

# Datasheet of SAW Duplexer 1814 Band5 Unbalanced

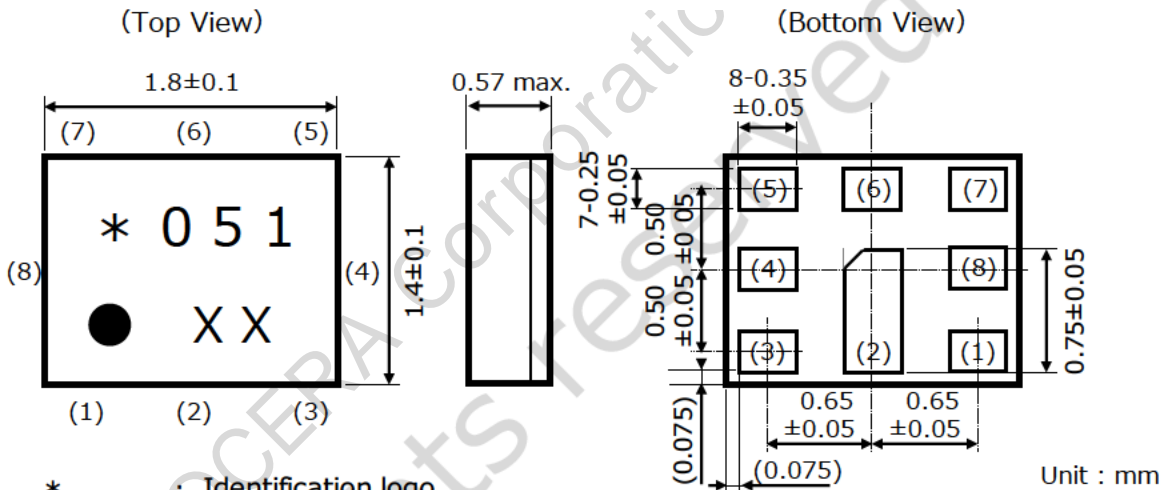
KYOCERA Part No. : SD18 0836R8UUQ1

KYOCERA Corporation  
All rights reserved

### 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)	+30	dBm	5,000hours, Ta=50deg.C, CW
Tx Port Nominal Impedance	50	ohm	Unbalance
Ant. Port Nominal Impedance	50//8.2nH	ohm	Unbalance
Rx Port Nominal Impedance	50	ohm	Unbalance

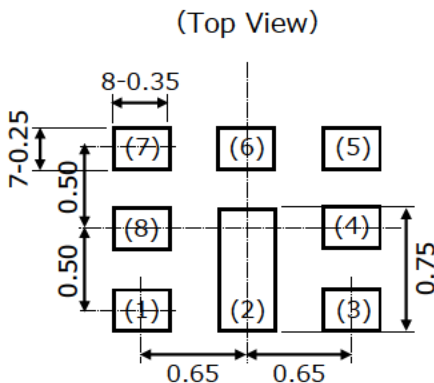
### Dimensions



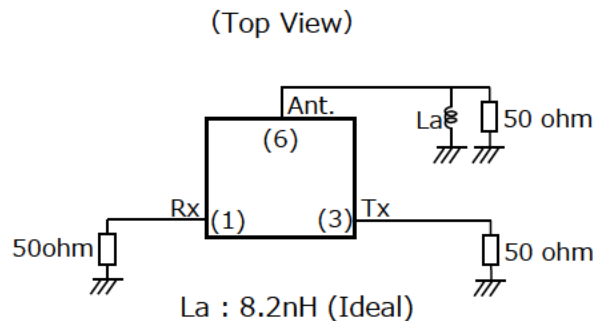
- \* : Identification logo
- 051 : Identification no.
- : Index mark of pin 1
- XX : Date code

