

Datasheet of SAW Device

SAW Duplexer

for Band8 / Unbalanced / LR /1814

Murata PN: SAYEY897MBA0B0A



- ► LTE-A
- Low Insertion Loss & High Isolation
- ➤ TC-SAW



Note : Murata SAW Component is applicable for Cellular /Cordless phone (Terminal) relevant market only. Please also read caution at the end of this document.



Revision Number	Date	Description
SAYEY897MBA0B0A_rev. A	Feb-21-2014	■ Initial Release
SAYEY897MBA0B0A_rev. B	May-28-2014	Updated for MP
SAYEY897MBA0B0A_rev. C	Sep-02-2015	Updated General Information
SAYEY897MBA0B0A_rev. D	Sep-15-2015	Updated General Information
SAYEY897MBA0B0A_rev. E	Sep-05-2016	Updated General Information
SAYEY897MBA0B0A_rev. F	Jun-13-2017	Updated General Information

-	Operating	temperature
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: -20 to +85 deg.C : -40 to +85 deg.C

Storage temperatureInput Power

: +29 dBm 5000 h +55 deg.C : 3V (25+/-2 deg.C)

: Yes

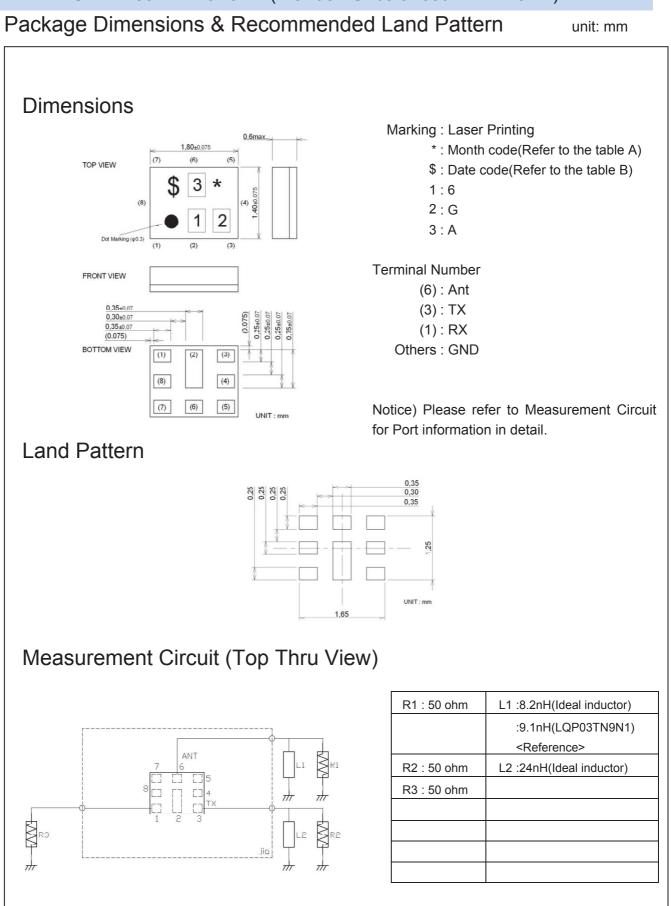
- D.C. Volatage between the terminals

- Minimum Resistance between the terminals : 10M ohm

- RoHS compliance

- ESD (ElectroStatic Discharge) sensitive device







Electrical Characteristic < TX→ANT. >

Т	$X \rightarrow ANT.$				Cha (-20	racteria to +85 d	stics eg.C)	Unit	Note
					min.	typ.*	max.		
Center Frequency						897.5		MHz	
Insertion Loss	880.	to	915.	MHz		2.3	3.0	dB	
	880.25		914.75	MHz		2.2	3.0	dB	
	882.5	to	912.5	MHz		1.8	2.2	dB _{INT}	Any 4.5MHz
Ripple Deviation	880.	to	915.	MHz		1.5	2.3	dB	
VSWR	880.	to	915.	MHz		1.5	2.0		TX
	880.	to	915.	MHz		1.5	2.0		ANT.
Absolute Attenuation	10.	to	716.	MHz	30	37		dB	
	716.	to	728.	MHz	35	37		dB	
	728.	to	793.	MHz	30	37		dB	
	832.	to	862.	MHz	30	40		dB	B20 TX
	925.	to	960.	MHz	44	56		dB	
	1559.	to	1563.	MHz	33	39		dB	COMPASS
	1565.42	to	1573.37	MHz	33	38 38		dB	Lower GPS
	1573.37 1577.47	to	1577.47 1585.42	MHz MHz	33 33	38		dB dB	Regular GPS
	1577.47	to	1585.42	MHz	33	37		dB dB	Upper GPS GLONASS
	1710.		1785.	MHz	33	39 46		dB dB	B3 TX
	1710.	to	1840.	MHz	30 40	40		dB	2f
	1840.	to	1880.	MHz	38	49 50		dB	<u>∠ı</u>
