

Datasheet of SAW Duplexer 1612 Band28A Unbalanced

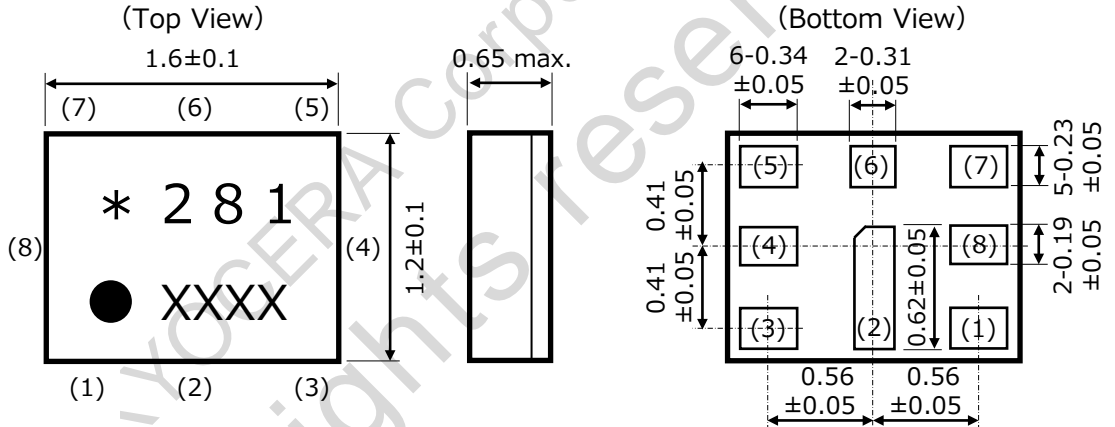
KYOCERA Part No. : SD16-0718R8UUA1

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 Band	+31	5,000Hours, CW, Ta=50deg.C
		+31	5,000Hours, QPSK, LTE, Ta=50deg.C
		+31	5,000Hours, DFT-s-OFDM-QPSK, Ta=50deg.C
		+29.5	5,000Hours, CP-OFDM-QPSK, Ta=50deg.C
Tx Port Nominal Impedance	50+15nH(series)	ohm	Unbalance
Ant. Port Nominal Impedance	50//11nH(shunt)	ohm	Unbalance
Rx Port Nominal Impedance	50+4.2nH(series)	ohm	Unbalance

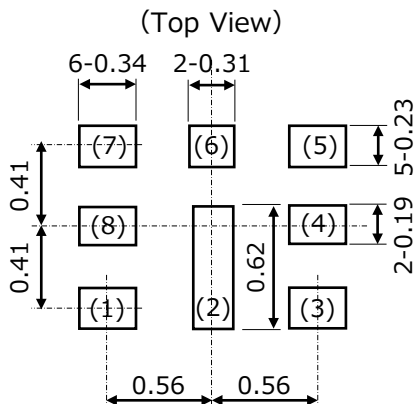
Dimensions



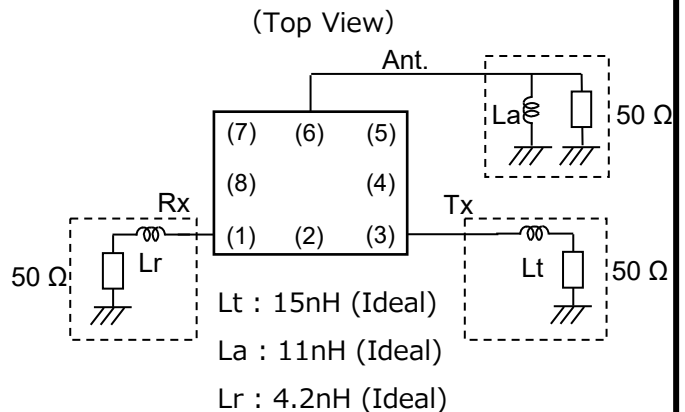
- * : Identification mark
- 281 : Identification no.
- : Index mark of pin 1
- XXXX : Production code

