

Datasheet of SAW Device

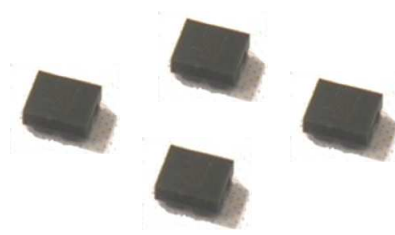
SAW Duplexer

for Band71 / Unbalanced / LR /1814

Murata PN: SAYRH634MBA0C0A

■ Feature

- Low Insertion Loss
- High Isolation
- For 5GNR



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.

Revision
E

SAYRH634MBA0C0A (Band71 / Unbalanced / LR / 1814)

General Information

- Operating temperature	: -20 to +85 deg.C
- Storage temperature	: -40 to +85 deg.C
- Input Power	: +30.0dBm 5000h +50deg.C (1) +28.5dBm 5000h +50deg.C (2) (1) applicable for W-CDMA, SC-FDMA, DFT-s-OFDM (2) applicable for CP-OFDM
- D.C. Volatage between the terminals	: 3V (25+/-2 deg.C)
- Minimum Resistance between the terminals	: 1M ohm
- RoHS compliance	: Yes
- ESD (ElectroStatic Discharge) sensitive device	

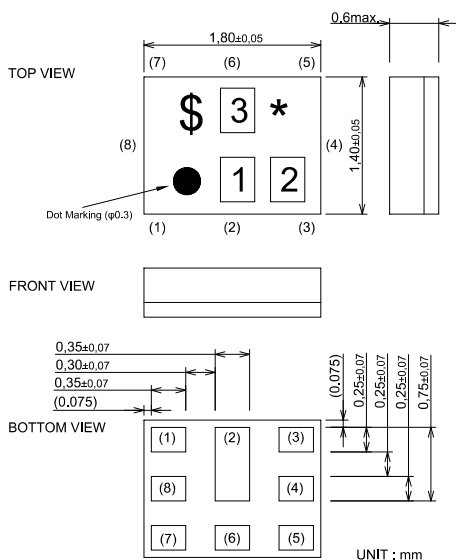
The input power shall be applied to Tx-port within own Tx passband frequency range.

SAYRH634MBA0C0A (Band71 / Unbalanced / LR / 1814)

Package Dimensions & Recommended Land Pattern

unit: mm

Dimensions



Marking : Laser Printing

- * : Month code
- \$: Date code
- 1 : 9
- 2 : R
- 3 : A

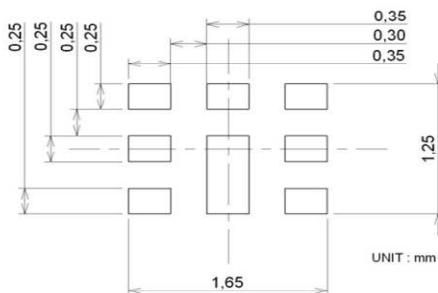
Terminal Number

- (6) : Ant
- (3) : TX
- (1) : RX

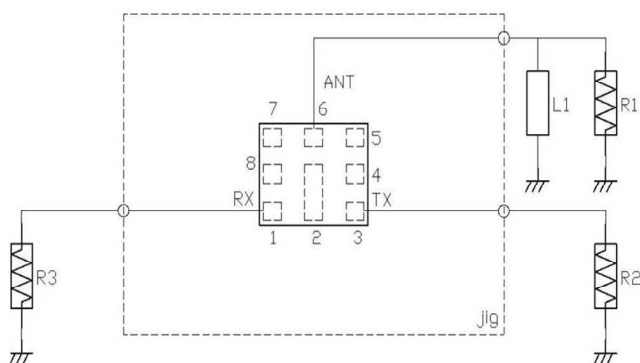
Others : GND

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

Land Pattern



Measurement Circuit (Top Thru View)



R1 : 50 ohm	L1 :16nH(Ideal inductor)
	:18nH(LQP03TN18N)
	<Reference>
R2 : 50 ohm	
R3 : 50 ohm	

SAYRH634MBA0C0A (Band71 / Unbalanced / LR / 1814)
Electrical Characteristic < TX → ANT. >

