Rev.00

RoHS Compliant

Datasheet of SAW Duplexer

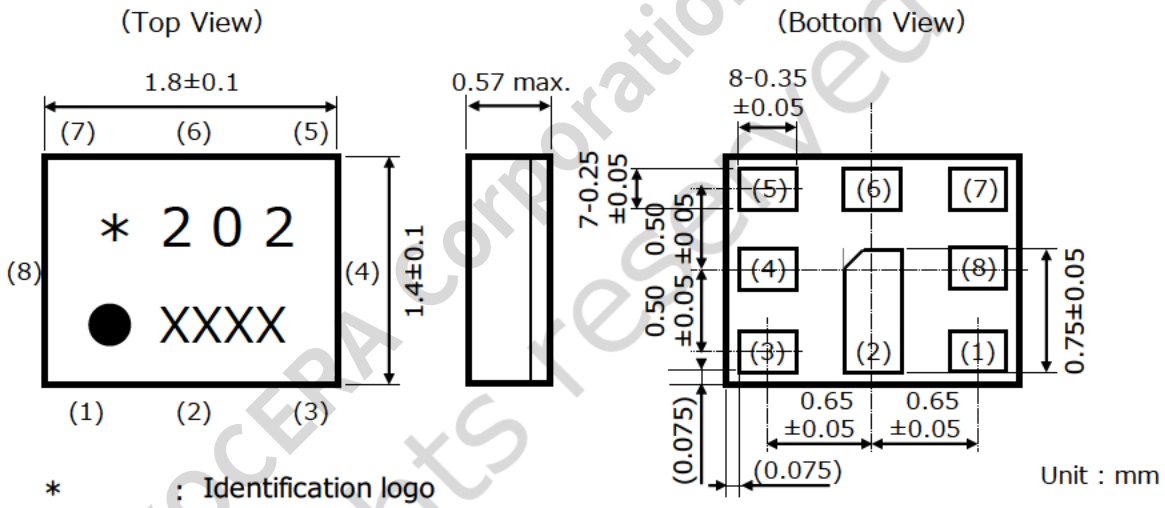
1814 Band20 Unbalanced

KYOCERA Part No. : SD18 0847R8UUB1

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)	+29.5	dBm	5,000hours, Ta=50deg.C, CW
Tx Port Nominal Impedance	50+3.9nH	ohm	Unbalance
Ant. Port Nominal Impedance	50//11nH	ohm	Unbalance
Rx Port Nominal Impedance	50+3.9nH	ohm	Unbalance

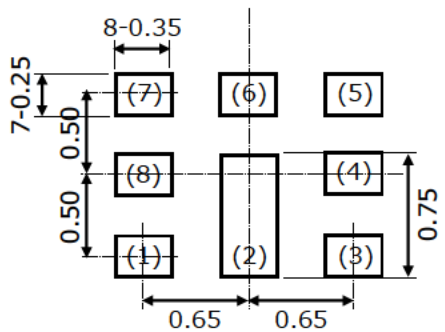
Dimensions



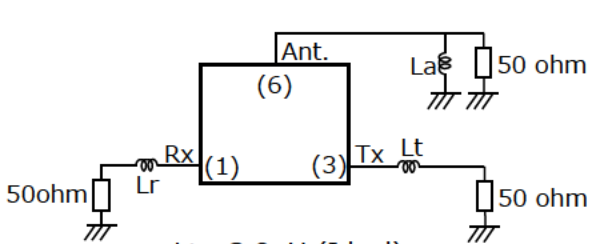
* : Identification logo
202 : Identification no.
● : Index mark of pin 1
XXXX : Production code