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

Recommendable Land Pattern



Measurement Circuit

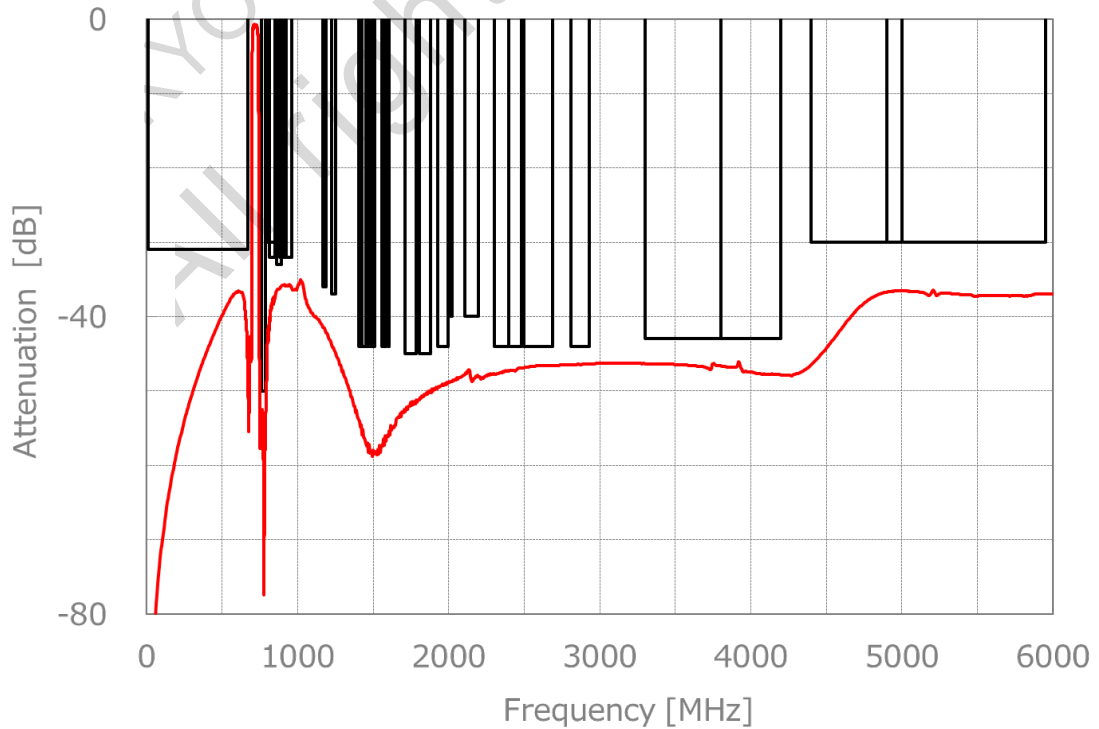
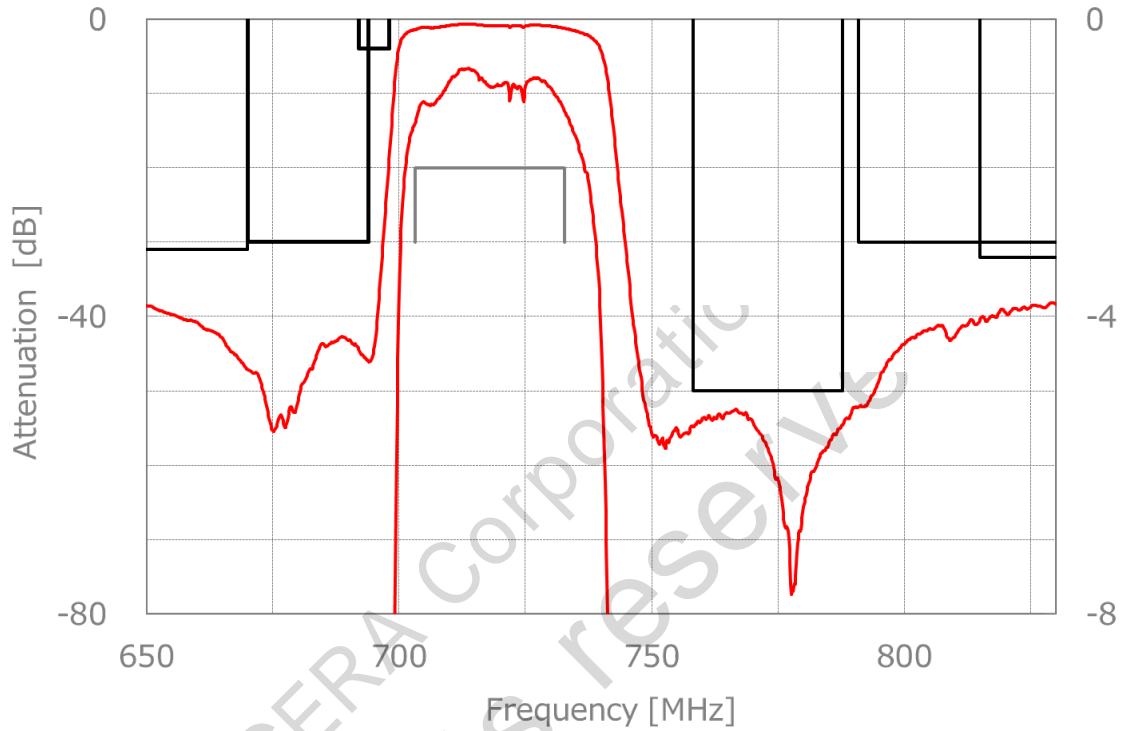


