

Datasheet of SAW Device

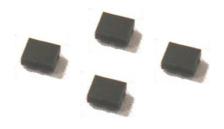
SAW Duplexer

for Band28B / Unbalanced / LR /1814

Murata PN: SAYEY733MBC0F0A

Feature

- > for 5GNR
- > High Isolation
- For Envelope Tracking



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 H



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 : 10M ohm
- RoHS compliance : Yes

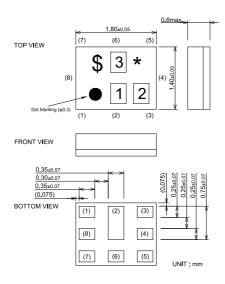
- ESD (ElectroStatic Discharge) sensitive device

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



Package Dimensions & Recommended Land Pattern unit: mm

Dimensions



Marking: Laser Printing

*: Month code

\$: Date code

1:7

2 : E

3 : A

Terminal Number

(6): Ant

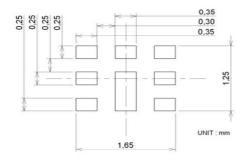
(3):TX

(1): RX

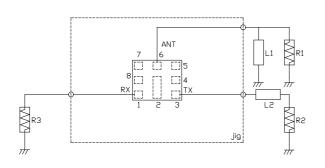
Others: GND

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

Land Pattern



Measurement Circuit (Top Thru View)



R1:50 ohm	L1 :8nH (Ideal inductor)
	:8.2nH (LQP03TN8N2)
	<reference></reference>
R2 : 50 ohm	L2 :10.4nH (Ideal inductor)
R3 : 50 ohm	



Electrical Characteristic < TX → ANT. >

Center Frequency Insertion Loss 718.25 to 747.75 MHz 720.5 to 747.55 MHz 720.5 to 747.5 MHz 720.5 to 748.4 M	$TX \to ANT.$			Cha (-20	racteri to +85 d	stics eg.C)	Unit	Note		
This ention Loss						min.		max.		
Ripple Deviation	Center Frequency									
Ripple Deviation	Insertion Loss									
Times	D: 1 D : (:									Any 4.5MHz
718. to 748. MHz		-							ав	
Absolute Attenuation 10. to 698. MHz 30 35 dB 698. to 710. MHz 19 35 dB DTV Rejection 698. to 710. MHz 30 35 dB +23 to +27deg.C 698. to 710. MHz 30 40 dB Average 758. to 773. MHz 15 32 dB 773. to 803. MHz 44 49 dB RX 859. to 894. MHz 30 37 dB 1225. to 1250. MHz 35 39 dB GPS L2 1436. to 1510. MHz 32 38 dB Compass 1565.42 to 1573.37 MHz 32 38 dB Compass 1567.47 to 1585.42 MHz 32 38 dB Wideband GPS lower side 1573.37 to 1577.47 MHz 32 38 dB Regular GPS 1577.47 to 1585.42 MHz 32 38 dB Wideband GPS upper side 1597.55 to 1605.89 MHz 32 38 dB GLONASS 1805. to 1880. MHz 31 40 dB BZ / BZ5 2010. to 2025. MHz 31 41 dB BZ / BZ5 2010. to 2025. MHz 31 42 dB B34 2154. to 2244. MHz 28 35 dB ISM 2.4 2570. to 2620. MHz 17 23 dB B38 2872. to 2992. MHz 15 18 dB 4f	VSWR									
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4900. 10 9950. MINZ 20 29 UB ISM 3G										
		4900.	to_	5950.	IVITIZ	20	29		uБ	18101 3G

^{*} Typical value at 25±2deg.C



Electrical Characteristic < ANT. → RX >

ANT. → RX					Characteristics (-20 to +85 deg.C) Unit			Unit	Note
				min.	typ.*	max.			
Center Frequency	770.05		222.75			788		MHz	
Insertion Loss	773.25 775.5		802.75 800.5			2.0 1.8	2.4 2.1	dB	Any 4 EMLIn
Pinnle Doviction	773.	to	803.	MHz MHz		0.3	1.5	dB _{INT} dB	Any 4.5MHz Any 5MHz
Ripple Deviation VSWR	773.	to to	803.	MHz		1.8	2.1	uБ	RX
	773.	to	803.	MHz		1.7	2.0		ANT.
Absolute Attenuation	10.	to	699.	MHz	38	60		dB	DTV Rejection
	45.	to	65.	MHz	48	100		dB	RX- TX
	703.	to	718.	MHz	48	56		dB	Block-A TX
	718.	to	748.	MHz	50	58		dB	TX
	814. 6957.	to	6000. 7227.	MHz	12 24	20 39		dB dB	OoB Rejection
	7730.	to	8030.	MHz MHz	20	35		dВ	9f 10f
	8503.	to to	8883.	MHz	16	29		dB	11f
	9267.	to	9636.	MHz	11	16		dB	12f
	10049.	to	10439.	MHz	8.0	13.0		dB	13f
	10822.	to	11242.	MHz	10	19		dB	14f
	11595.		12045.	MHz	9.0	21.0		dB	15f
	12368.	to	12750.	MHz	1.0	15.0		dB	16f
							1		
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							}		
									* Typical value at 25±2dea C