	1920.	to to	1980.	MHz	30	46		dB	B1 TX
	2110.	to	2170.	MHz	27	41		dB	BTIX
	2400.	to	2500.	MHz	35	39		dB	ISM2.4
	2434.	to	2494.	MHz	35	39		dB	WLAN co-ex
	2620.	to	2745.	MHz	33	38		dB	3f
	3520.	to	3660.	MHz	20	33		dB	4f
	4400.	to	4575.	MHz	20	31		dB	5f
	4900.	to	5950.	MHz	20	28		dB	ISM5G, 6f
	6160.	to	6405.	MHz	15	25		dB	7f
	7040.	to	7320.	MHz	9.0	14.0		dB	8f
	7920.	to	8235.	MHz	2.0	11.0		dB	9f
	8800.	to	9150.	MHz	2.0	11.0		dB	10f
	9680.		10065.	MHz	2.0	12.0		dB	11f
	10560.		10980.	MHz	2.0	7.0		dB	12f
	11440.	to	11895.	MHz	2.0	7.0		dB	13f
	12320.	to	12750.	MHz	2.0	9.0		dB	14f
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* Typical value at 25±2deg.C



Electrical Characteristic < ANT.→RX >

			<u> </u>		Cha	racteria				
A	NT. \rightarrow RX					to +85 d		Unit	Note	
	<u></u>				min.	typ.*	max.	N 41 1		
Center Frequency Insertion Loss	925.	to	960.	MHz		942.5 2.5	3.8	MHz dB		
	925.25	to to	959.75			2.3	3.5	dB		
	927.5	to	957.5	MHz		1.9	2.7	dB _{INT}	Any 4.5MHz	
Ripple Deviation	925.	to	960.	MHz		1.3	3.0	dB		
VŚŴR	925.	to	960.	MHz		1.7	2.2		RX	
	925.	to	960.	MHz		1.8	2.2		ANT.	
Absolute Attenuation	10.	to	880.	MHz	45	64		dB		
	0.05	-	45. 870.	MHz	50 40	109 67		dB dB	RX - TX	
	835. 880.	to	915.	MHz MHz	40	58		dB	2TX - RX TX	
	902.5	to to	910.	MHz	30	61		dB	(RX + TX) / 2	
	980.	to	1045.	MHz	25	28		dB		
	1427.	to	1448.	MHz	40	72		dB	B11 TX	
	1710.	to	1785.	MHz	40	66		dB	B3 TX	
	1805.	to	1920.	MHz	40	64		dB	RX + TX, 2f	
	1920.	to	1980.	MHz	40	63		dB	B1 TX	
	2400.	to	2500.	MHz	40	59 60		dB	ISM2.4	
	2500. 2685.	to	2570. 2790.	MHz MHz	40 40	60 58		dB dB	B7 TX RX + 2TX	
	2005.	to to	2880.	MHz	40	58		dB	3f	
	2880.	to	3700.	MHz	35	55		dB		
	3700.	to	3840.	MHz	40	55		dB	4f	
	4625.	to	4800.	MHz	40	53		dB	5f	
	4900.	to	5950.	MHz	40	53		dB	ISM 5G, 6f	
	6475.	to	6720.	MHz	20	55		dB	7f	
	7400.	to	7680.	MHz	15	53		dB	8f	
	8325.	to	8640.	MHz	15	57		dB	9f	
	9250. 10175.	to	9600. 10560.	MHz MHz	15 15	43 34		dB dB	10f 11f	
	111100.	to to	11520.	MHz	15	27		dB	12f	
	12025.	to	12480.	MHz	15	26		dB	13f	
		10								
1	1				1	1		l	* Typical value at 25+2deg C	