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

### Recommendable Land Pattern



### Measurement Circuit

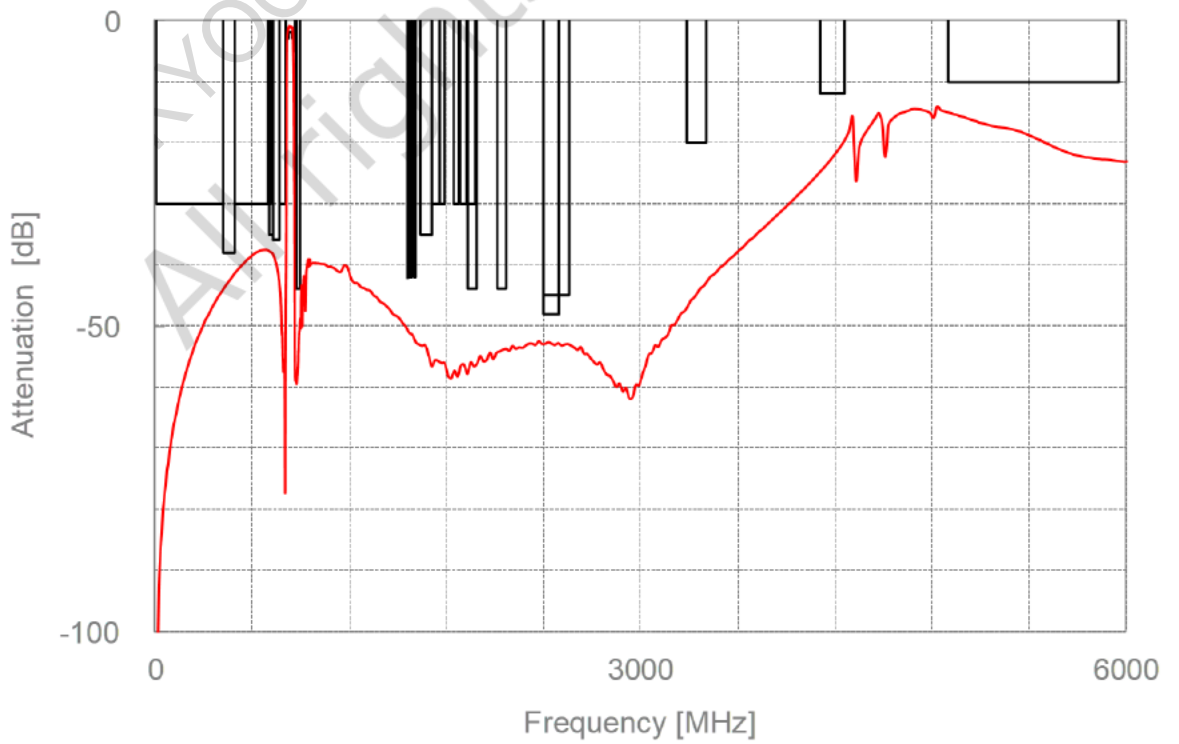
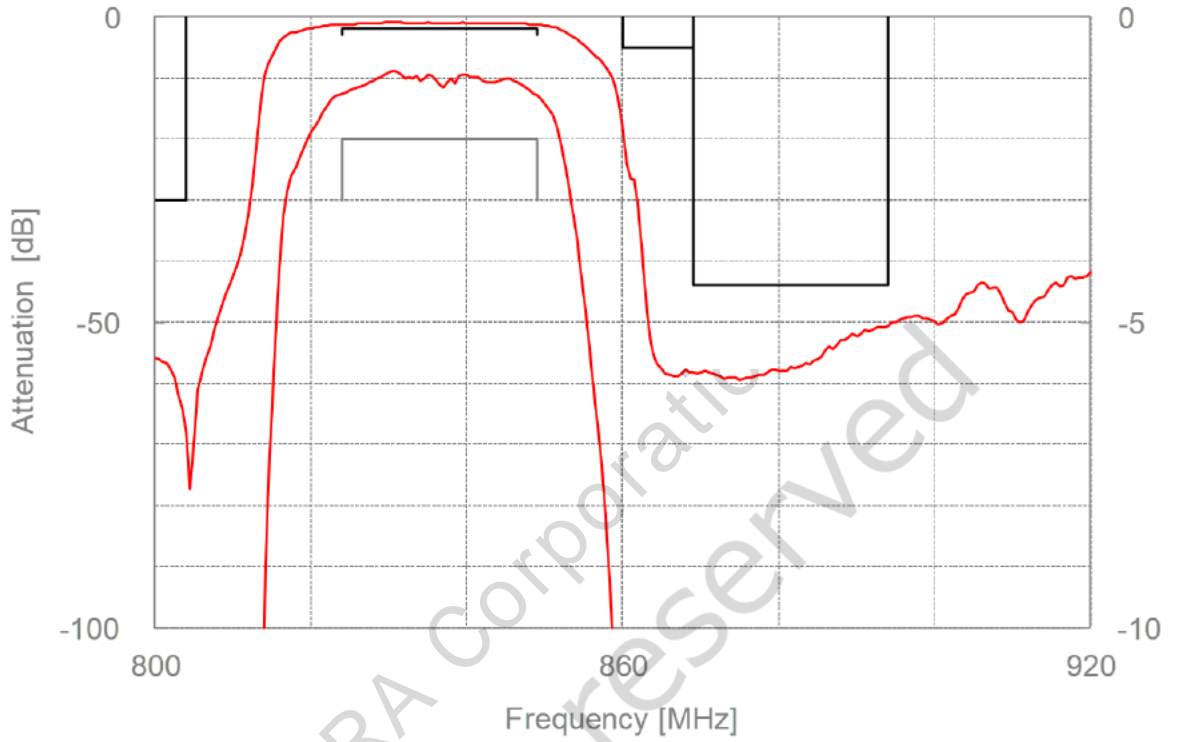


