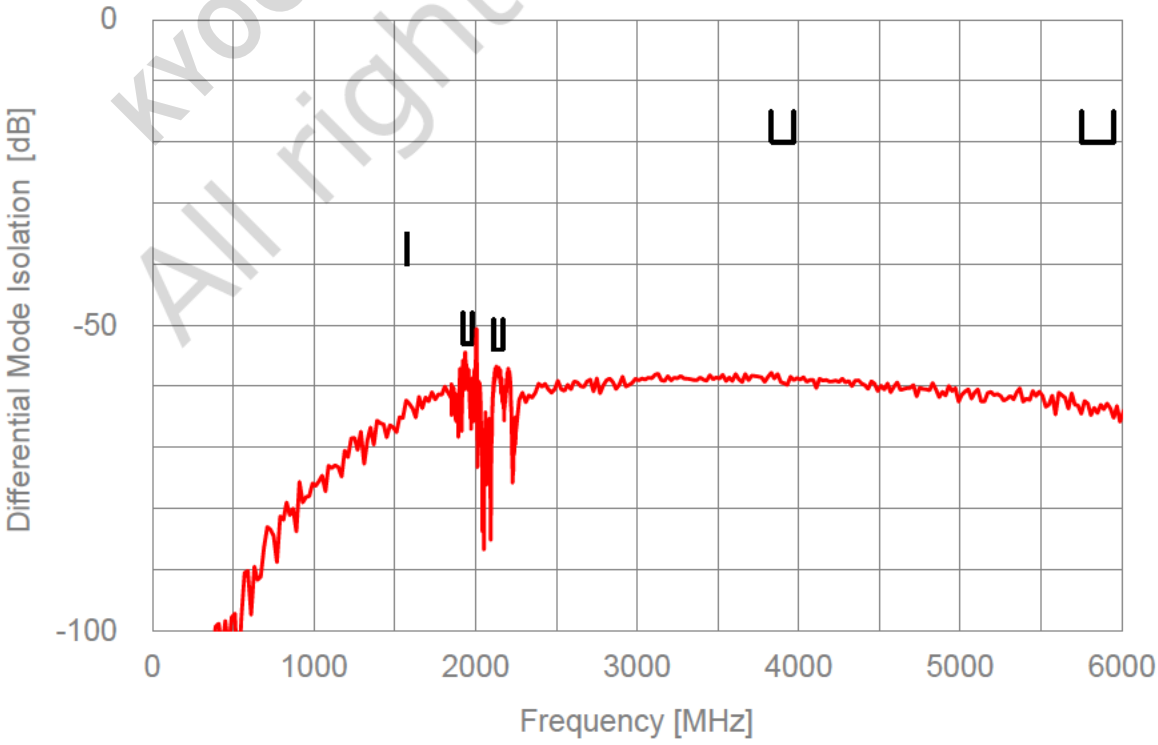




Electrical Characteristics

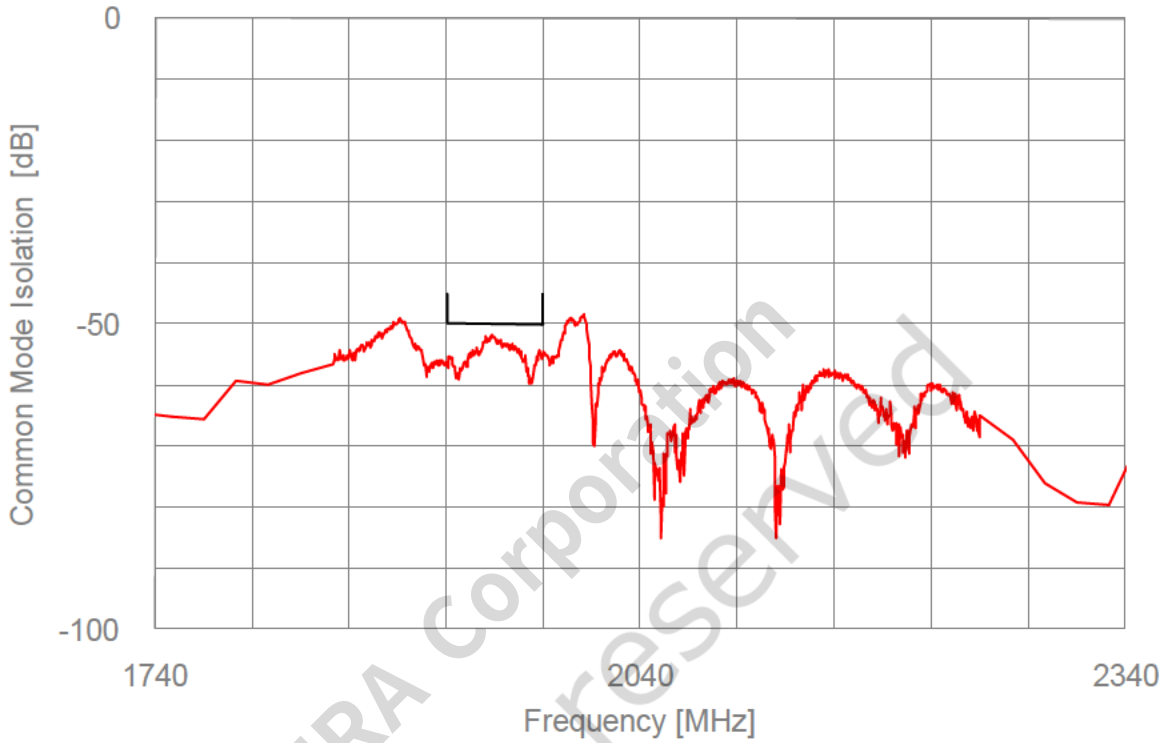
[Tx to Rx]