TX → ANT.		Characteristics (-20 to +85 deg.C)			Unit	Note
		min.	typ.*	max.		
		Center Frequency		680.5		
Insertion Loss	663.25 to 697.75 MHz		1.9	2.5	dB	
	665.5 to 695.5 MHz		1.5	2.1	dB _{INT}	Any 4.5MHz
Ripple Deviation	663.25 to 697.75 MHz		1.1	2.0	dB	
VSWR	663.25 to 697.75 MHz		1.5	2.0		ANT.
	663.25 to 697.75 MHz		1.4	2.0		TX
Absolute Attenuation	608. to 614. MHz	50	58		dB	Channel 37, radio astronomy
	617. to 652. MHz	45	56		dB	Rx
	717. to 728. MHz	21	39		dB	B29Rx
	722. to 729. MHz	10	39		dB	Channel 56
	729. to 746. MHz	40	50		dB	B12Rx
	746. to 756. MHz	50	69		dB	B13Rx
	758. to 768. MHz	45	61		dB	B14Rx
	768. to 805. MHz	40	52		dB	
	824. to 849. MHz	40	49		dB	B5 Tx CA
	869. to 894. MHz	40	48		dB	
	1164. to 1250. MHz	38	43		dB	L2 attenuation
	1326. to 1396. MHz	40	48		dB	2f
	1559. to 1563. MHz	42	53		dB	Compass
	1565.42 to 1573.37 MHz	42	52		dB	Wideband GPS, lower side band
	1573.37 to 1577.47 MHz	42	52		dB	Regular GPS, main lobe
	1577.47 to 1585.42 MHz	42	52		dB	Wideband GPS, upper side lobe
	1597.55 to 1605.89 MHz	42	55		dB	GLONASS
	1710. to 1755. MHz	40	49		dB	B4 Tx CA
	1805. to 1880. MHz	40	47		dB	DCS 1800
	1930. to 1990. MHz	40	54		dB	B2 Rx
	1989. to 2094. MHz	40	51		dB	3f
	2110. to 2200. MHz	40	50		dB	B66 Rx
	2155. to 2170. MHz	40	51		dB	
	2400. to 2484. MHz	40	61		dB	ISM2.4G
	2652. to 2792. MHz	40	56		dB	4f
	3315. to 3490. MHz	40	63		dB	5f
	3978. to 4188. MHz	40	65		dB	6f
	4641. to 4886. MHz	40	55		dB	7f
	4900. to 5950. MHz	35	42		dB	ISM5G
5304. to 5584. MHz	38	45		dB	8f	

* Typical value at 25±2deg.C

SAYRH634MBA0C0A (Band71 / Unbalanced / LR / 1814)
Electrical Characteristic < ANT. → RX >