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

Recommendable Land Pattern



Measurement Circuit



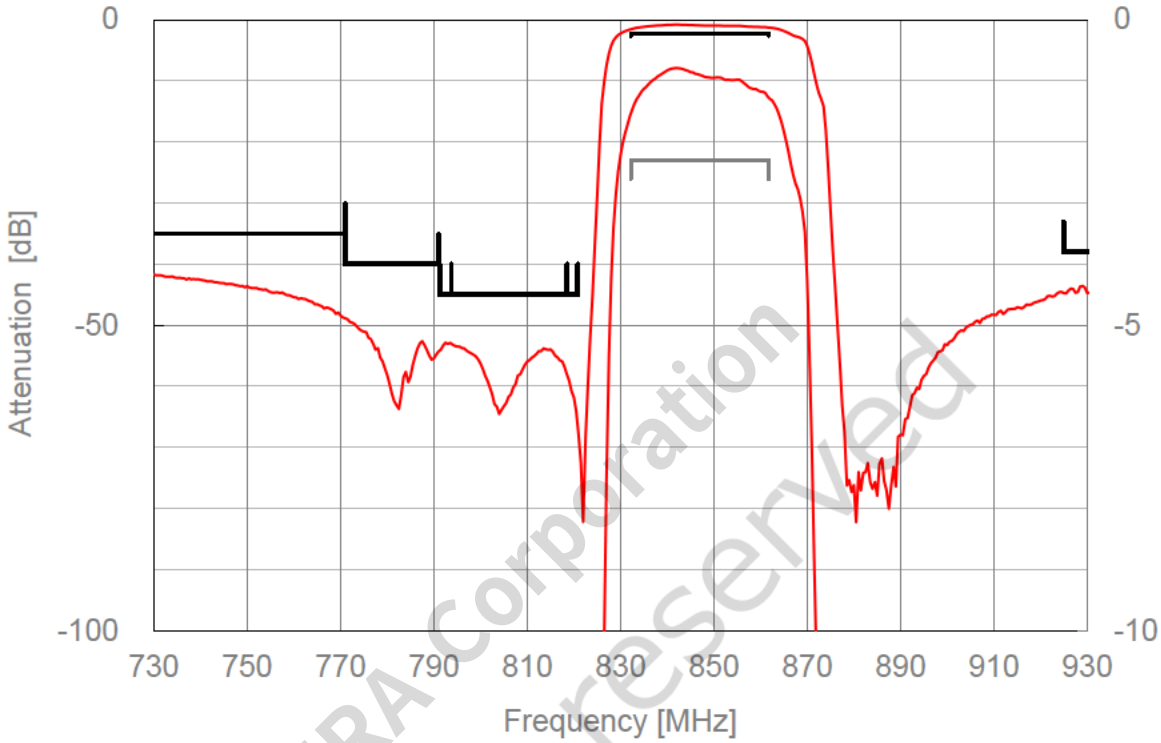
Lt : 3.9nH (Ideal)
La : 11nH (Ideal)
Lr : 3.9nH (Ideal)