* Typical value at 25±2deg.C



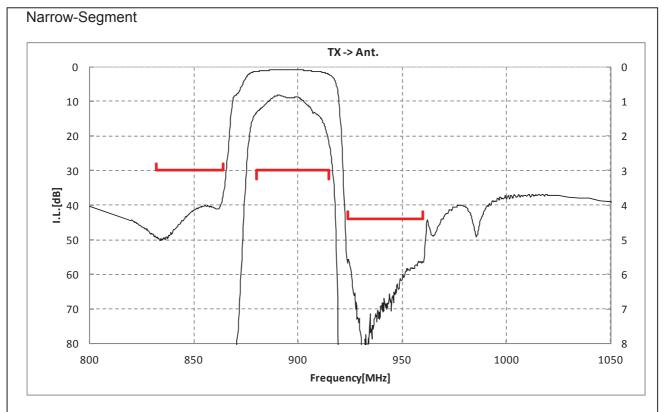
Electrical Characteristic < TX → RX. >

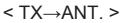
T	$X \rightarrow RX$	→ RX				to +85 d	stics eg.C)	Unit	Note	
					min.	typ.*	max.			
Isolation	882.5	to	912.5	MHz	55	64		dBuur	Any 4.5MHz	
	927.5	to	957.5	MHz	55	61			Any 4.5MHz	