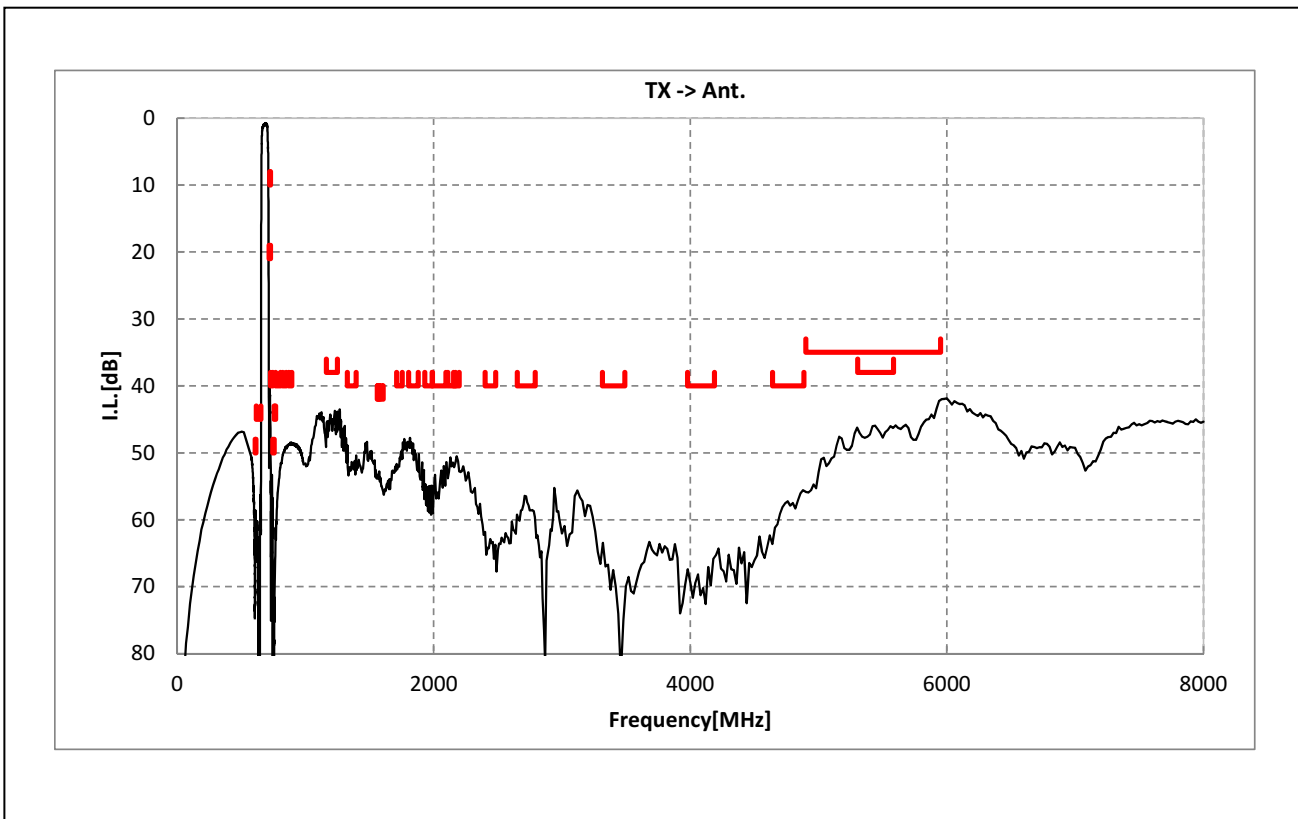
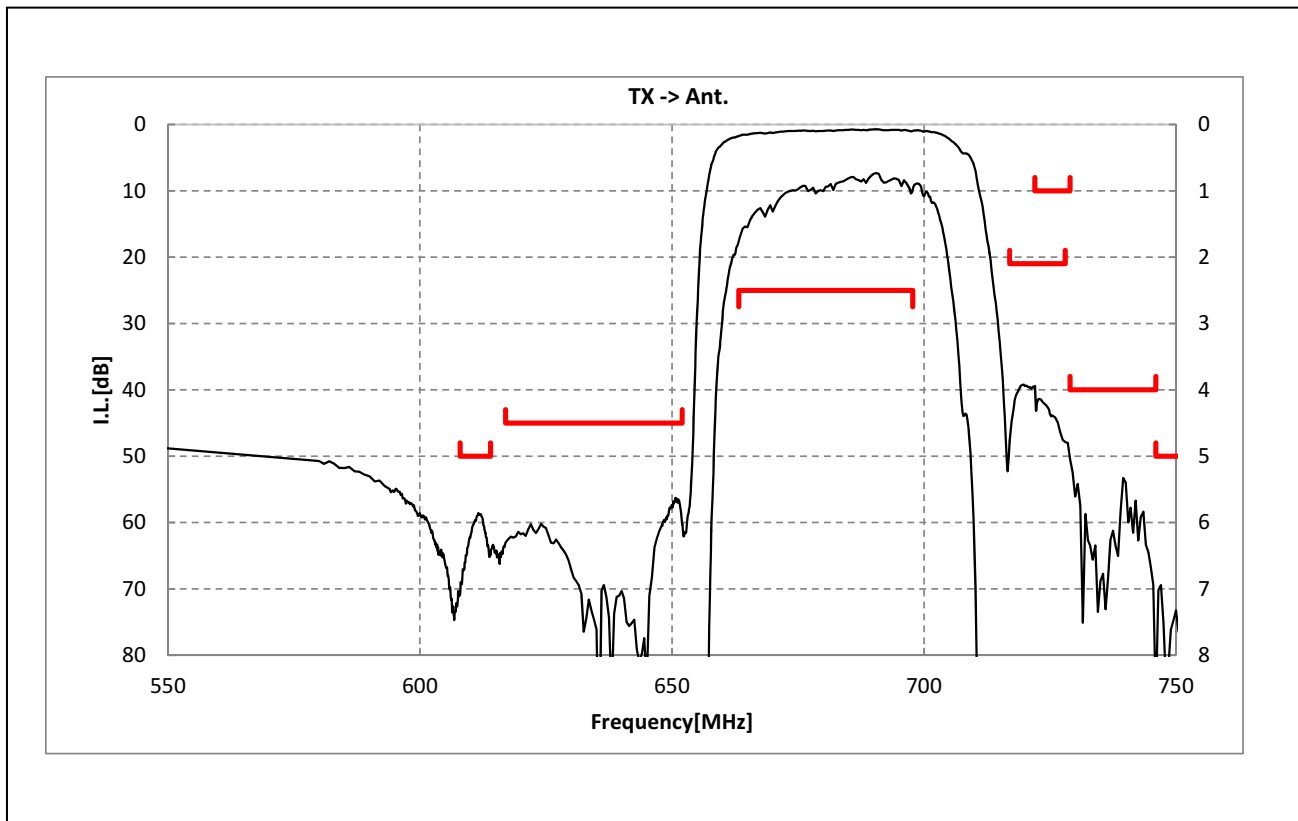
ANT. → RX		Characteristics (-20 to +85 deg.C)			Unit	Note
		min.	typ.*	max.		
		Center Frequency		634.5		
Insertion Loss	617.25 to 651.75 MHz	1.9	2.9	dB		
	619.5 to 649.5 MHz	1.6	2.1	dB _{INT}	Any 4.5MHz	
Ripple Deviation	617.25 to 651.75 MHz	1.1	2.2	dB		
VSWR	617.25 to 651.75 MHz	1.7	2.2		Rx	
	617.25 to 651.75 MHz	1.6	2.2		ANT.	
Absolute Attenuation	35. to 55. MHz	50	76	dB	Rx-Tx	
	60. to 602. MHz	30	38	dB		
	602. to 608. MHz	20	38	dB	Average over ch36	
	608. to 614. MHz	2.0	8.0	dB	Average over ch37	
	657.56 to 662.44 MHz	10	34	dB	Average, WiFi reflection	
	663. to 698. MHz	45	56	dB	Tx	
	709. to 740. MHz	20	42	dB	2Tx - Rx	
	716. to 722. MHz	15	45	dB	Average	
	776. to 793. MHz	35	39	dB	PS mobile transmitters	
	793. to 805. MHz	35	39	dB		
	814. to 6000. MHz	20	29	dB		
	824. to 849. MHz	30	39	dB	BC0 Tx jammer	
	1058. to 1138. MHz	25	38	dB	B4 Tx CA Tx-Rx	