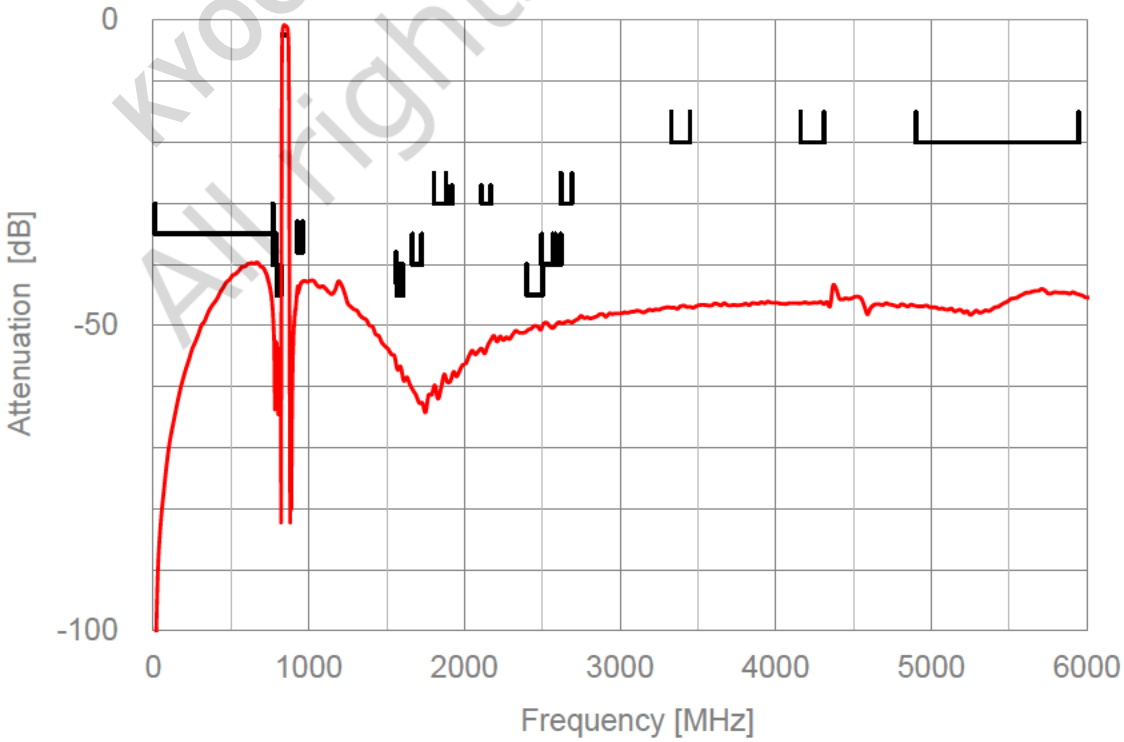
Electrical Characteristics

Items			Frequency (MHz)			Characteristics min.	Characteristics typ.	Characteristics max.	Unit	Note
Tx to Ant	Nominal Center Frequency		-				847		MHz	
	Insertion Loss		832.25	to	861.75	-	1.5	2.3	dB	
	Ripple		832	to	862	-	0.8	1.8	dB	
	VSWR	Tx	832	to	862	-	1.5	2.0	-	
		Ant	832	to	862	-	1.4	2.0	-	
	Attenuation		10	to	771	35	40	-	dB	
			771	to	791	40	49	-	dB	
			791.25	to	820.75	45	53	-	dB	
			793.5	to	818.5	45	53	-	dB	
			925	to	960	38	43	-	dB	
			1559	to	1563	43	56	-	dB	
			1565.42	to	1573.37	45	56	-	dB	
			1573.37	to	1577.47	45	56	-	dB	
			1577.47	to	1585.42	45	57	-	dB	
			1597.55	to	1605.89	45	58	-	dB	
			1664	to	1724	40	62	-	dB	
			1805	to	1880	30	59	-	dB	
			1884.5	to	1919 6	30	59	-	dB	
			2110	to	2170	30	53	-	dB	
			2400	to	2500	45	50	-	dB	
			2496	to	2586	40	50	-	dB	
			2570	to	2620	40	49	-	dB	
			20	to	2690	30	49	-	dB	
			3328	to	3448	20	47	-	dB	
			4160	to	4310	20	46	-	dB	
			4900	to	5950	20	44	-	dB	
Ant to Rx	Nominal Center Frequency		-				806		MHz	
	Insertion Loss		791.25	to	820.75	-	2.1	3.6	dB	
	Ripple		791	to	821	-	1.3	3.0	dB	
	VSWR	Ant	791	to	821	-	1.4	2.2	-	
		Rx	791	to	821	-	1.5	2.3	-	
	Attenuation		10	to	760	35	41	-	dB	
			760	to	770	10	50	-	dB	
			832.25	to	861.75	48	54	-	dB	
			880	to	915	40	43	-	dB	
			1710	to	1785	40	55	-	dB	
			2373	to	2463	40	48	-	dB	
			2400	to	2500	40	47	-	dB	
			2500	to	2570	40	47	-	dB	
			4900	to	5950	25	38	-	dB	
Tx to Rx	Isolation		791.25	to	820.75	53	55	-	dB	
			832.25	to	861.75	53	58	-	dB	
			1574	to	1577	40	53	-	dB	
			1664	to	1724	20	52	-	dB	
			2496	to	2586	20	53	-	dB	