Electrical Characteristics

Items		Frequency (MHz)		Specification			Unit	Notes	
				min.	typ.	max.			
TX to ANT	Insertion Loss	703.24	- 732.76	-	1.4	2.0	dB		
	Ripple	703.24	- 732.76	-	0.7	1.6	dB		
	VSWR	Tx	703	- 733	-	1.7	2.1	-	
		Ant	703	- 733	-	1.7	2.0	-	
	Attenuation	670	- 694	30	44	-	dB	Average over any 6MHz	
		692	- 698	4	34	-	dB	Average over any 6MHz	
		10	- 670	31	36	-	dB		
		758.24	- 787.76	50	53	-	dB		
		791	- 862	30	36	-	dB		
		815	- 849	32	37	-	dB		
		860	- 894	33	36	-	dB		
		880	- 915	32	36	-	dB		
		925	- 960	32	36	-	dB		
		1166	- 1187	36	42	-	dB		
		1226	- 1250	37	44	-	dB		
		1406	- 1466	44	55	-	dB		
		1427.9	- 1462.9	44	56	-	dB		
		1452	- 1496	44	57	-	dB		
		1475.9	- 1510.9	44	58	-	dB		
		1559	- 1563	44	57	-	dB		
		1565.42	- 1573.37	44	57	-	dB		
		1573.37	- 1577.47	44	57	-	dB		
		1577.47	- 1585.42	44	56	-	dB		
		1597.55	- 1605.89	44	56	-	dB		
		1710	- 1785	45	51	-	dB		
		1805	- 1880	45	50	-	dB		
		1930	- 1995	44	49	-	dB		
		2010	- 2025	40	49	-	dB		
		2109	- 2199	40	47	-	dB		
		2300	- 2400	44	48	-	dB		
		2400	- 2484	44	47	-	dB		
	2496	- 2690	44	47	-	dB			
	2812	- 2932	44	47	-	dB			
3300	- 3800	43	46	-	dB				
3300	- 4200	43	46	-	dB				
4400	- 5000	30	36	-	dB				
4900	- 5950	30	36	-	dB				
ANT to RX	Insertion Loss	758.24	- 787.76	-	1.5	2.0	dB		
	Ripple	758.24	- 787.76	-	0.5	1.6	dB		
	VSWR	Ant	758	- 788	-	1.6	2.0	-	
		Rx	758	- 788	-	1.6	2.0	-	
	Attenuation	10	- 699	45	50	-	dB		
		45	- 65	60	86	-	dB		
		703.24	- 732.76	50	56	-	dB		
		733.24	- 747.76	35	45	-	dB		
		814	- 2400	25	40	-	dB		
		2400	- 2483	40	48	-	dB		
		2496	- 2690	40	47	-	dB		
		3300	- 3800	38	46	-	dB		
		3300	- 4200	38	46	-	dB		
4400	- 5000	38	45	-	dB				
4900	- 5950	38	43	-	dB				
TX to RX	Isolation	703.24	- 732.76	56	59	-	dB		
		758	- 788	54	57	-	dBint	Integrated calculation, 4.5MHz of LTE5MHz	