	1163. to 1204. MHz	34	38	dB	B4 Tx CA (Rx+Tx)/2	
	1233. to 1281. MHz	20	29	dB	B2 Tx CA (Rx+Tx)/2	
	1461. to 1484. MHz	34	43	dB	B30 Tx CA (Rx+Tx)/2	
	1653. to 1698. MHz	25	42	dB	B30 Tx CA Tx-Rx	
	1710. to 1755. MHz	38	43	dB	B4 Tx CA	
	1850. to 1920. MHz	35	43	dB	B2 Tx CA	
	1851. to 1956. MHz	30	41	dB	3f	
	2305. to 2315. MHz	35	48	dB	B30 Tx CA	
	2327. to 2407. MHz	35	47	dB	B4 Tx CA Tx+Rx	
	2400. to 2500. MHz	35	47	dB	ISM2.4G	
	2468. to 2608. MHz	35	46	dB	4f	
	2922. to 2967. MHz	35	47	dB	B30 Tx CA Tx+Rx	
	4037. to 4162. MHz	35	52	dB	B4 Tx CA 2Tx+Rx	
	4317. to 4472. MHz	35	51	dB	B2 Tx CA 2Tx+Rx	
	4900. to 5950. MHz	35	50	dB	ISM5G	
	5553. to 5868. MHz	35	53	dB	9f	
	6170. to 6520. MHz	35	44	dB	10f	
	6787. to 7172. MHz	35	43	dB	11f	
	7404. to 7824. MHz	35	42	dB	12f	
	8021. to 8476. MHz	30	43	dB	13f	
	8638. to 9128. MHz	30	43	dB	14f	
	9255. to 9780. MHz	30	43	dB	15f	
9872. to 10432. MHz	30	43	dB	16f		