Electrical Characteristics

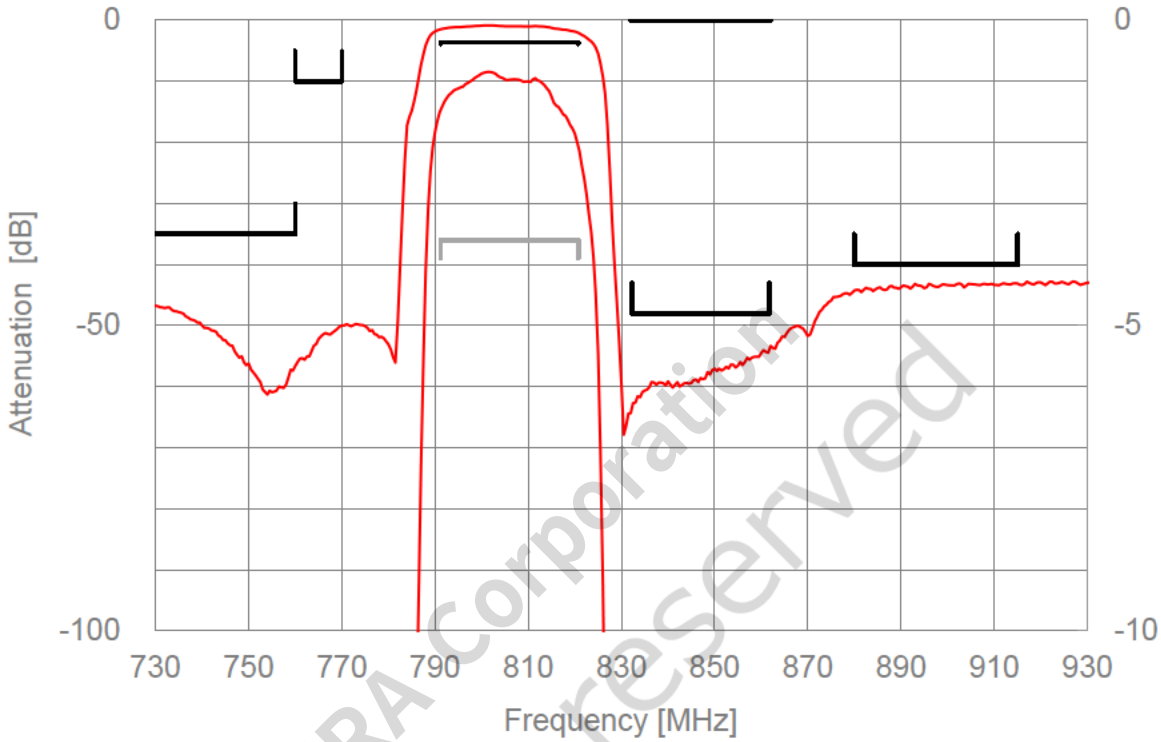
[Tx to Ant]