^{*} Typical value at 25±2deg.C



Electrical Characteristic < TX → RX >

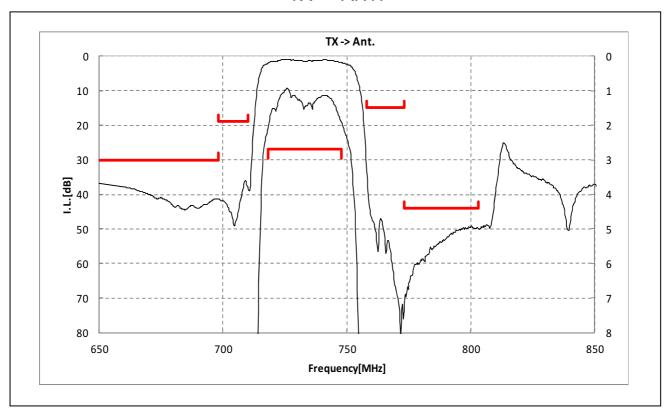
	X → RX			Cha (-20	racteri	eg.C)	Unit	Note
laclation	1			mın.	typ.*	max.		
Isolation	718.25 to	747.75	MHz	58	61		dB	TX
	720.5 to	745.5	MHz	60	62			Any 4.5MHz, TX
	773.25 to	802.75	MHz	55	60		dB	RX
	775.5 to	800.5	MHz	55	61		dB _{INT}	Any 4.5MHz, RX
	1436. to	1496.	MHz	30	64			2f TX
	2154. to	2244.	MHz	30	63		dB	3f TX
	2872. to	2992.	MHz	30	59		dB	4f TX
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								* Typical value at 25±2dag C