## Electrical Characteristics

Items	Frequency (MHz)		Characteristics			Unit	Note	
			min.	typ.	max.			
Tx to Ant	Nominal Center Frequency		836.5			MHz		
	Insertion loss		824 to 849	-	1.3	2.0	dB	
	Ripple (any 5MHz)		824 to 849	-	0.3	1.0	dB	
	VSWR	Tx	824 to 849	-	1.4	2.0	-	
		Ant	824 to 849	-	1.4	2.0	-	
	Absolute attenuation		10 to 420	30	44	-	dB	
			420 to 494	38	41	-	dB	
			494 to 701	30	38	-	dB	
			699 to 716	30	38	-	dB	
			701 to 728	35	38	-	dB	
			704 to 716	30	38	-	dB	
			728 to 764	36	38	-	dB	
			764 to 804	30	42	-	dB	
			860 to 869	5	18	-	dB	
			869 to 894	44	51	-	dB	
			1559 to 1563	42	51	-	dB	
			1565.42 to 1573.374	42	51	-	dB	
			1573.374 to 1577.466	42	51	-	dB	
			1577.466 to 1585.42	42	51	-	dB	
			1597.5515 to 1605.886	42	52	-	dB	
			1638 to 1708	35	53	-	dB	
			1710 to 1755	30	56	-	dB	
			1710 to 1785	30	56	-	dB	
			1844.9 to 1879.9	30	57	-	dB	
			1884.5 to 1919.6	30	56	-	dB	
			1920 to 1980	30	56	-	dB	
			1930 to 1990	44	56	-	dB	
			2110 to 2170	44	54	-	dB	
			2400 to 2557	45	53	-	dB	
			2402 to 2494	48	53	-	dB	
			3286 to 3406	20	43	-	dB	
			4110 to 4255	12	20	-	dB	
			900 to 5950	10	15	-	dB	
Ant to Rx	Nominal Center Frequency		881.5			MHz		
	Insertion loss		869 to 894	-	1.7	2.2	dB	
	Ripple (any 5MHz)		869 to 894	-	0.3	1.0	dB	
	VSWR	Rx	869 to 894	-	1.5	2.0	-	
		Ant	869 to 894	-	1.5	2.0	-	
	Absolute attenuation		0.2 to 447	45	66	-	dB	
			45 to 824	50	104	-	dB	
			447 to 824	40	57	-	dB	
			779 to 804	40	57	-	dB	
			824 to 849	45	61	-	dB	
			849 to 854	30	57	-	dB	
			909 to 979	8	12	-	dB	
			979 to 6000	40	46	-	dB	
			1693 to 1743	40	58	-	dB	
			1710 to 1785	50	58	-	dB	
			1785 to 1788	40	58	-	dB	
			1850 to 1920	40	56	-	dB	
			1920 to 1980	40	56	-	dB	
			1980 to 2400	35	54	-	dB	
			2305 to 2315	40	54	-	dB	
			2400 to 2500	40	54	-	dB	
			2467 to 2494	50	54	-	dB	
			2517 to 2592	40	53	-	dB	
			2607 to 2682	40	53	-	dB	
			3476 to 3576	35	52	-	dB	
			4345 to 4470	35	49	-	dB	
			4900 to 5950	40	46	-	dB	
			5214 to 5364	30	47	-	dB	
	Tx to Rx	Isolation		824 to 849	55	60	-	dB
				871.4 to 891.6	50	56	-	dB
				869.7 to 893.37	50	54	-	dB
				1574 to 1577	40	57	-	dB
				1638 to 1708	20	56	-	dB
		2462 to 2557	20	52	-	dB		