* Typical value at 25±2deg.C

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Electrical Characteristic

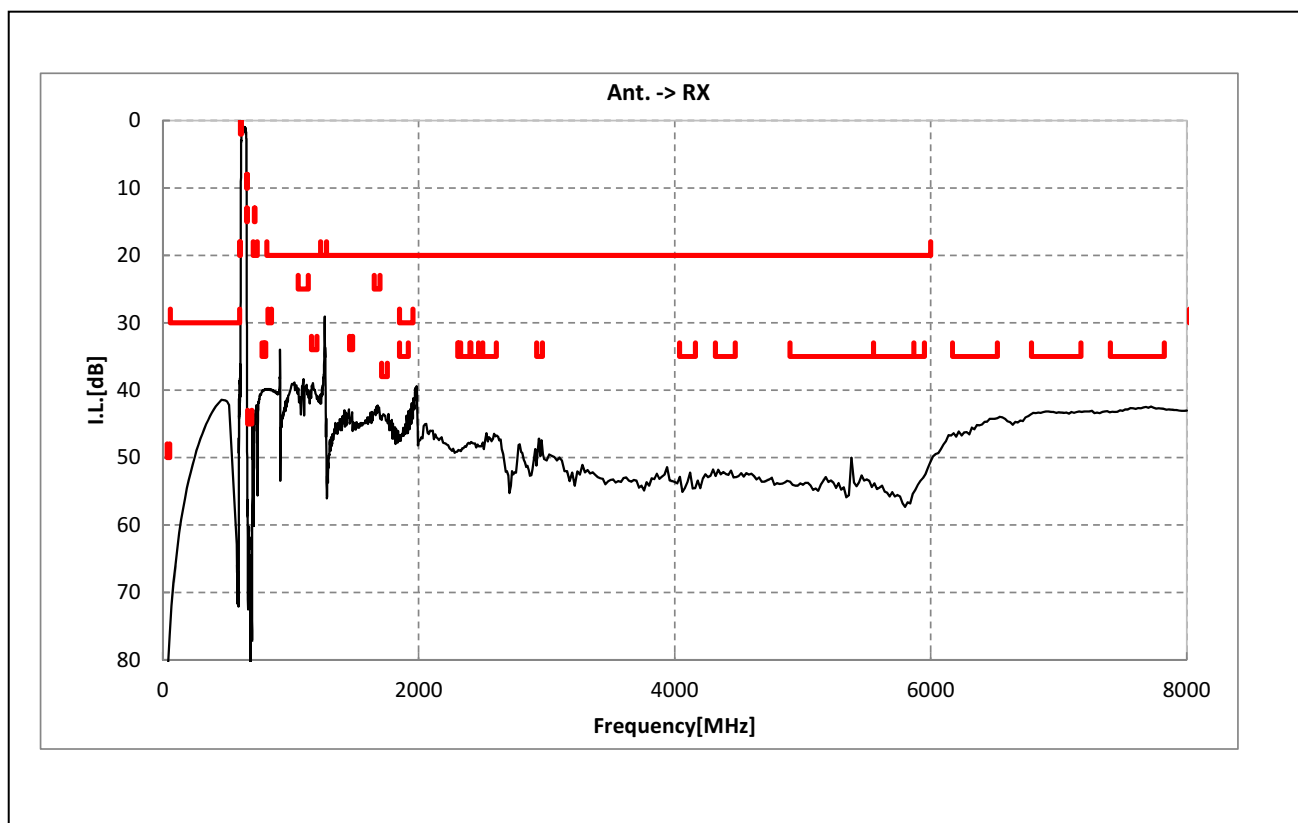
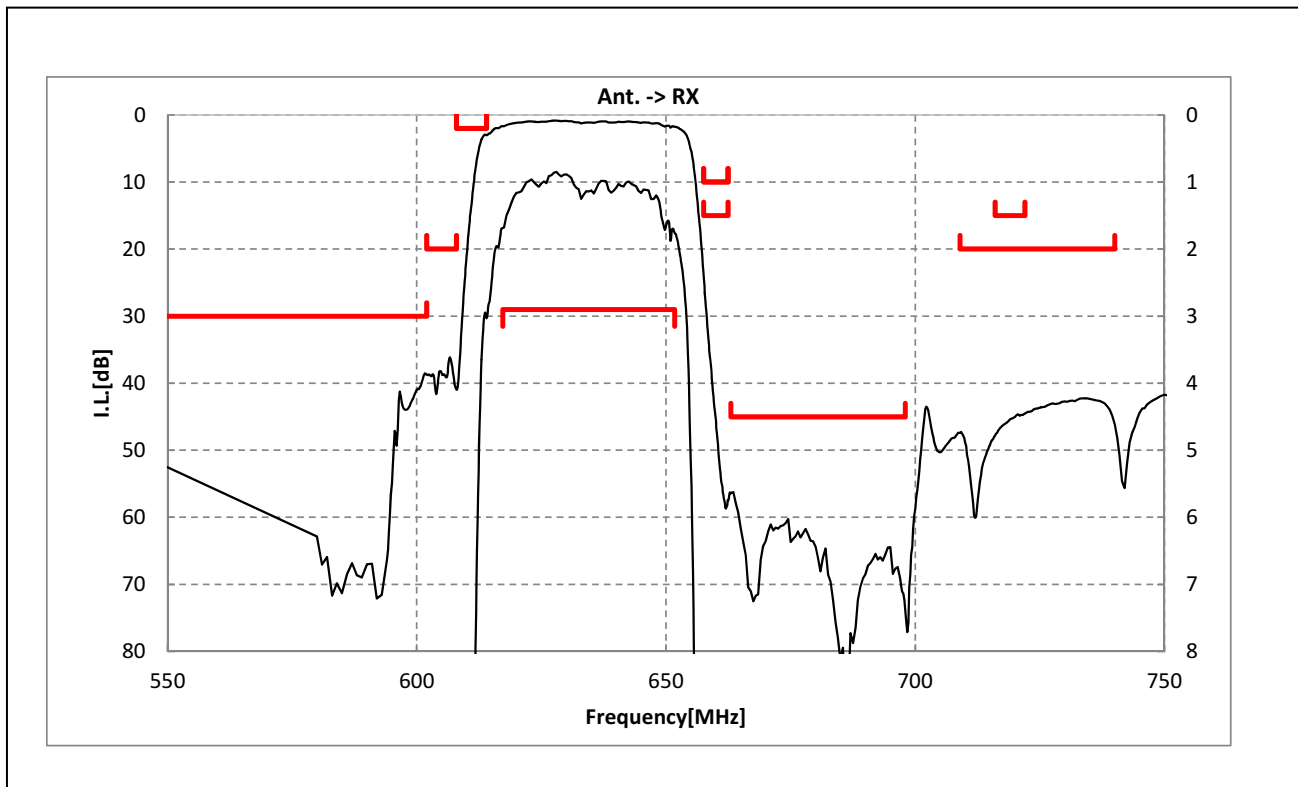
< TX → ANT. >



