

Datasheet of SAW Device

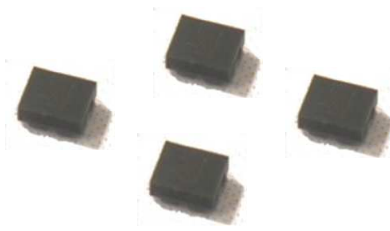
SAW Duplexer

for Band8 / Unbalanced / LR /1814

Murata PN: SAYEY897MBG0F0A

■ Feature

- Band8 LTE
- Low Insertion Loss
- High Attenuation



Note : This Murata SAW Component is Consumer grade product and applicable for Cellular phone or similar end devices.

Please also read Important Notice at the end of this document.

SAYEY897MBG0F0A (Band8 / Unbalanced / LR / 1814)

General Information

- Operating temperature	: -20 to +85 deg.C
- Storage temperature	: -40 to +85 deg.C
- Input Power	: +29.0dBm 5000h +55deg.C (1) (1) applicable for W-CDMA, SC-FDMA, DFT-s-OFDM
- D.C. Volatage between the terminals	: 3V (25+/-2 deg.C)
- Minimum Resistance between the terminals	: 10M ohm
- RoHS compliance	: Yes
- ESD (ElectroStatic Discharge) sensitive device	

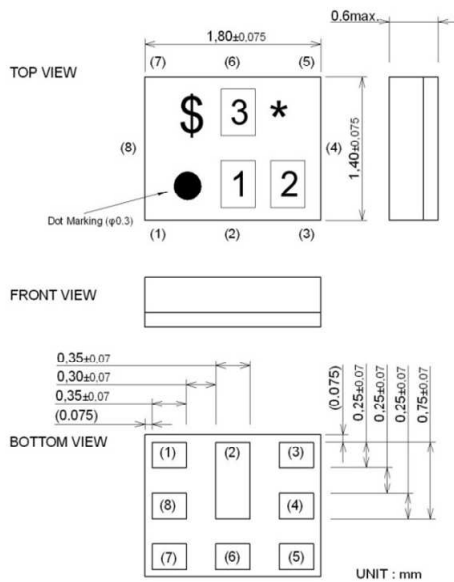
The input power shall be applied to Tx-port within own Tx passband frequency range.

SAYEY897MBG0F0A (Band8 / Unbalanced / LR / 1814)

Package Dimensions & Recommended Land Pattern

unit: mm

Dimensions



Marking : Laser Printing

* : Month code

\$: Date code

1 : 8

2 : G

3 : A

Terminal Number

(6) : Ant

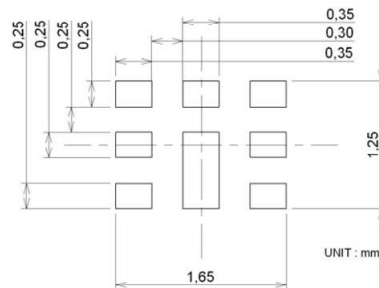
(3) : TX

(1) : RX

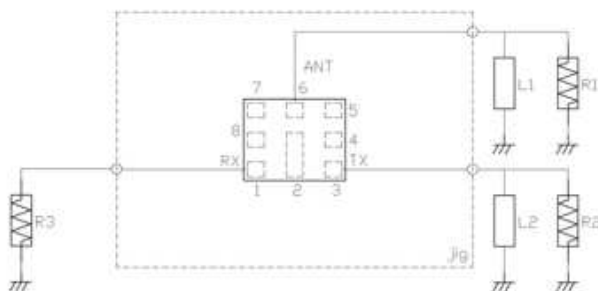
Others : GND

Notice) Please refer to Measurement Circuit for Port information in detail.

Land Pattern



Measurement Circuit (Top Thru View)



R1 : 50 ohm	L1 :7.2nH(Ideal inductor)
	:8.1nH(LQP03TN8N1)
	<Reference>
R2 : 50 ohm	L2 :45nH(Ideal inductor)
R3 : 50 ohm	

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Electrical Characteristic < TX→ANT. >