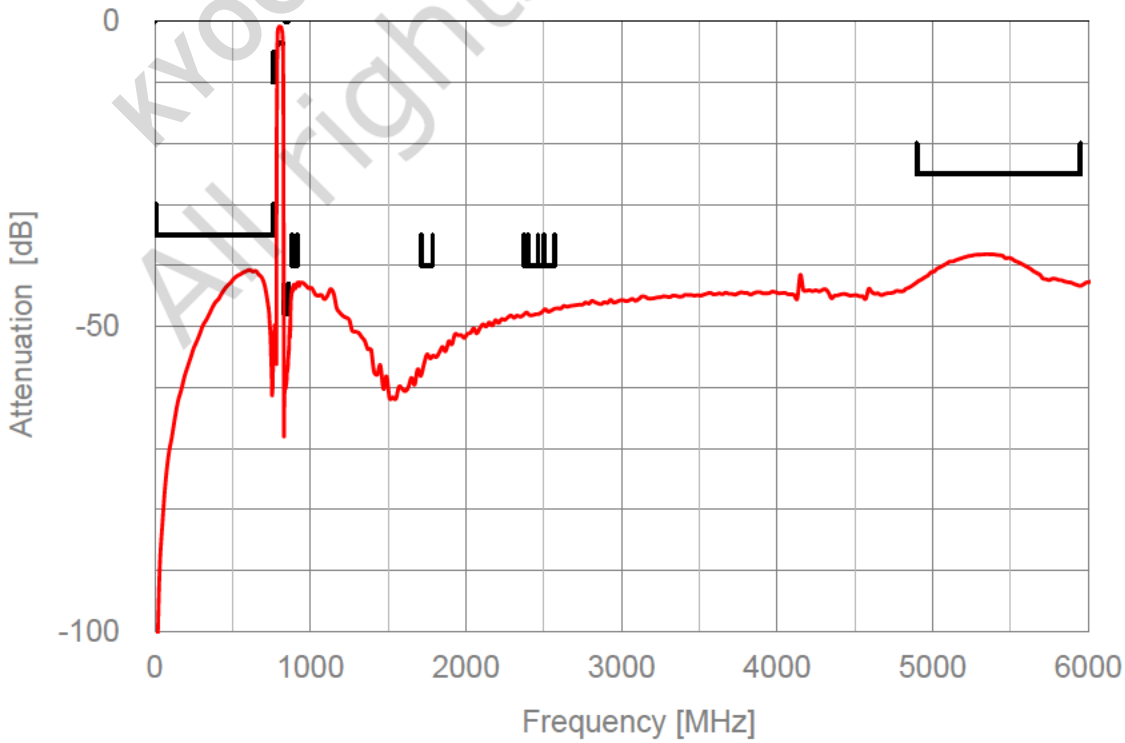




Electrical Characteristics

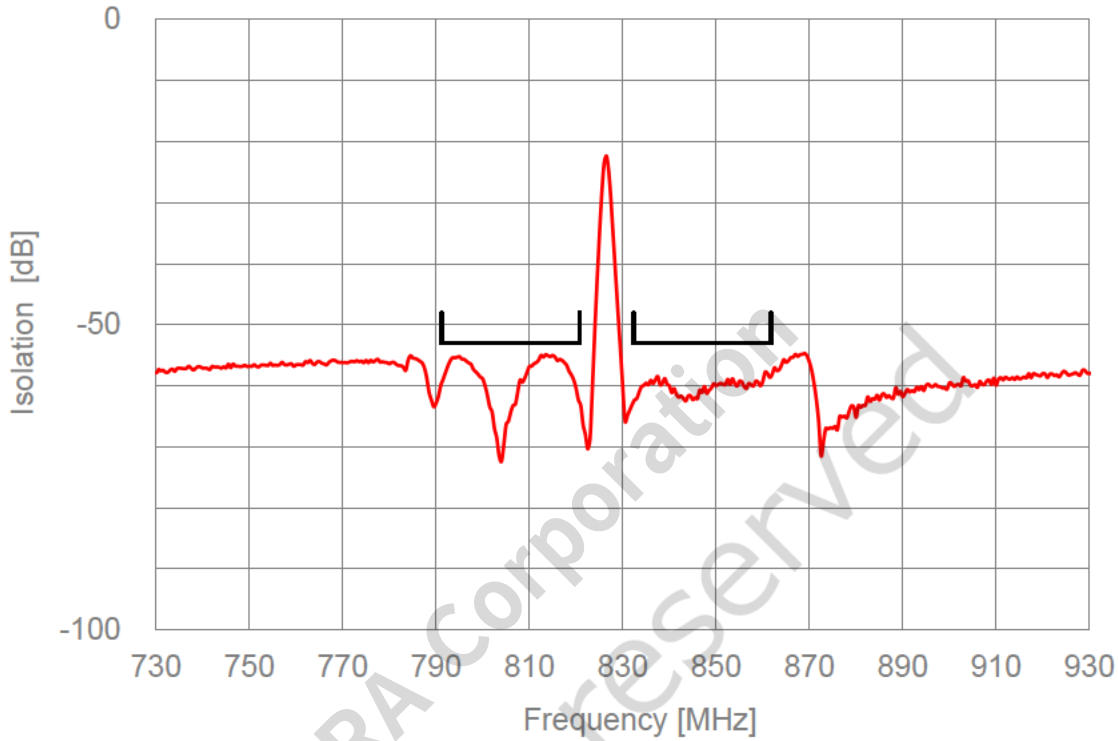
[Ant to Rx]