SAYRH634MBA0C0A (Band71 / Unbalanced / LR / 1814)

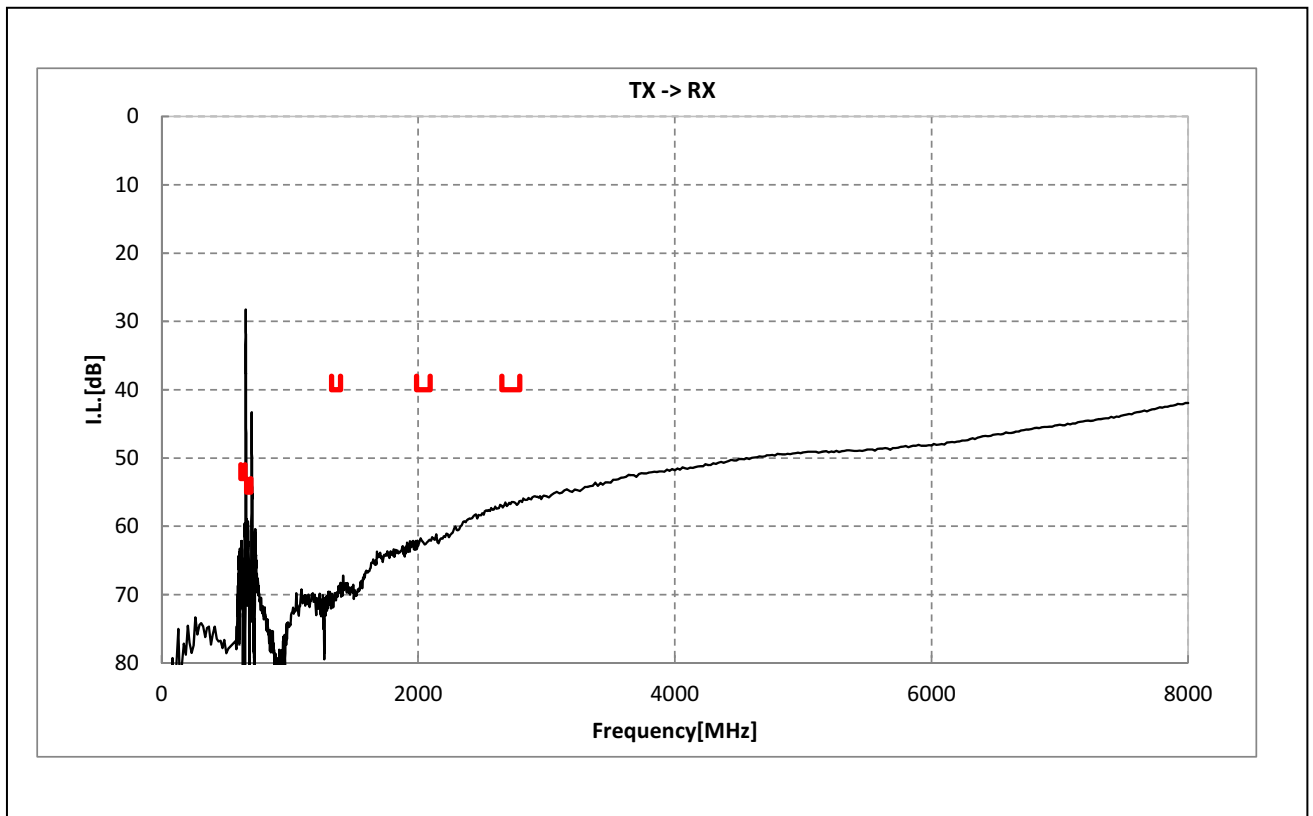