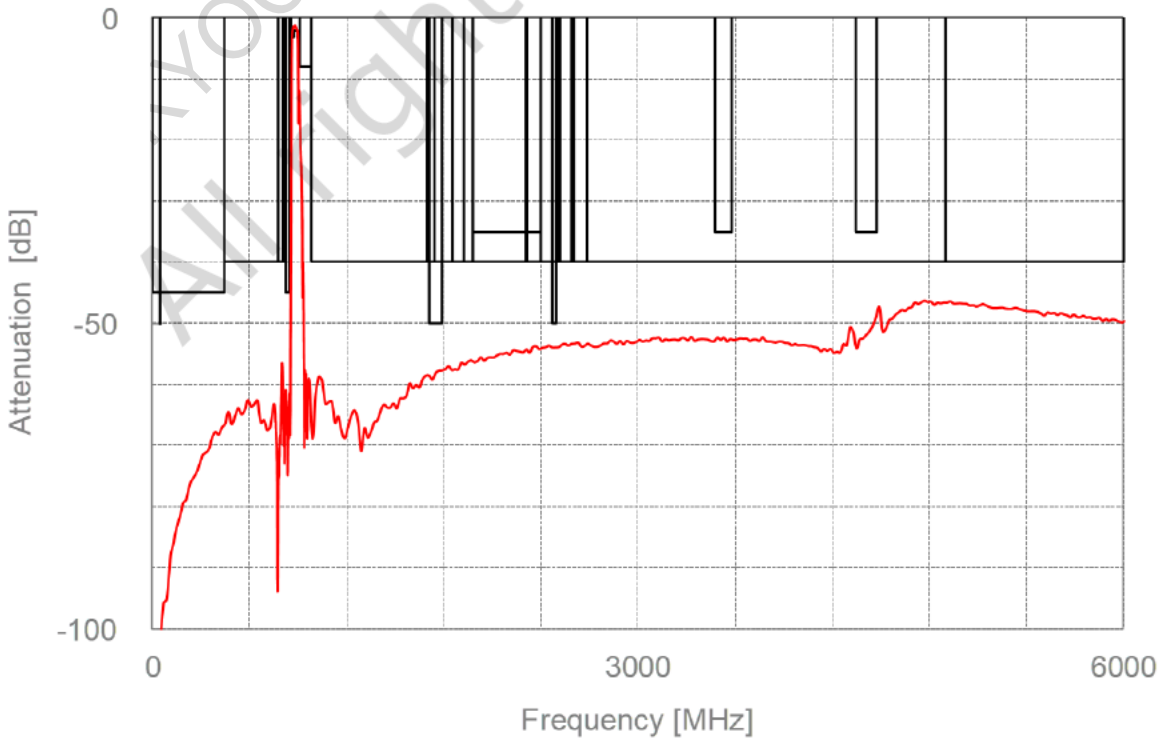
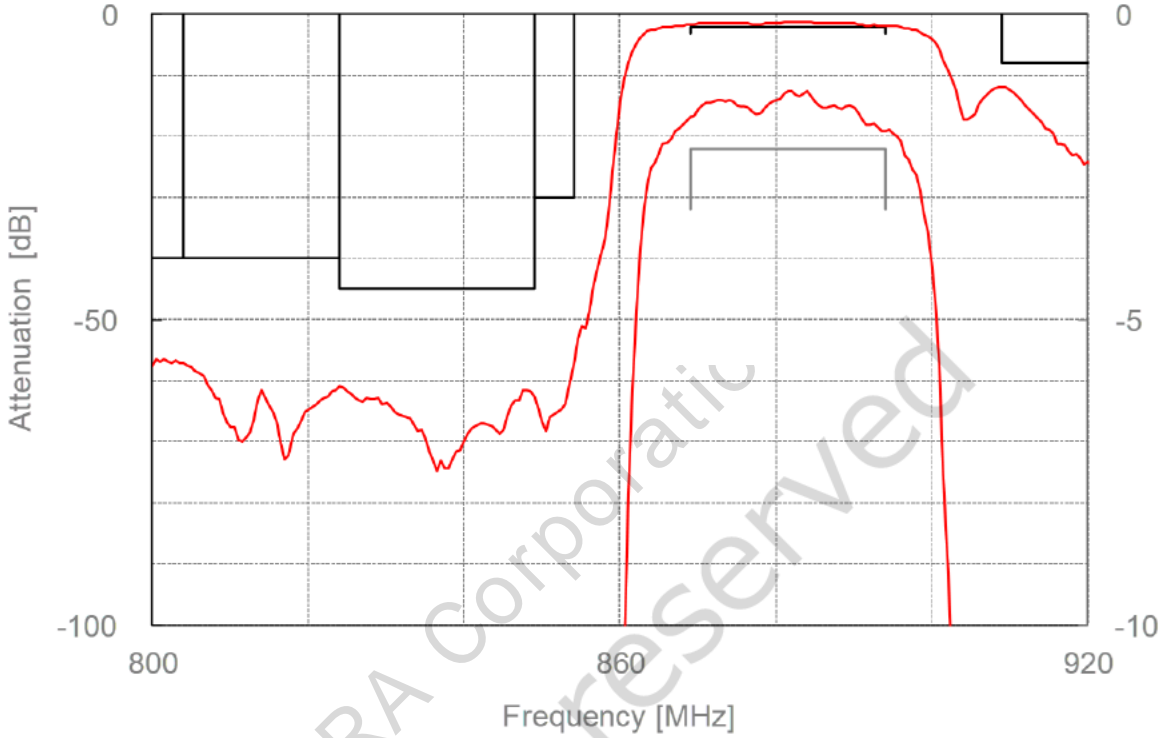
**Electrical Characteristics**