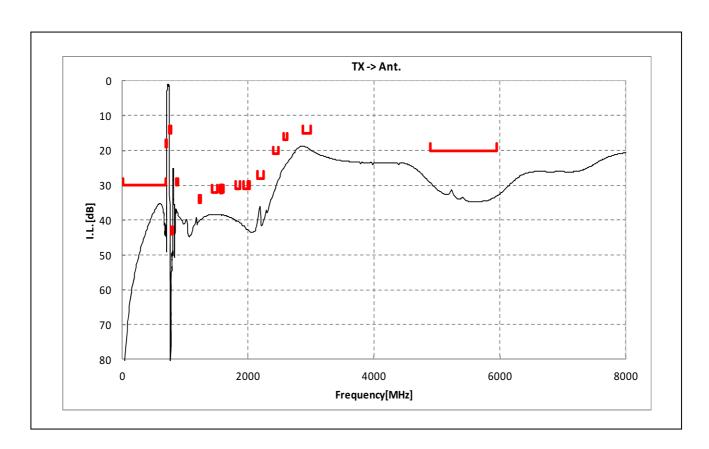
^{*} Typical value at 25±2deg.C



Electrical Characteristic

 $< TX \rightarrow ANT. >$

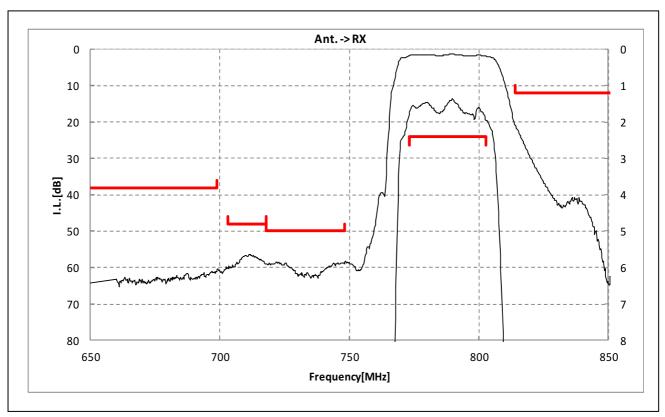


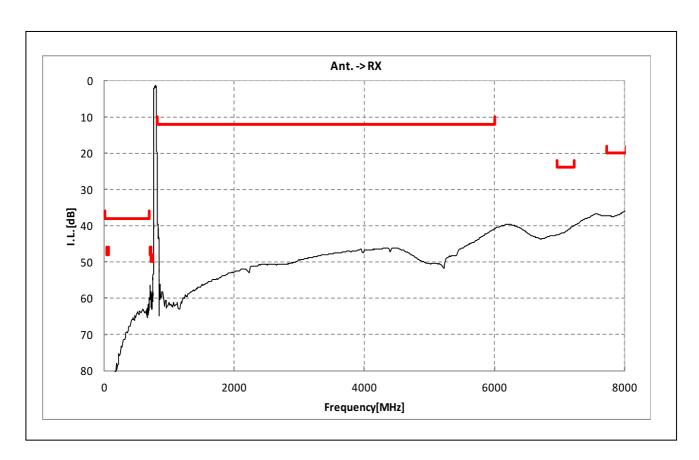




Electrical Characteristic

 $< ANT. \rightarrow RX >$

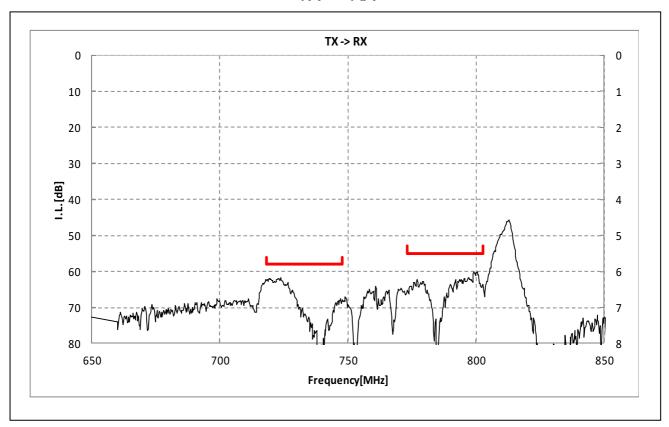


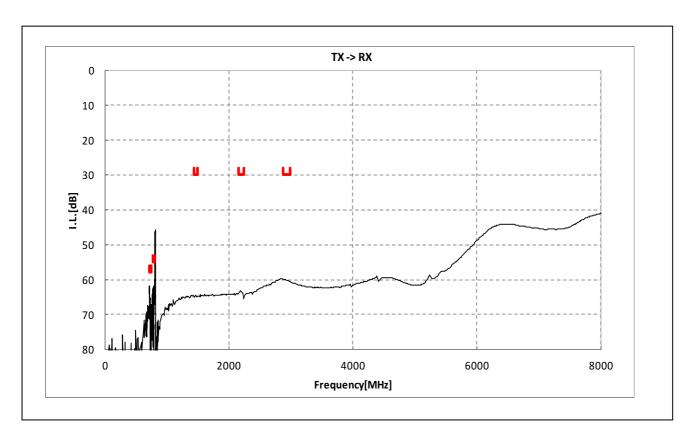




Electrical Characteristic

$$< TX \rightarrow RX >$$

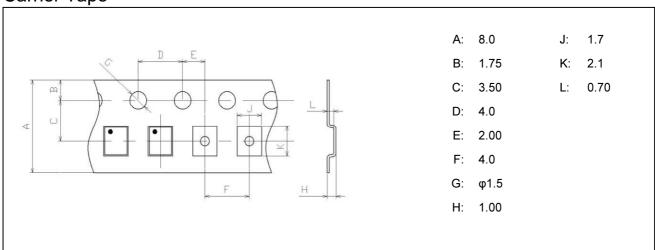




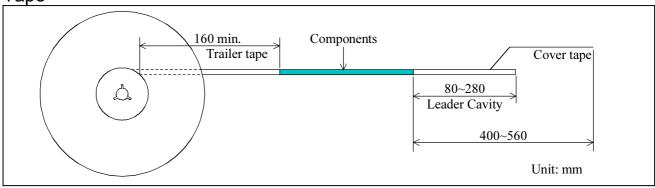


Dimensions of Tape & Reel unit: mm

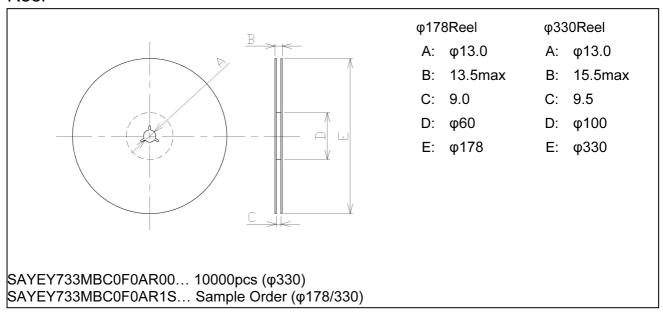
Carrier Tape



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 serge 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.

If you can't agree the above contents, you should inquire our sales.