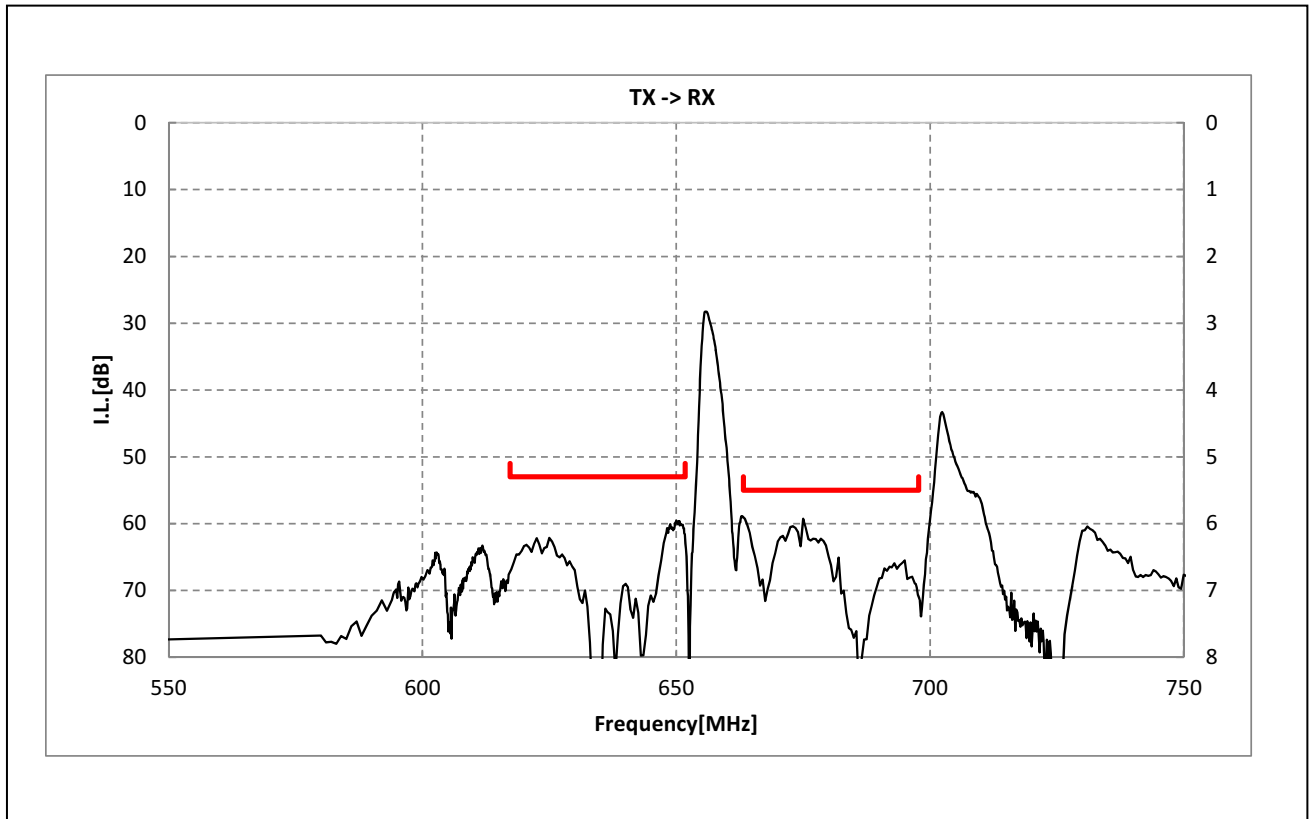
Electrical Characteristic