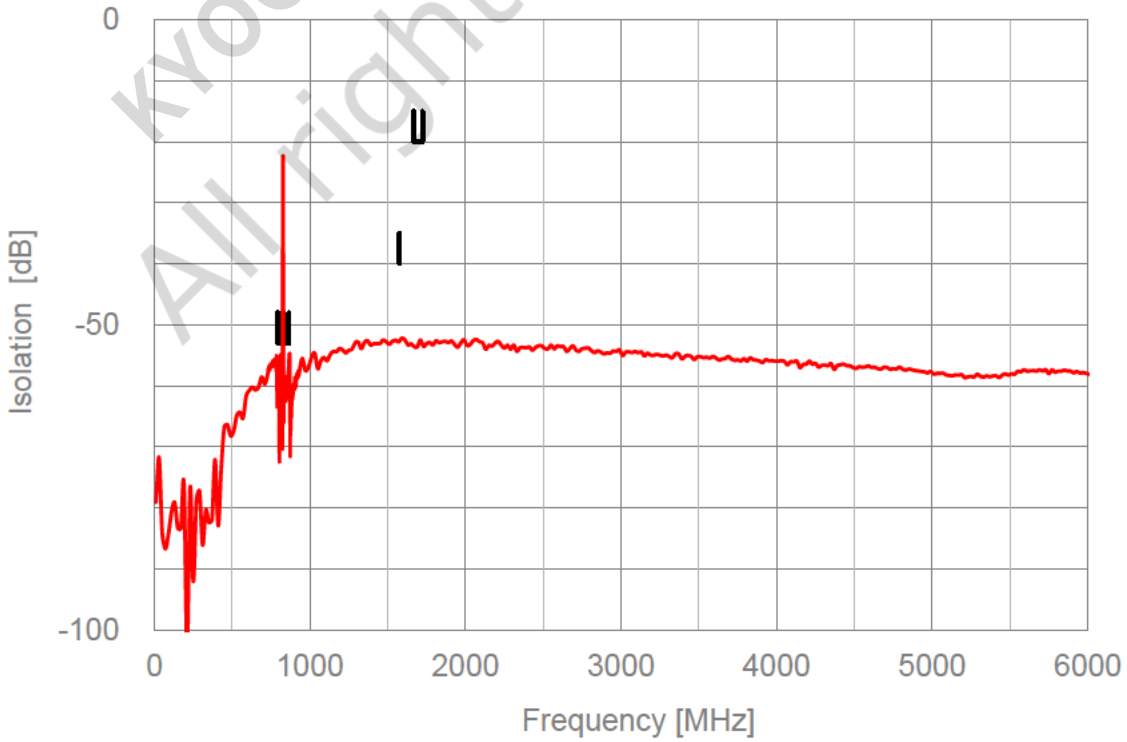




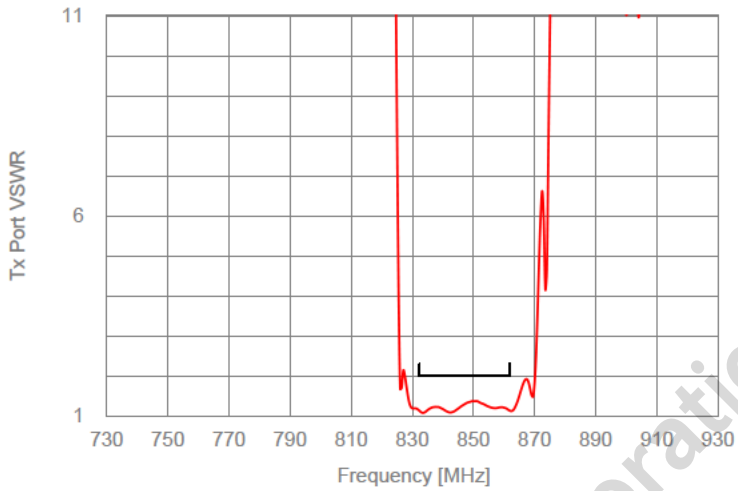
Electrical Characteristics

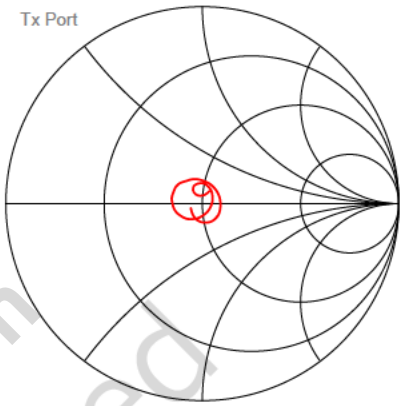
[Tx to Rx]