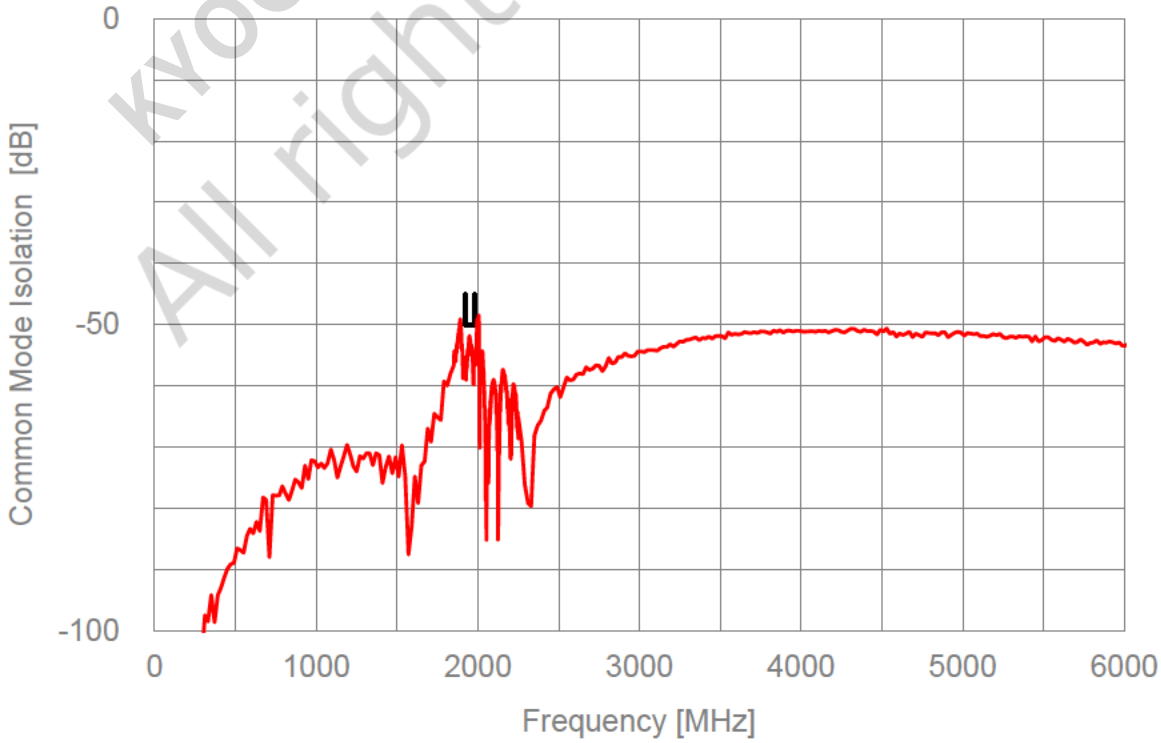




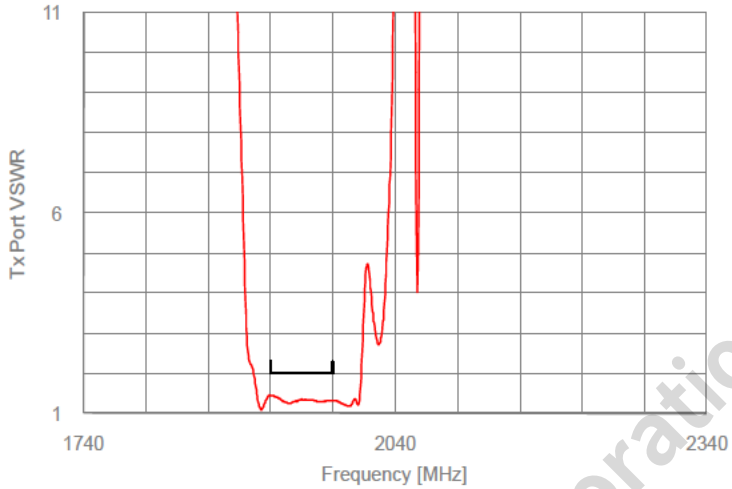
Electrical Characteristics

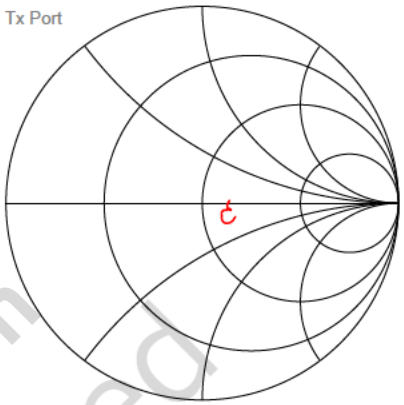
[Tx to Rx]