TX → ANT.		Characteristics			Unit	Note
		(-20 to +85 deg.C)				
		min.	typ.*	max.		
Center Frequency			897.5		MHz	
Insertion Loss	882.5 to 912.5 MHz		1.7	2.5	dB _{INT}	Any 4.5MHz
Ripple Deviation	880. to 915. MHz		0.7	2.0	dB	Any 5MHz
VSWR	880. to 915. MHz		1.5	2.2		Ant
	880. to 915. MHz		1.5	2.2		Tx
Absolute Attenuation	10. to 716. MHz	30	35		dB	
	716. to 728. MHz	30	35		dB	
	728. to 793. MHz	30	35		dB	
	832. to 862. MHz	30	40		dB	B20 Tx
	927.5 to 957.5 MHz	35	54		dB _{INT}	Any 4.5MHz
	1559. to 1563. MHz	42	46		dB	Compass
	1565.42 to 1573.37 MHz	42	46		dB	Wideband GPS, lower side lobe
	1573.37 to 1577.47 MHz	42	46		dB	Regular GPS, main lobe
	1577.47 to 1585.42 MHz	42	46		dB	Wideband GPS, upper side lobe
	1597.55 to 1605.89 MHz	42	46		dB	GLONASS
	1710. to 1785. MHz	30	46		dB	B3Tx
	1760. to 1840. MHz	35	45		dB	2f
	1840. to 1880. MHz	35	44		dB	
	1920. to 1980. MHz	30	42		dB	B1 Tx
	2110. to 2170. MHz	30	40		dB	
	2400. to 2500. MHz	32	37		dB	2.4GHz ISM
	2434. to 2494. MHz	30	37		dB	
	2620. to 2745. MHz	30	37		dB	3f
	3520. to 3660. MHz	15	28		dB	4f
	4400. to 4575. MHz	3.0	8.9		dB	5f
	4900. to 5950. MHz	3.0	10.0		dB	5GHz ISM, 6f
	6160. to 6405. MHz	12	21		dB	7f
	7040. to 7320. MHz	12	20		dB	8f
	7920. to 8235. MHz	7.0	12.0		dB	9f
	8800. to 9150. MHz	5.0	11.0		dB	10f
	9680. to 10065. MHz	2.0	10.0		dB	11f
10560. to 10980. MHz	2.0	6.4		dB	12f	
11440. to 11895. MHz	2.0	4.1		dB	13f	
12320. to 12750. MHz	2.0	4.9		dB	14f	

* Typical value at 25±2deg.C

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Electrical Characteristic < ANT. → RX >