[Tx to Ant]



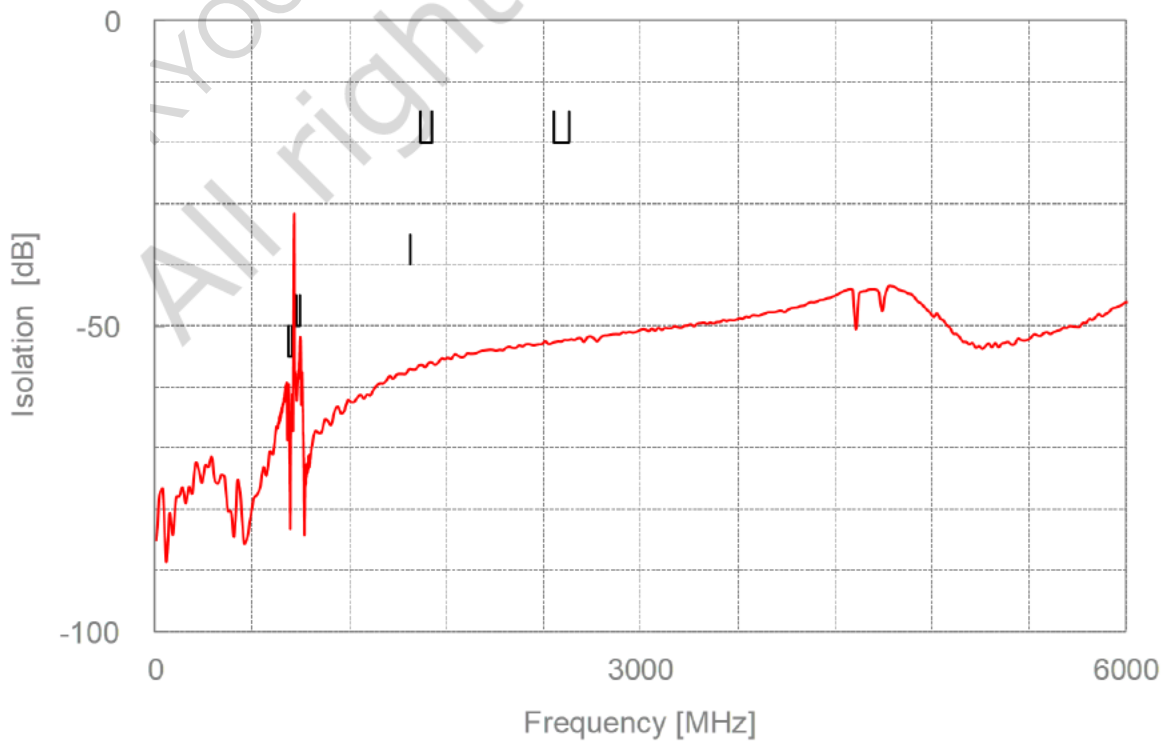
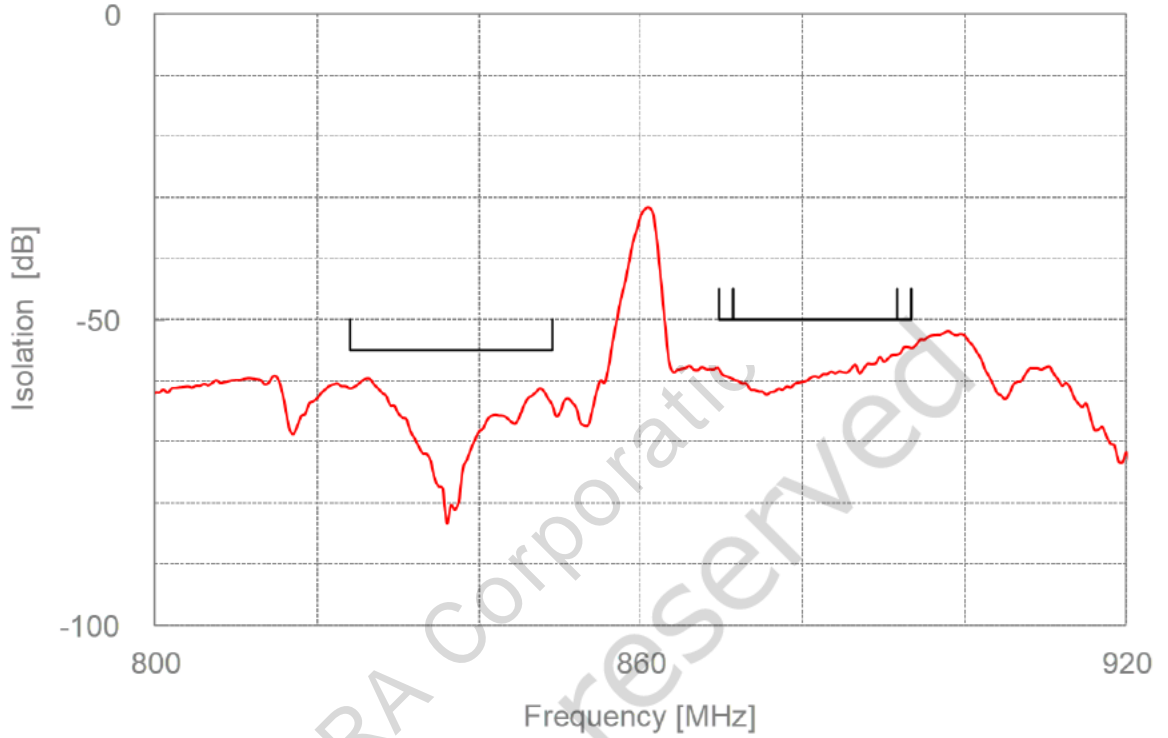
### Electrical Characteristics

[Ant to Rx]