< ANT. → RX >



SAYRH634MBA0C0A (Band71 / Unbalanced / LR / 1814)
Electrical Characteristic

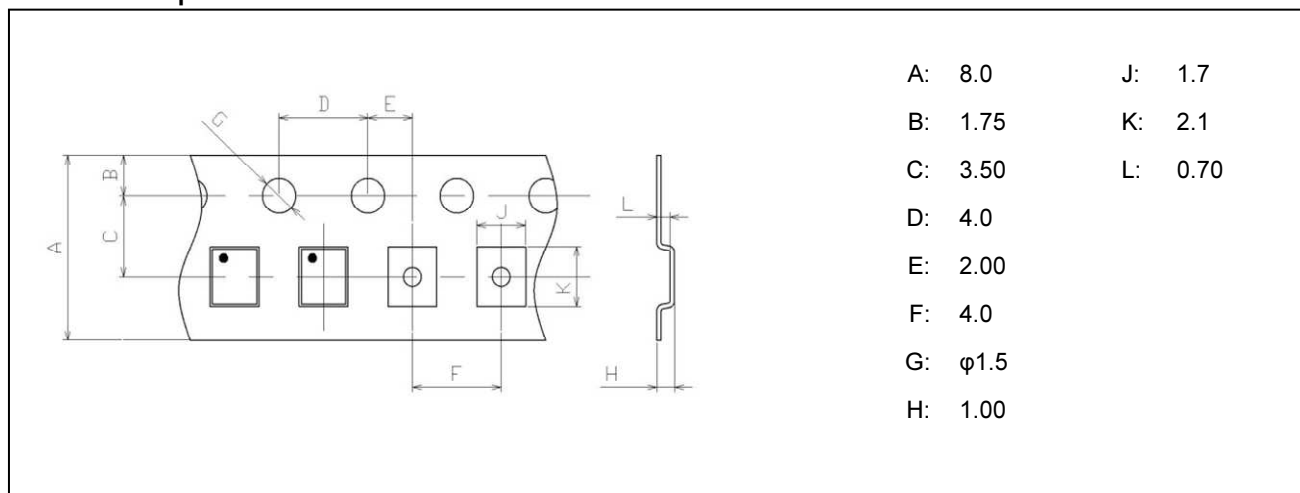
< TX → RX >



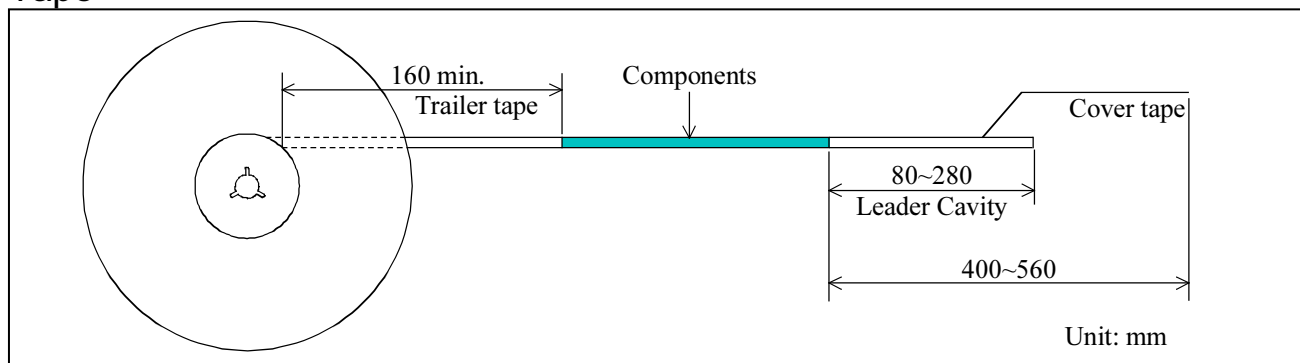
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Dimensions of Tape & Reel unit: mm

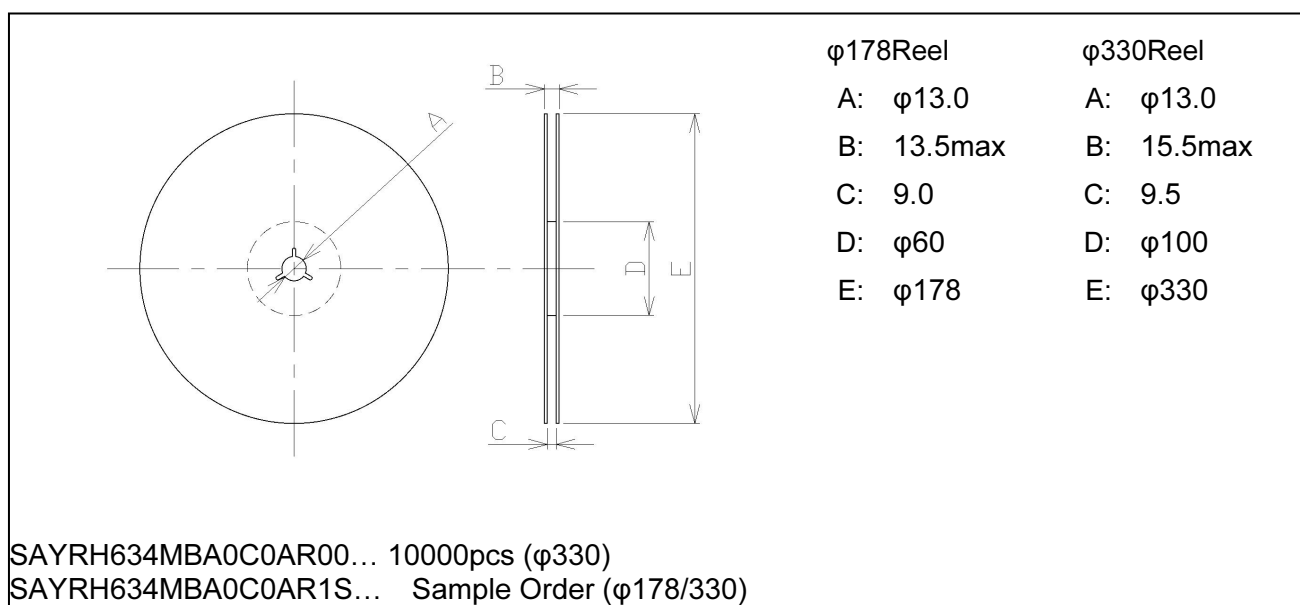
Carrier Tape



Tape



Reel



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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

SAYRH634MBA0C0A (Band71 / Unbalanced / LR / 1814)

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.

We disclaim any liability for consequential and incidental damages.

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