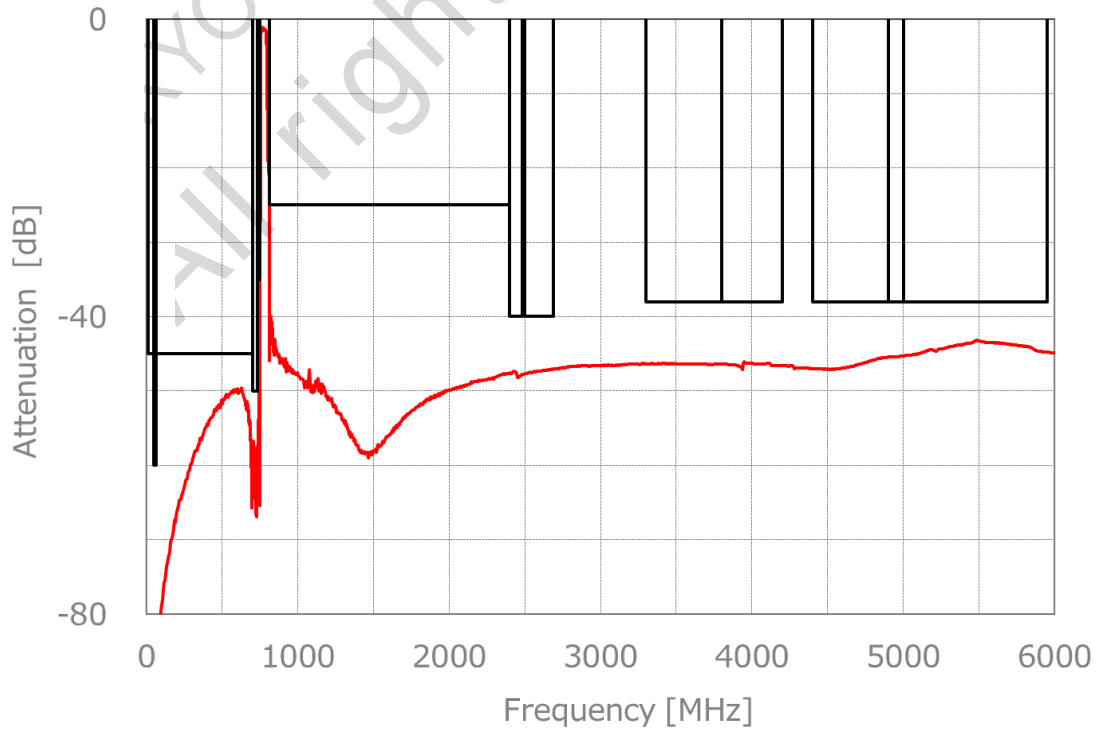
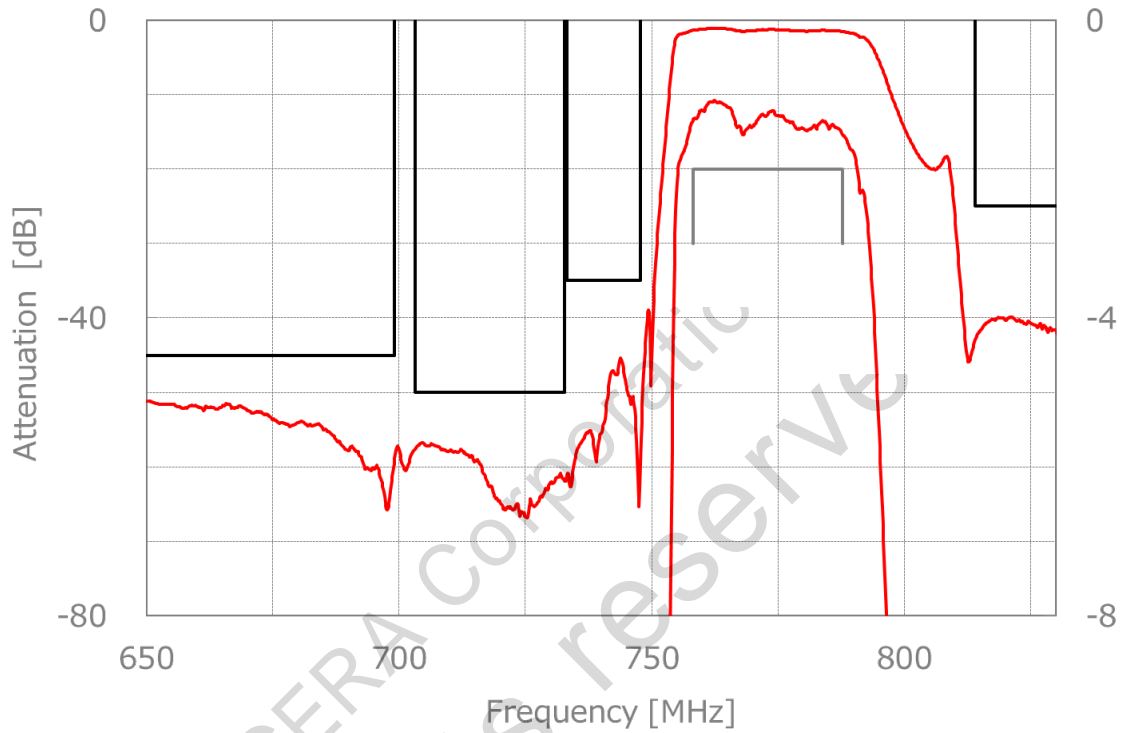
Electrical Characteristics