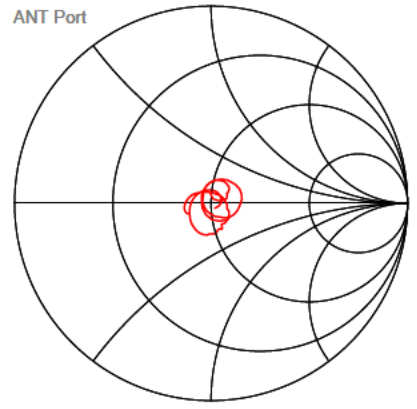
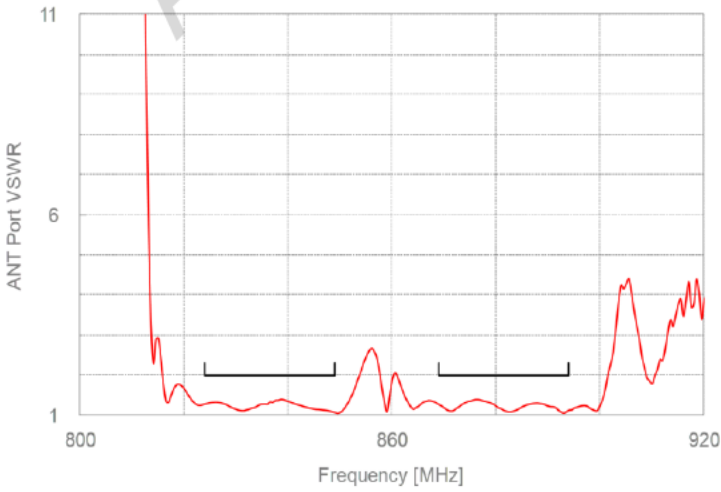
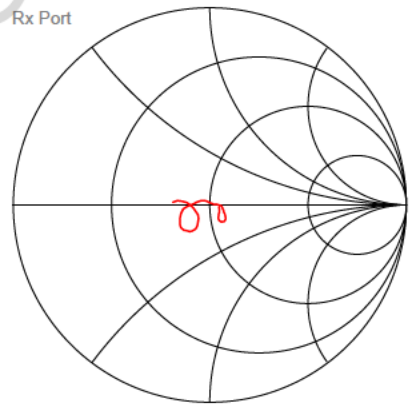
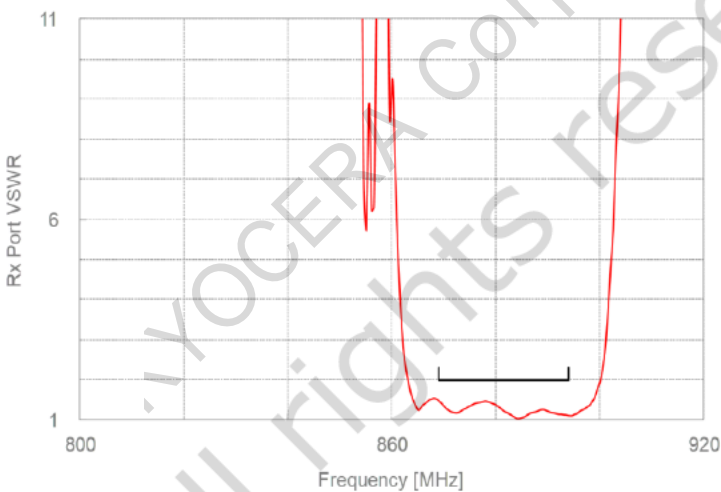
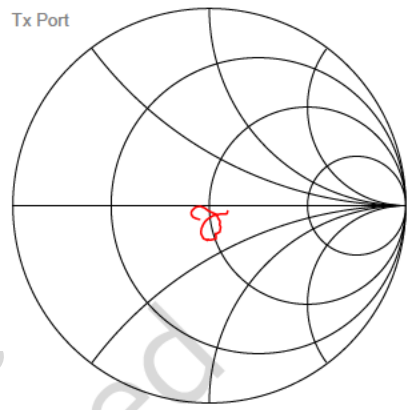
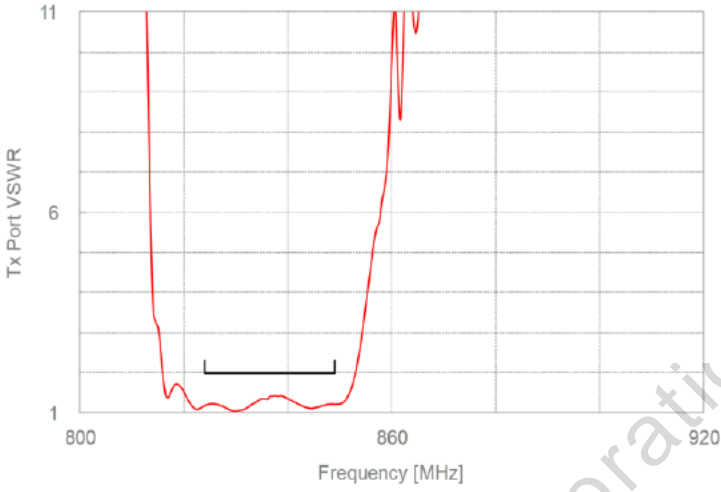