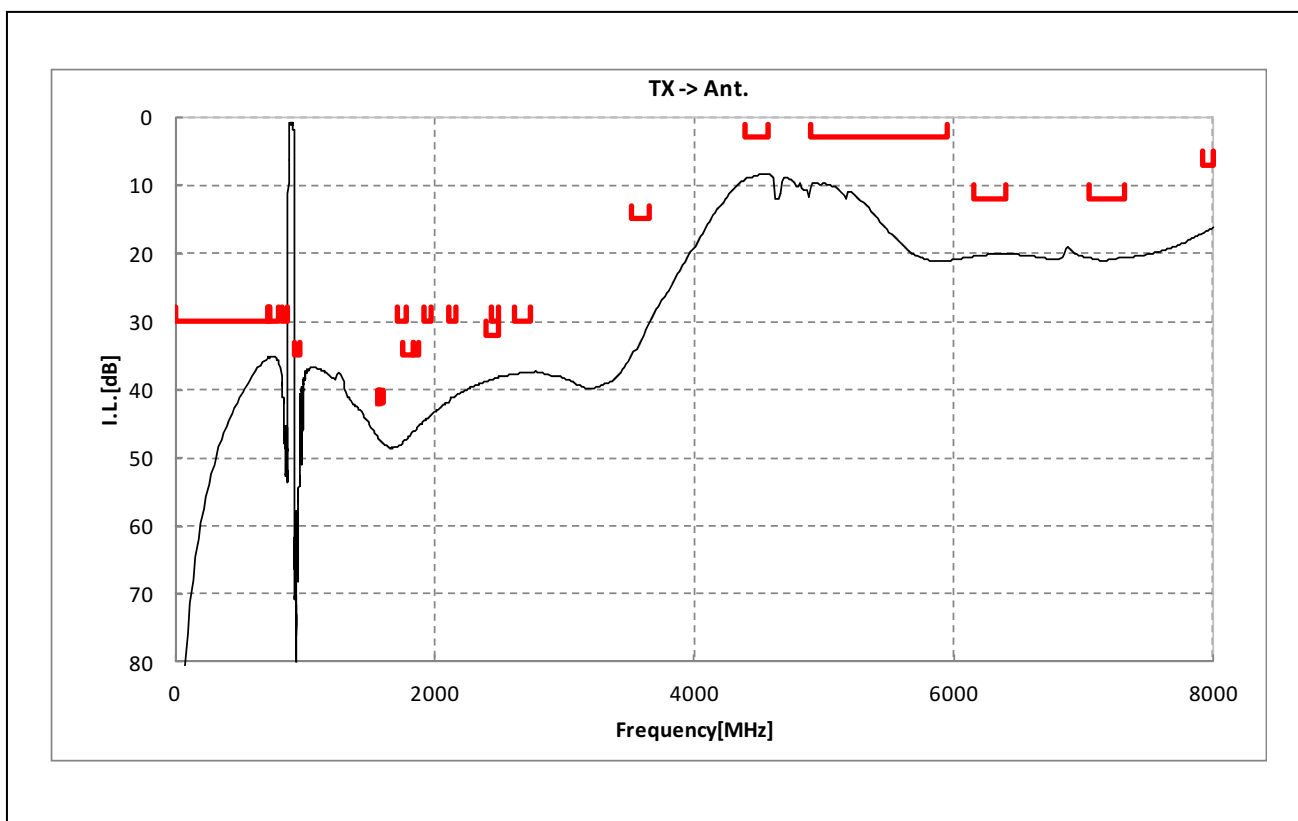
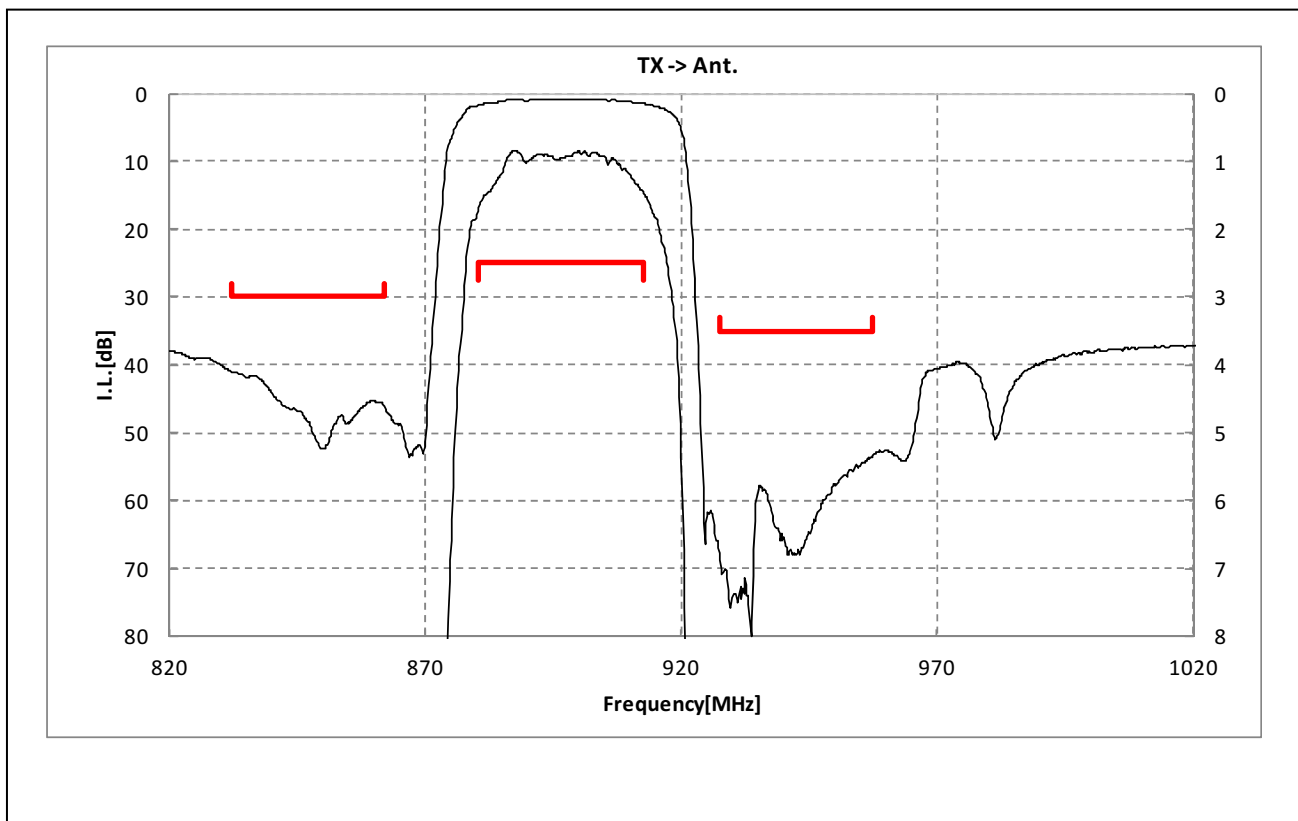
ANT. → RX				Characteristics (-20 to +85 deg.C)			Unit	Note
				min.	typ.*	max.		
Center Frequency					942.5		MHz	
Insertion Loss	927.5 to 957.5	MHz		2.0	2.5		dB _{INT}	Any 4.5MHz
Ripple Deviation	925. to 960.	MHz		0.5	2.3		dB	Any 5MHz
VSWR	925. to 960.	MHz		1.8	2.1			Ant
	925. to 960.	MHz		1.7	2.1			Rx
Absolute Attenuation	0.2 to 880.	MHz	45	54			dB	
	45. to 45.	MHz	50	96			dB	Rx-Tx
	835. to 870.	MHz	40	55			dB	2Tx-Rx
	882.5 to 912.5	MHz	45	56			dB _{INT}	Any 4.5MHz
	902.5 to 910.	MHz	30	58			dB	(Rx+Tx)/2
	980. to 1045.	MHz	12	17			dB	
	1045. to 6000.	MHz	25	34			dB	
	1427. to 1448.	MHz	40	59			dB	B11Tx
	1710. to 1785.	MHz	40	66			dB	B3Tx
	1805. to 1920.	MHz	40	66			dB	Rx+Tx and 2x
	1920. to 1980.	MHz	40	65			dB	B1Tx
	1980. to 13025.	MHz	8.0	15.0			dB	
	2400. to 2500.	MHz	40	57			dB	2.4Ghz ISM
	2500. to 2570.	MHz	40	57			dB	B7Tx
	2685. to 2790.	MHz	40	56			dB	Rx+2Tx
	2775. to 2880.	MHz	40	56			dB	3f
	2880. to 3700.	MHz	35	50			dB	
	3700. to 3840.	MHz	30	47			dB	4f
	4625. to 4800.	MHz	28	36			dB	5f
	4900. to 5950.	MHz	25	34			dB	5GHz ISM, 6f
	6475. to 6720.	MHz	20	41			dB	7f
	7400. to 7680.	MHz	20	32			dB	8f
8325. to 8640.	MHz	15	23			dB	9f	
9250. to 9600.	MHz	8.0	16.0			dB	10f	
10175. to 10560.	MHz	8.0	16.0			dB	11f	
11100. to 11520.	MHz	15	29			dB	12f	
12025. to 12480.	MHz	15	23			dB	13f	