[Tx to Ant]



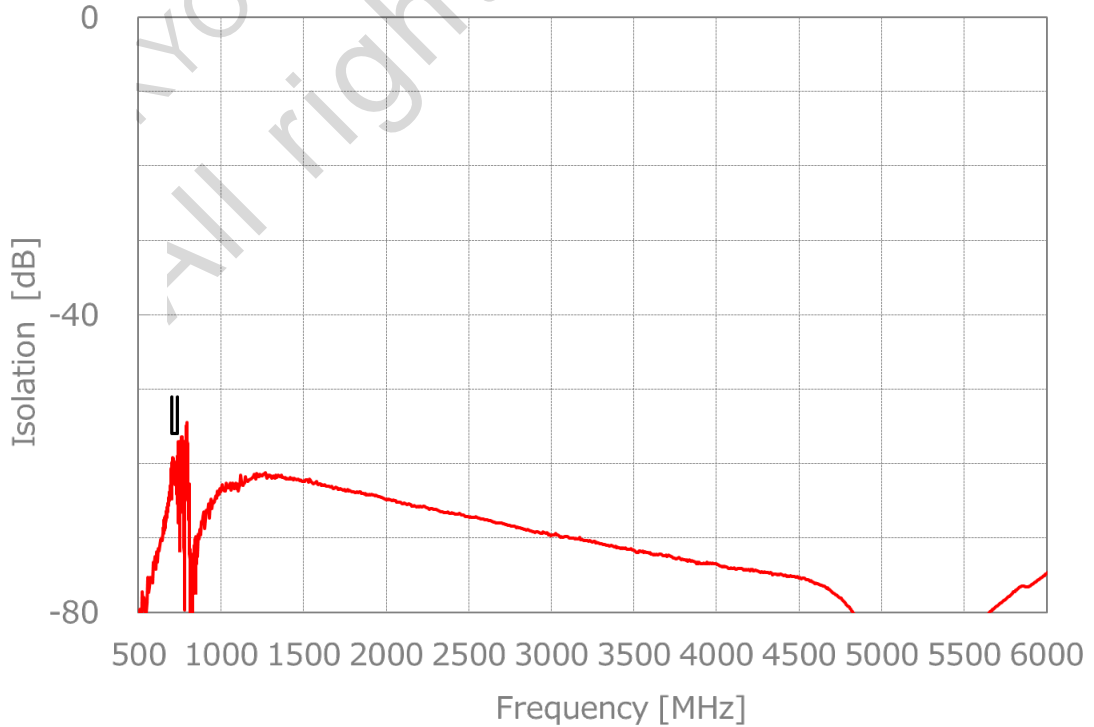
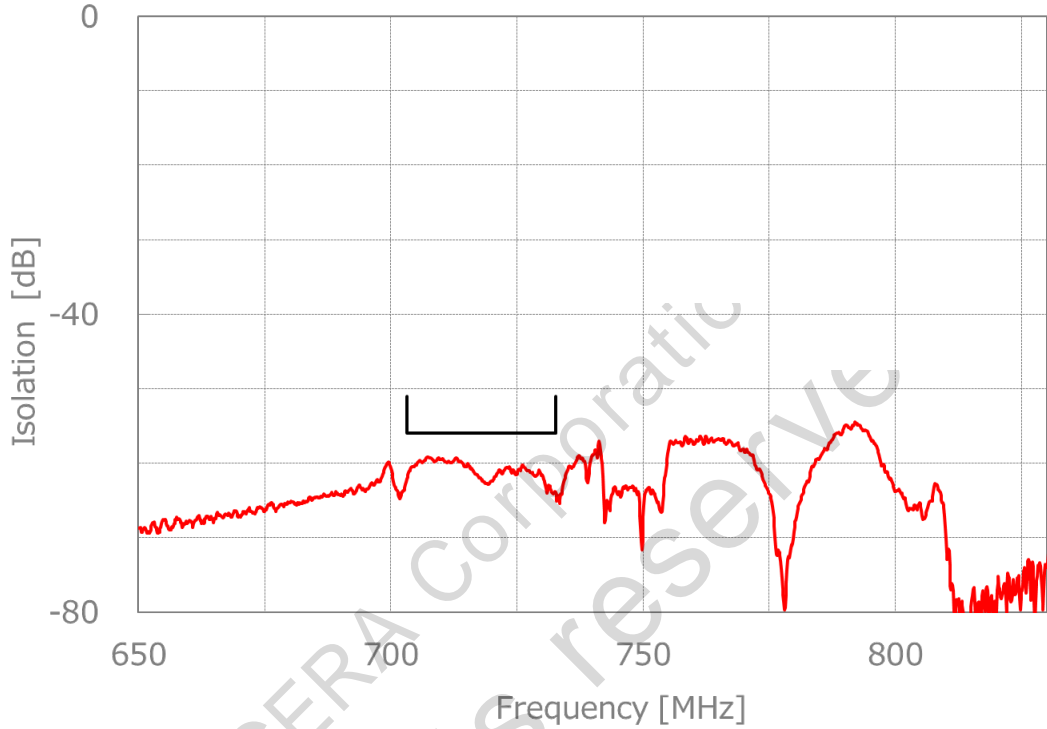
Electrical Characteristics

[Ant to Rx]