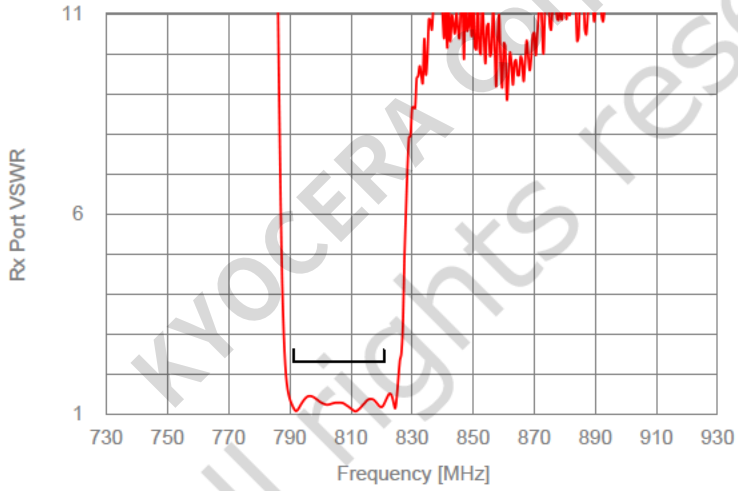


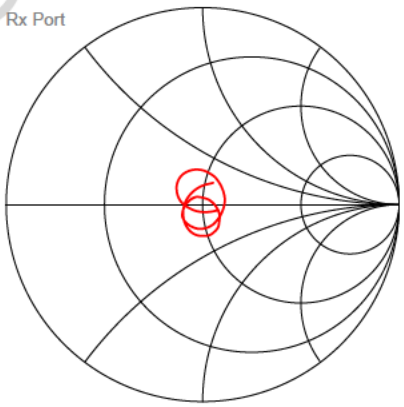


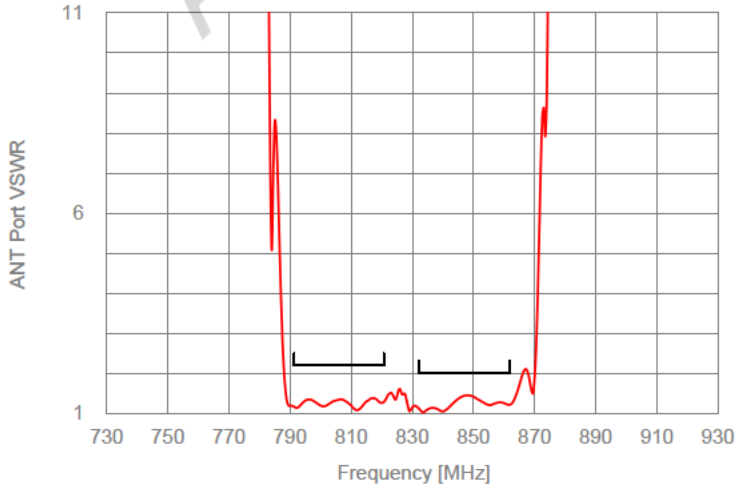
Electrical Characteristics

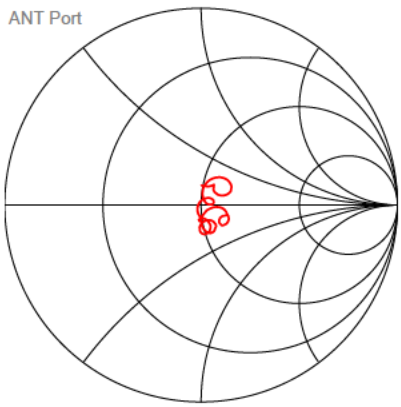






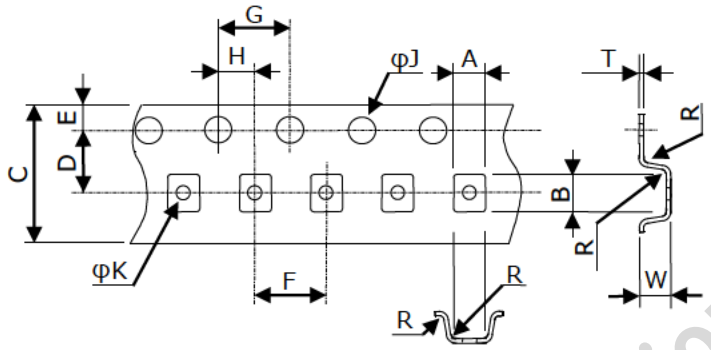






Tape & Reel Specification

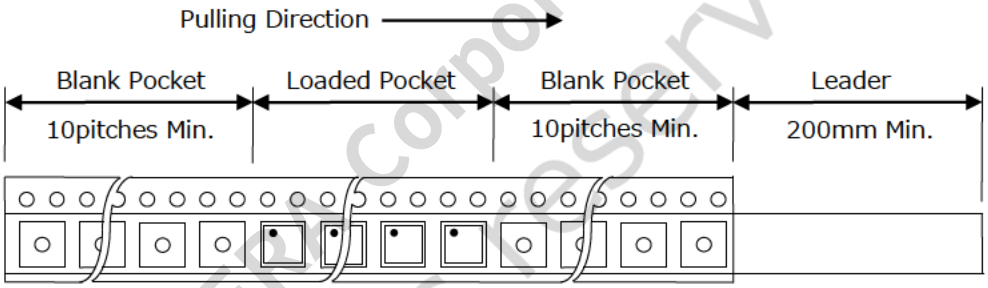
[Tape]



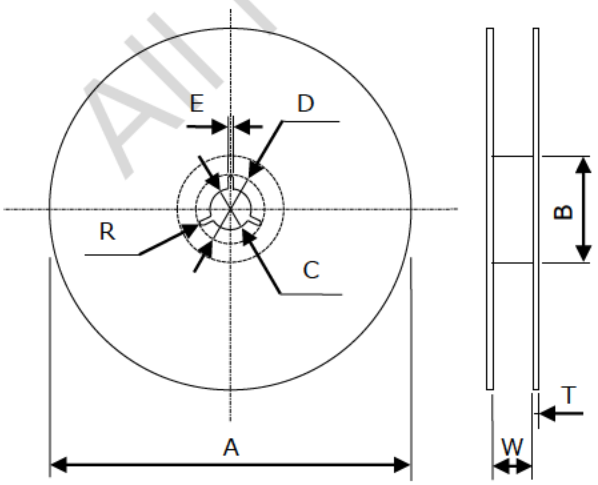
Unit : mm

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

Notice

1. Characteristics described in this datasheet are for references specifications shall be based on written documents agreed by each party.

2. Contents in this datasheet are subject to change without notice. It is recommended to confirm the latest information at the time of usage. Also, this datasheet is revised once a year. We may not be able to accept requests based on old datasheets.

3. Products in this datasheet are intended to be used in general electronic equipment such as office equipment, audio and visual equipment, communication equipment, measurement instrument and home appliances. It is absolutely recommended to consult with our sales representatives in advance upon planning to use our products in applications which require extremely high quality and reliability such as aircraft and aerospace equipment, traffic systems, safety systems, power plant and medical equipment including life maintenance systems.

4. Even though we strive for improvements of quality and reliability of products, it is requested to design with enough safety margin in equipment or systems in order not to threaten human lives directly or damage human bodies or properties by an accidental result of products.

5. It is requested to design based on guaranteed specifications for such as maximum ratings, operating voltage and operating temperature. It is not the scope o our guarantee for unsatisfactory results due to misuse or inadequate usage of products in the datasheet.

6. Operation summaries and circuit examples in this datasheet are intended to explain typical operation and usage of the product. It is recommended to perform circuit and assembly design considering surrounding conditions upon using products in this datasheet.

7. Technical information described in this datasheet is meant to explain typical operations and applications of products, and it is not intended to guarantee or license intellectual properties or other industrial rights of the third party or Kyocera.

8. Trademarks, logos and brand names used in this datasheet are owned by Kyocera or the corresponding third party.

9. Certain products in this datasheet are subject to the Foreign Exchange and Foreign Trade Control Act of Japan, and require the license from Japanese Government upon exporting the restricted products and technical information under the law. Besides, it is requested not to use products and technical information in the datasheet for the development and/or manufacture of weapons of mass destruction or other conventional weapons, nor to provide them to any third party with the possibility of having such purposes.

10. It is prohibited to reprint and reproduce a part or whole of this datasheet without permission.