* Typical value at 25±2deg.C

SAYEY897MBG0F0A (Band8 / Unbalanced / LR / 1814)

Electrical Characteristic

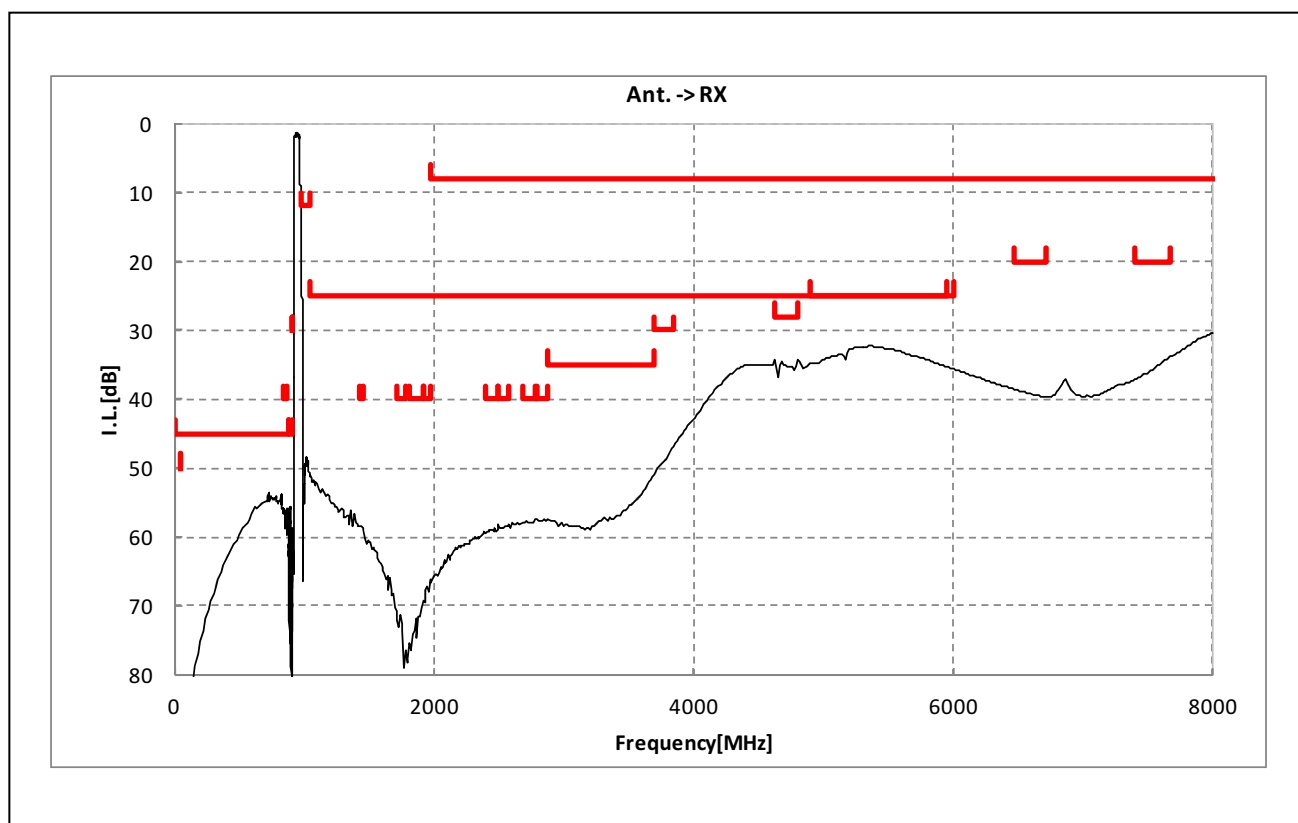
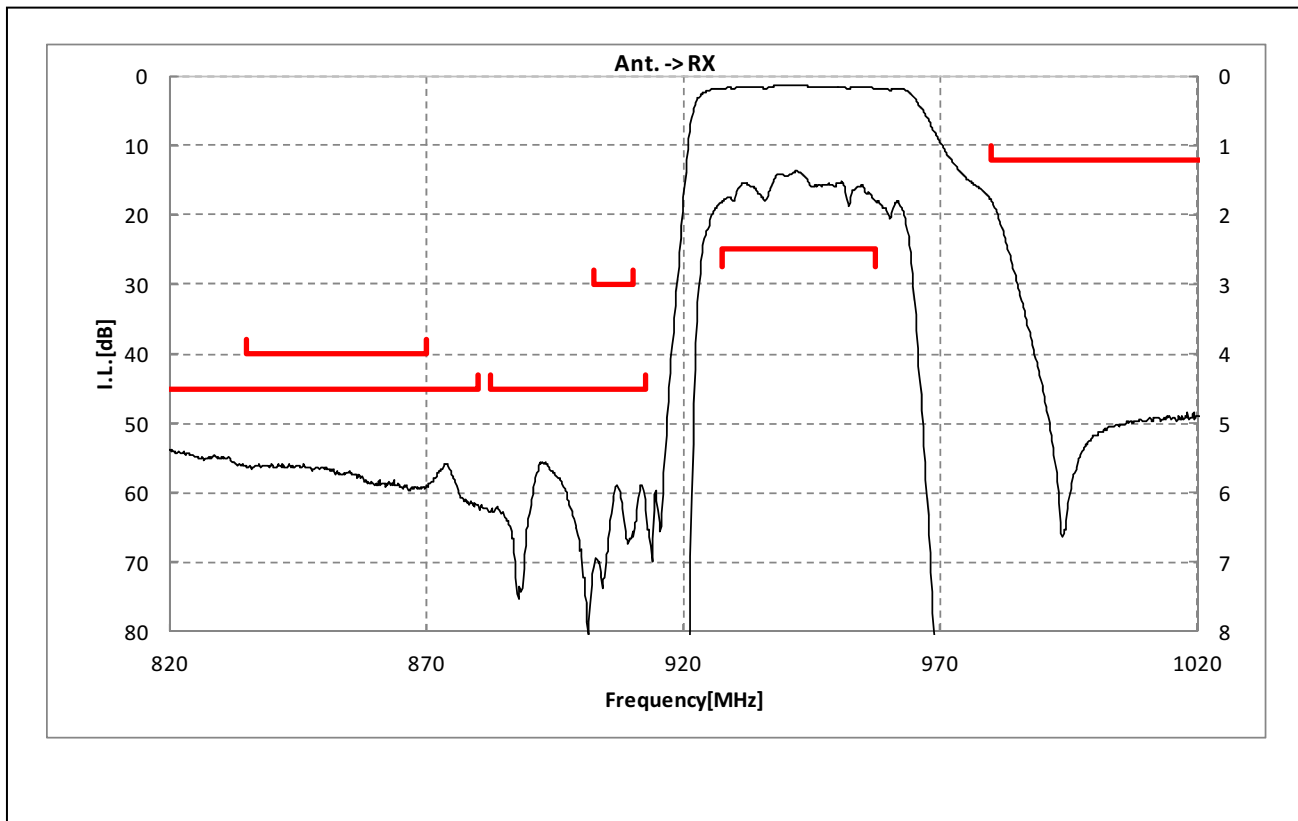
< TX→ANT. >