### Electrical Characteristics

[Tx to Rx]

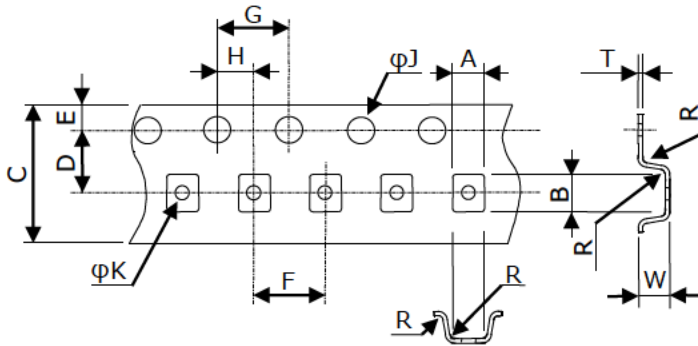


**Electrical Characteristics**



### Tape & Reel Specification

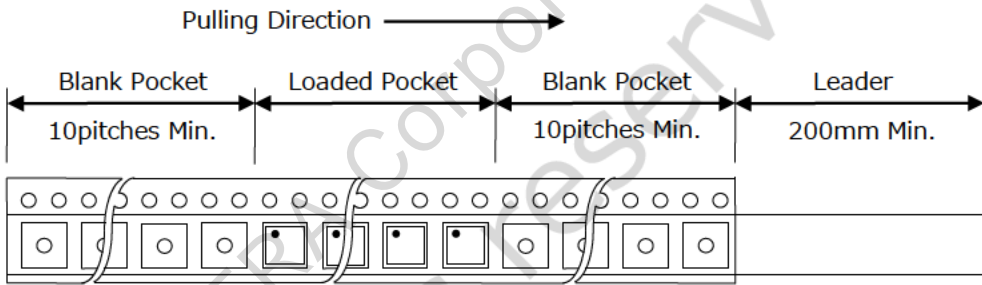
#### [Tape]



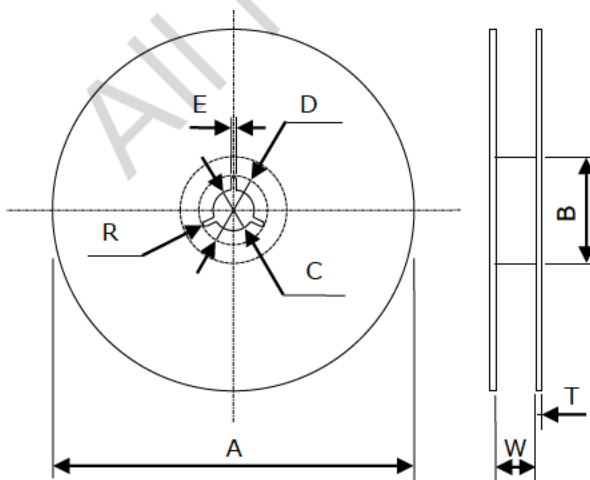
Unit : mm

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 of 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.