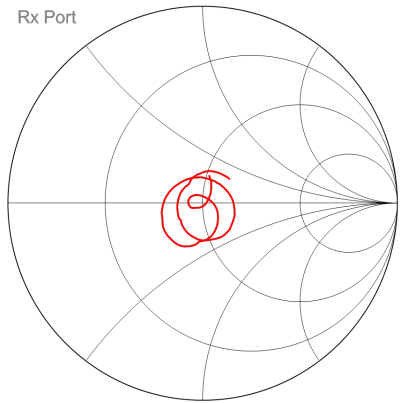
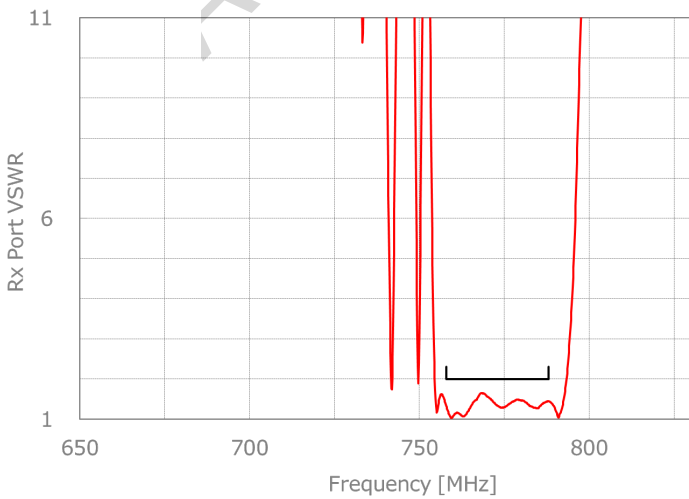
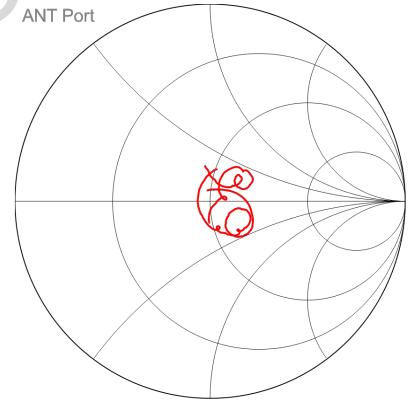
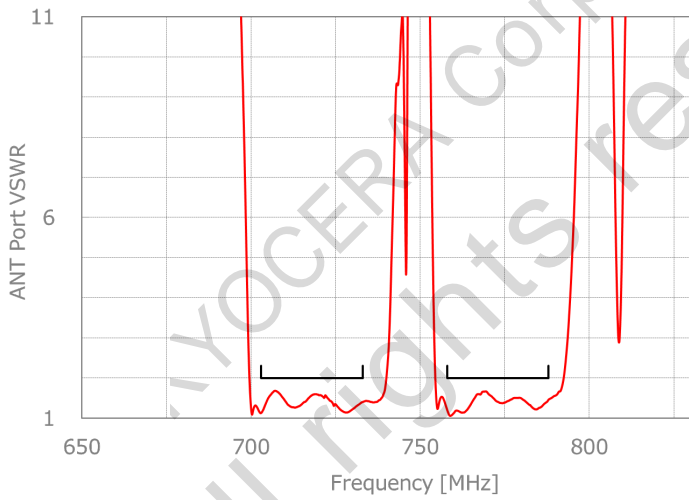
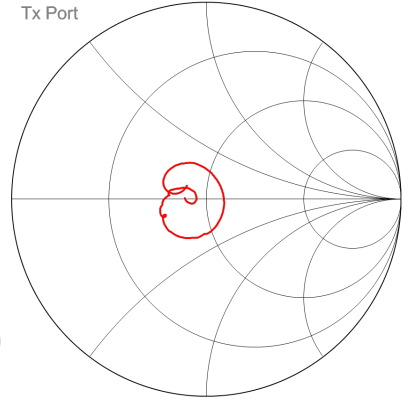
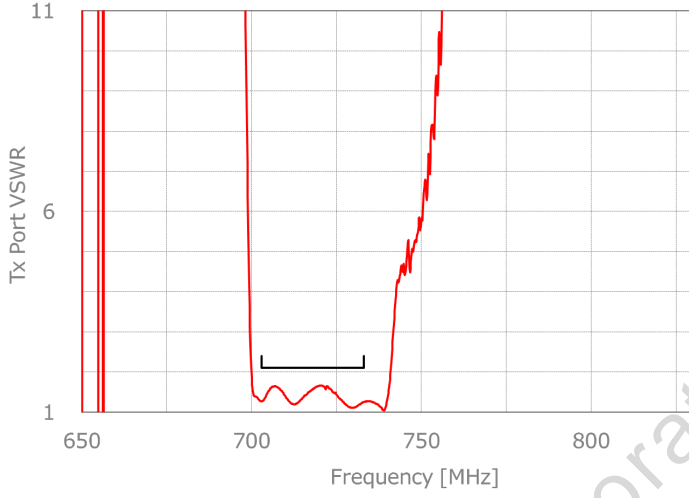