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Electrical Characteristic

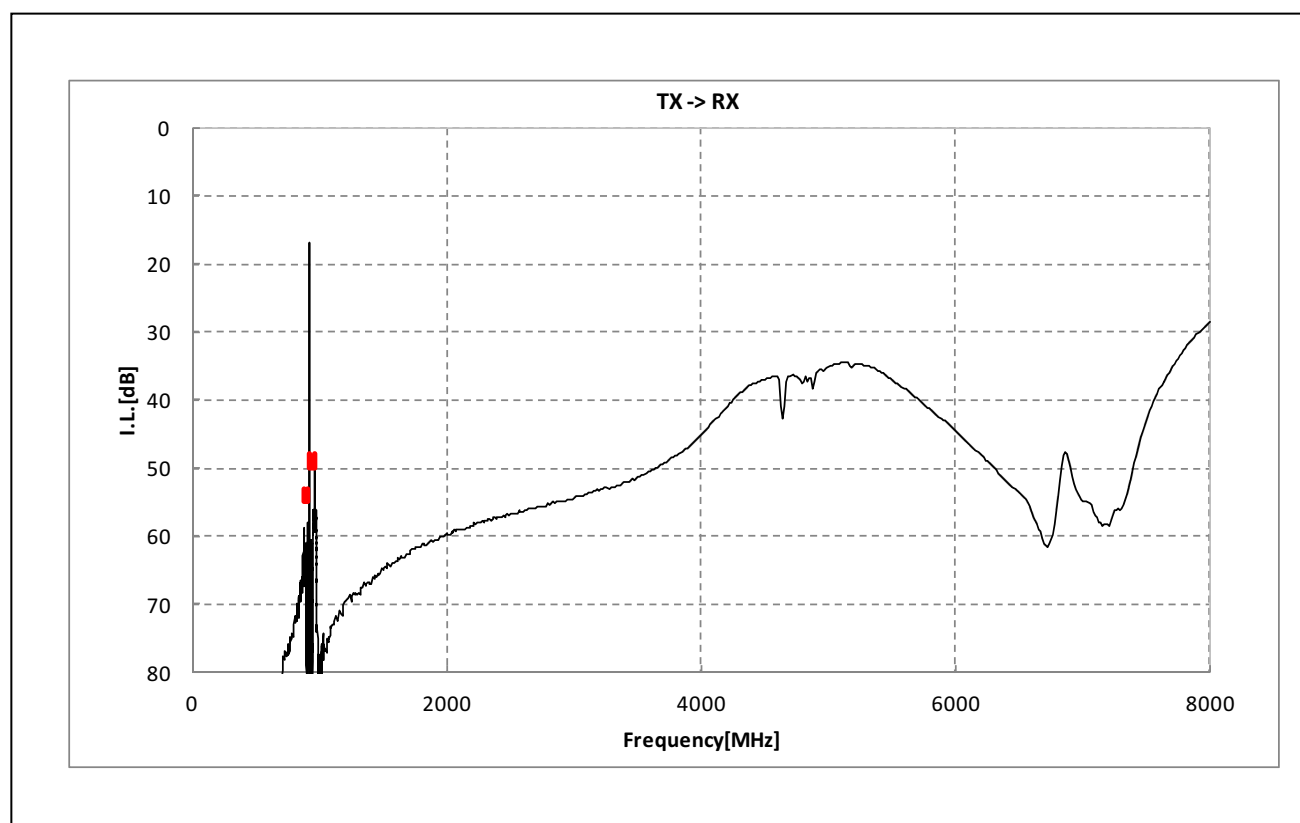
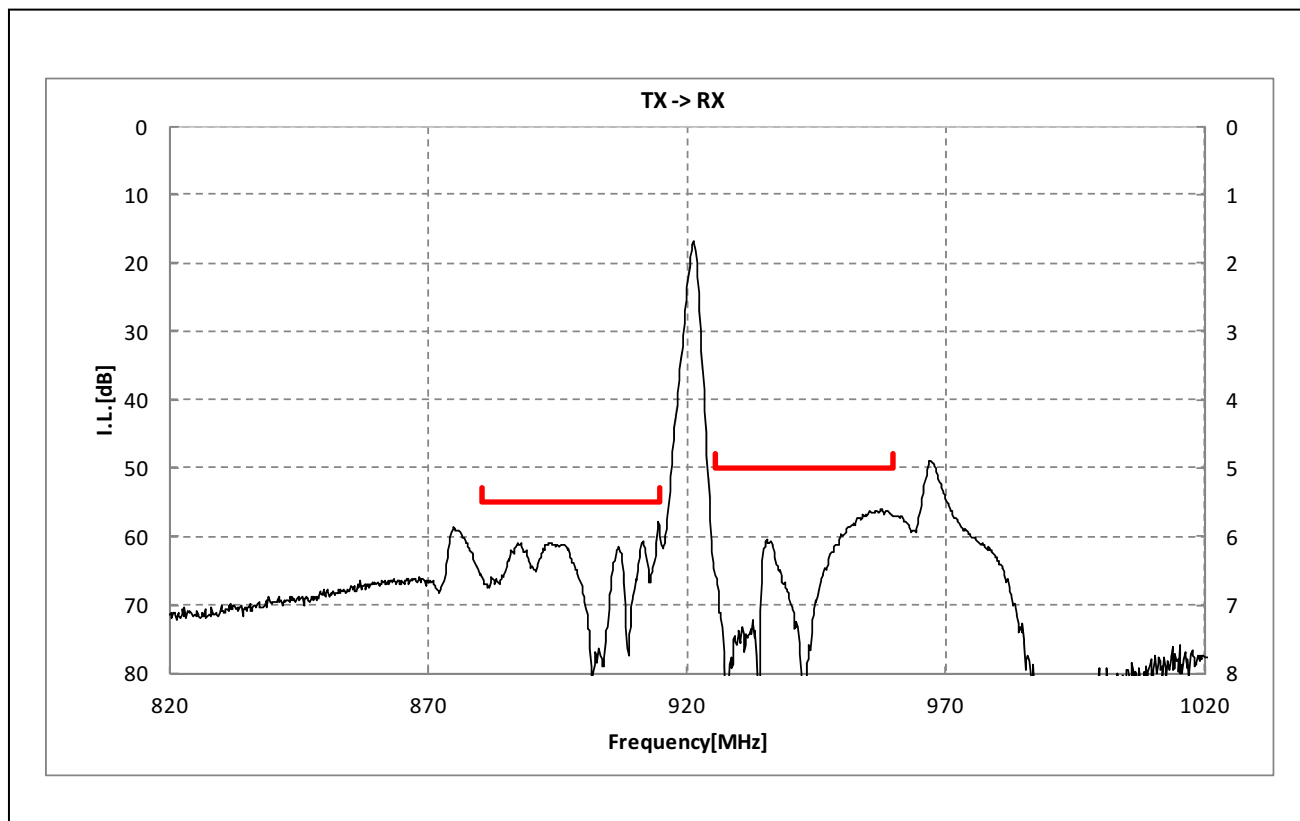
< ANT. → RX >