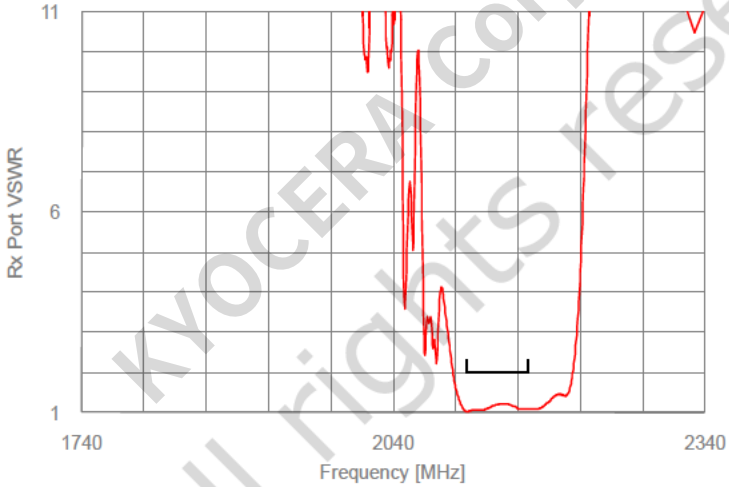


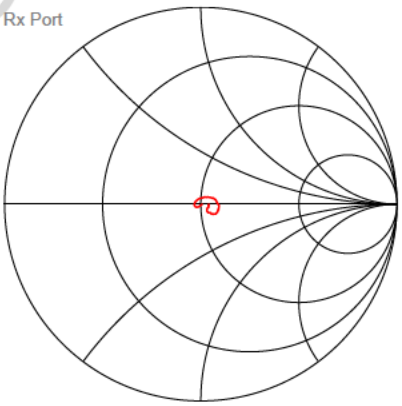


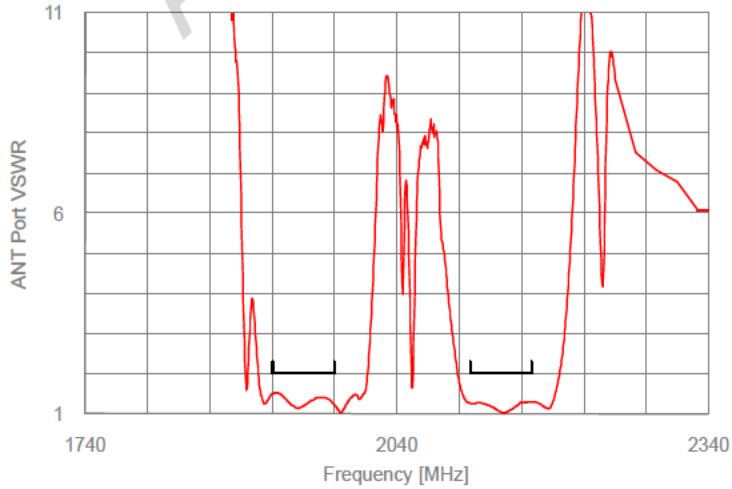
Electrical Characteristics

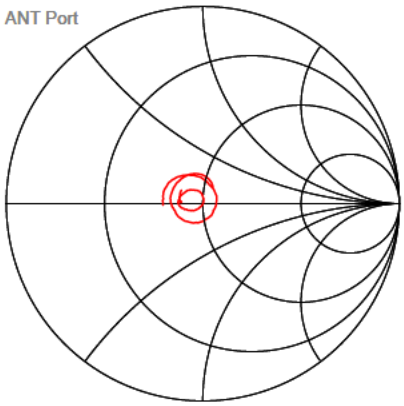






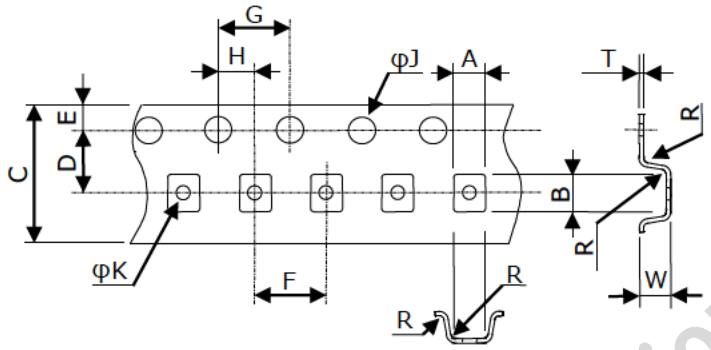






Tape & Reel Specification

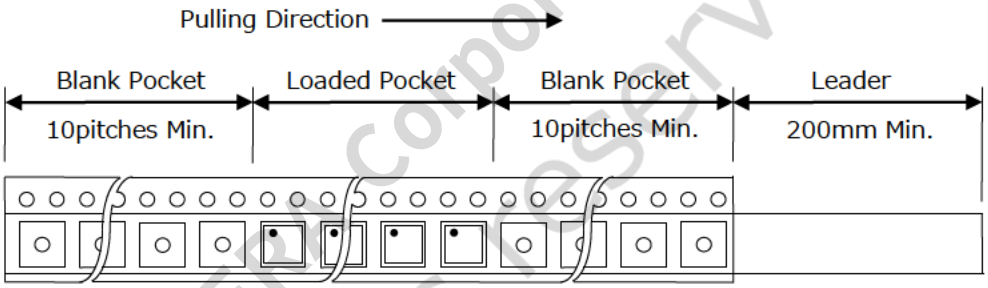
[Tape]



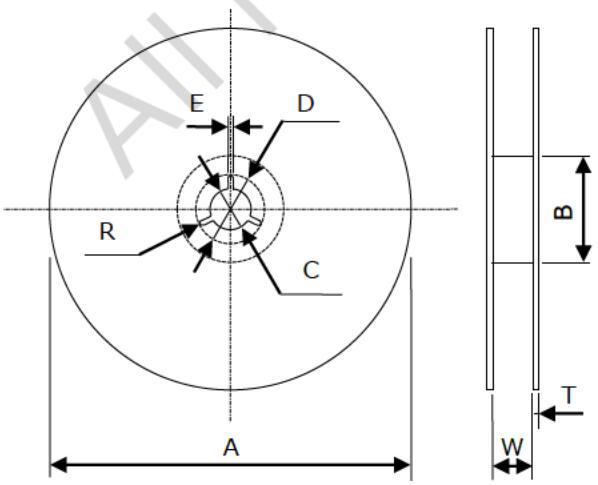
Unit : mm

Part	Dimension
A	1.7±0.1
B	2.05±0.10
C	8.0±0.2
D	3.50±0.05
E	1.75±0.10
F	4.0±0.1
G	4.0±0.1
H	2.00±0.05
φJ	1.5+0.1/-0
φK	0.80±0.05
R	0.2 Max
W	0.7±0.1
T	0.20±0.05

W : Dimension is depth of pockets.



[Reel]



Unit : mm

Part	Dimension
A	178 ± 2
B	60 ± 2
C	13.0 ± 0.2
D	21.0 ± 0.8
E	2.0 ± 0.5
R	1
W	9.5 ± 1.0
T	2.0 ± 0.2

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