Electrical Characteristics

[Tx to Rx]

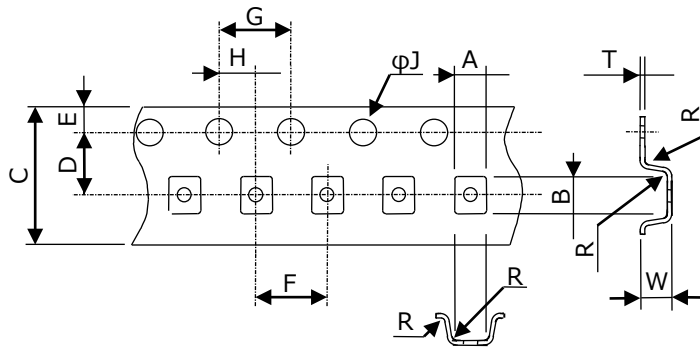


Electrical Characteristics



Tape & Reel Specification

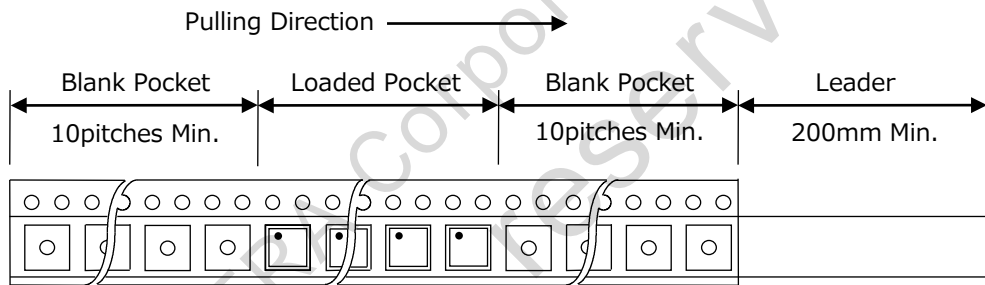
[Tape]



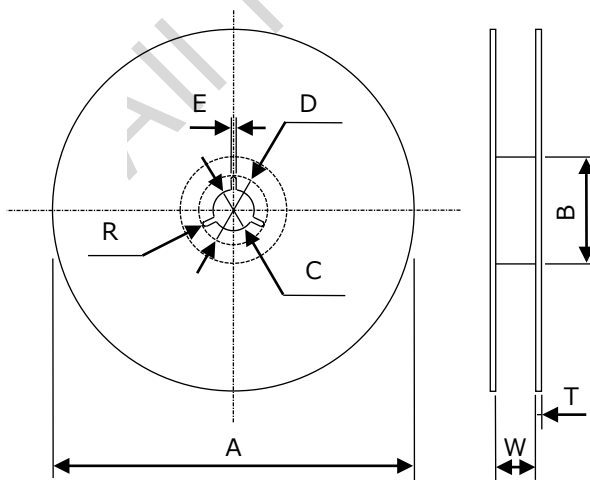
Unit : mm

Part	Dimension
A	1.35±0.10
B	1.80±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
R	0.2 Max
W	0.8±0.2
T	0.20±0.05

W : Dimension is depth of pockets.



[Reel]



Unit : mm

Part	Dimension
A	330 ± 2
B	100 ± 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.