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Electrical Characteristic

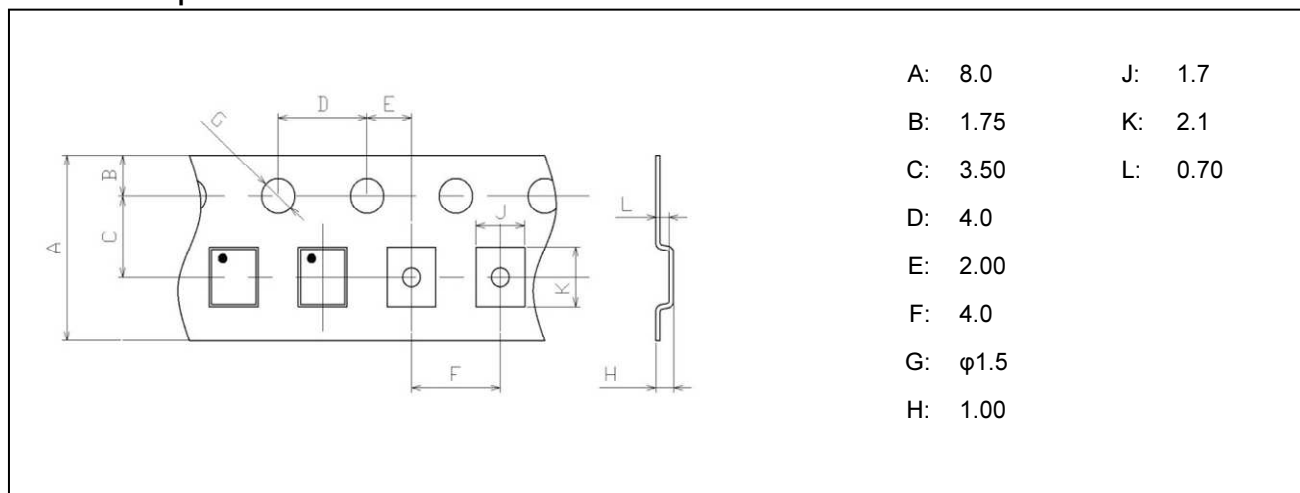
< TX→RX. >



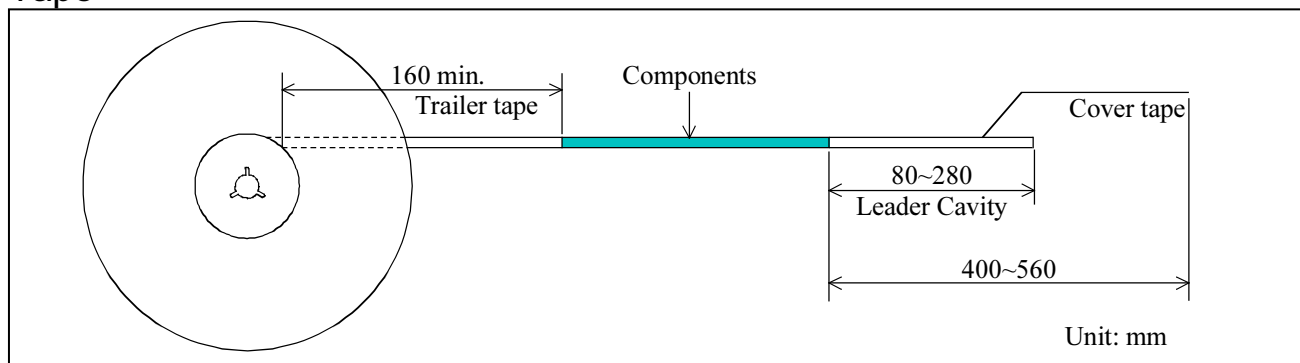
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Dimensions of Tape & Reel unit: mm

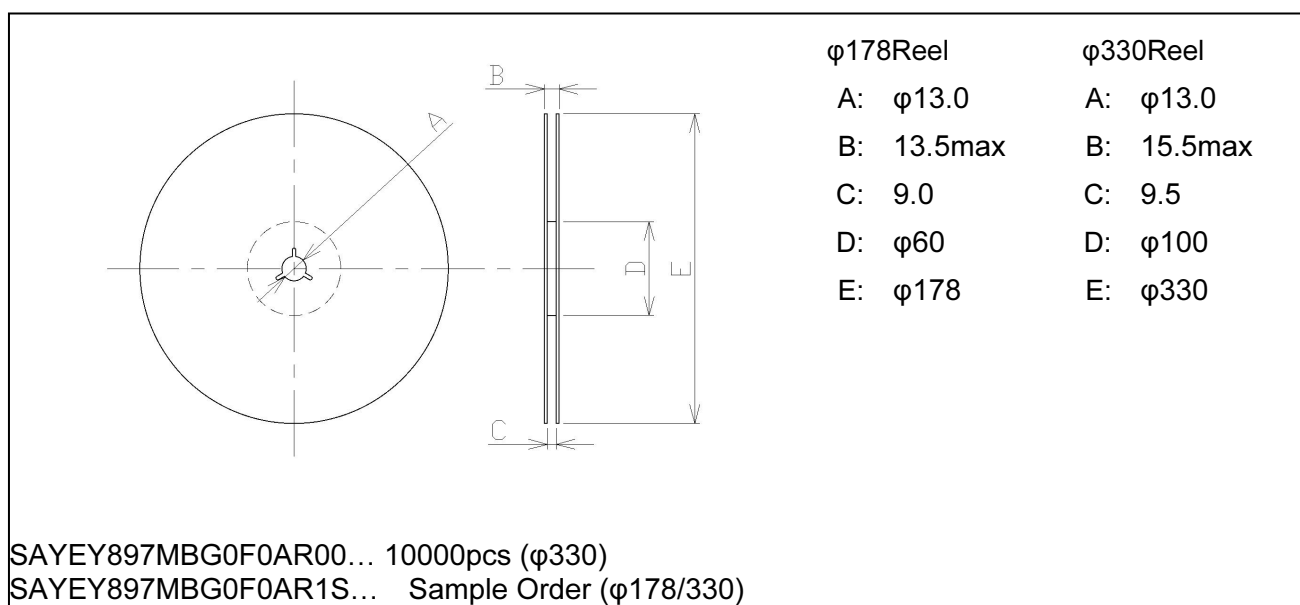
Carrier Tape



Tape



Reel



Important Notice (1/2)

PLEASE READ THIS NOTICE BEFORE USING OUR PRODUCTS.

Please make sure that your product has been evaluated and confirmed from the aspect of the fitness for the specifications of our product specified in the front page of this product specifications (the "Product" or "Products") when our Product is mounted to your product. All the items and parameters in this product specification/datasheet/catalog have been prescribed on the premise that our Product is used for the purpose, under the condition and in the environment specified in this specification. You are requested not to use our Product deviating from the condition and the environment specified in this specification.

Please note that the only warranty that we provide regarding the Product is its conformance to the specifications provided herein. Accordingly, we shall not be responsible for any defects in products or equipment incorporating such Products, which are caused under the conditions other than those specified in this specification.

WE HEREBY DISCLAIMS ALL OTHER WARRANTIES REGARDING THE PRODUCTS, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, THAT THEY ARE DEFECT-FREE, OR AGAINST INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS.

The Product shall not be used for any application which requires especially high reliability or accuracy in order to prevent defect which incurs high possibility of damage to the third party's life, body or property such as the applications listed below as item (a) to (j) (the "Prohibited Application"). You acknowledge and agree that, if you use our Products in the Prohibited Applications, we will not be responsible for any damage caused by such use.

Furthermore, YOU AGREE TO INDEMNIFY AND DEFEND US AND OUR AFFILIATES AGAINST ALL CLAIMS, DAMAGES, COSTS, AND EXPENSES THAT MAY BE INCURRED, INCLUDING WITHOUT LIMITATION, ATTORNEY FEES AND COSTS, DUE TO THE USE OF OUR PRODUCTS IN THE PROHIBITED APPLICATIONS.

- (a) Aircraft equipment.
- (b) Aerospace equipment
- (c) Undersea equipment.
- (d) Power plant control equipment
- (e) Medical equipment.
- (f) Transportation equipment (vehicles, automotive, trains, ships, etc.).
- (g) Traffic signal equipment.
- (h) Disaster prevention / crime prevention equipment.
- (i) Burning / explosion control equipment
- (j) Application of similar complexity and/ or reliability requirements to the applications listed in the above.

For the avoidance of doubt, the Product is not automotive grade, and will not support such requests for automotive as below, also not support other specific requests for automotive.

- AEC-Q200
- PPAP
- IATF16949, VDA6.3
- Zero Defect program
- Long product life cycle
- Automotive 8D failure analysis and report

Important Notice (2/2)

We expressly prohibit you from analyzing, breaking, Reverse-Engineering, remodeling altering, and reproducing our product. Our product cannot be used for the product which is prohibited from being manufactured, used, and sold by the regulations and laws in the world.

Please do not use the Product in molding condition.

This product is ESD (ElectroStatic Discharge) sensitive device.
When you install or measure this, you should be careful not to add antistatic electricity or high voltage.
Please be advised that you had better check anti surge voltage.

We do not warrant or represent that any license, either express or implied, is granted under any our patent right, copyright, mask work right, or our other intellectual property right relating to any combination, machine, or process in which our Products or services are used. Information provided by us regarding third-party products or services does not constitute a license from us to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from us under our patents or other intellectual property.

Please do not use our Products, our technical information and other data provided by us for the purpose of developing of mass-destruction weapons and the purpose of military use.
Moreover, you must comply with "foreign exchange and foreign trade law", the "U.S. export administration regulations", etc.

Please note that we may discontinue the manufacture of our products, due to reasons such as end of supply of materials and/or components from our suppliers.

Customer acknowledges that Murata will, if requested by you, conduct a failure analysis for defect or alleged defect of Products only at the level required for consumer grade Products, and thus such analysis may not always be available or be in accordance with your request (for example, in cases where the defect was caused by components in Products supplied to Murata from a third party).

The Product shall not be used in any other application/model than that of claimed to Murata.

Customer acknowledges that engineering samples may deviate from specifications and may contain defects due to their development status.

We reject any liability or product warranty for engineering samples.

In particular we disclaim liability for damages caused by

- the use of the engineering sample other than for evaluation purposes, particularly the installation or integration in the Product to be sold by you,
- deviation or lapse in function of engineering sample,
- improper use of engineering samples.

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