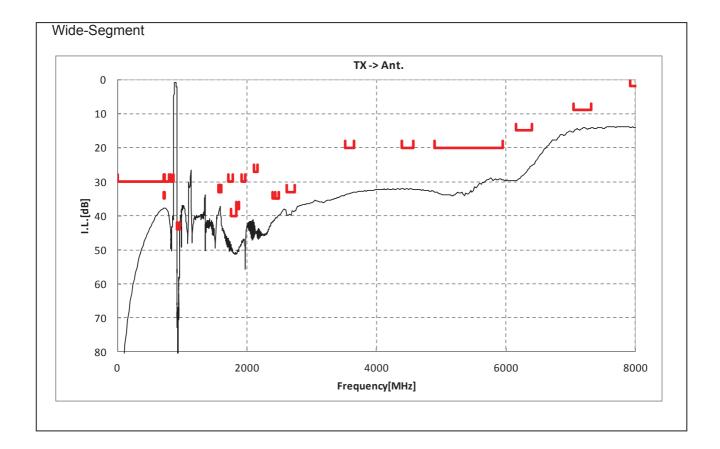
* Typical value at 25±2deg.C



Electrical Characteristic

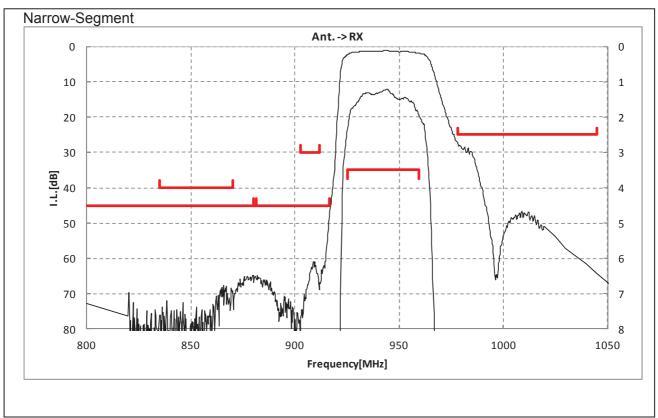




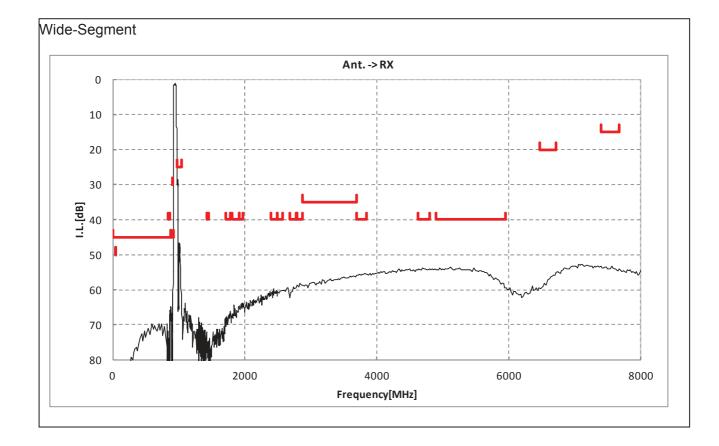




Electrical Characteristic

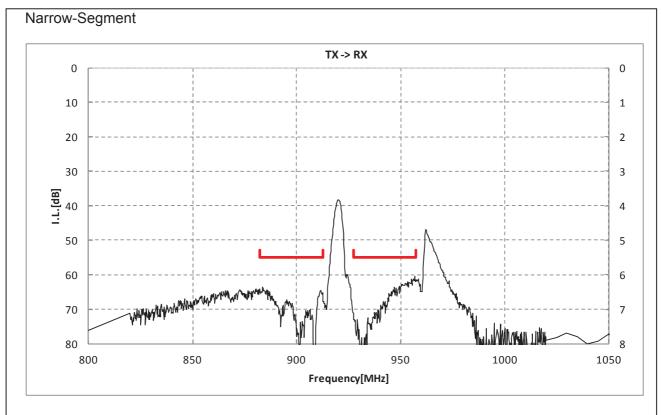


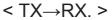


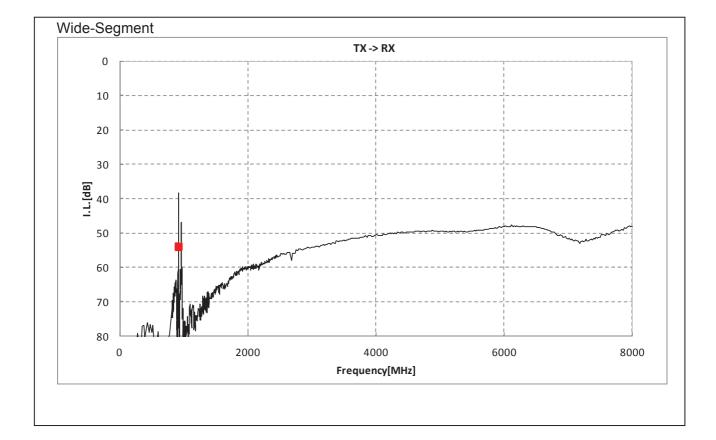




Electrical Characteristic



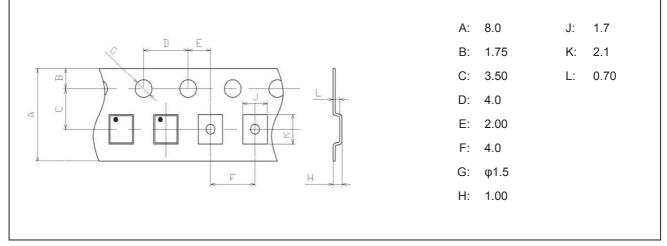




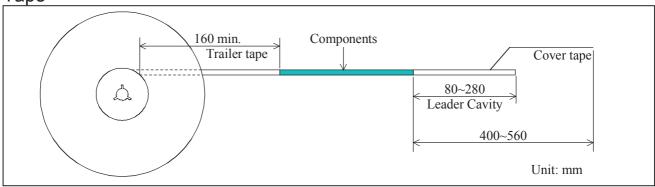


Dimensions of Tape & Reel unit: mm

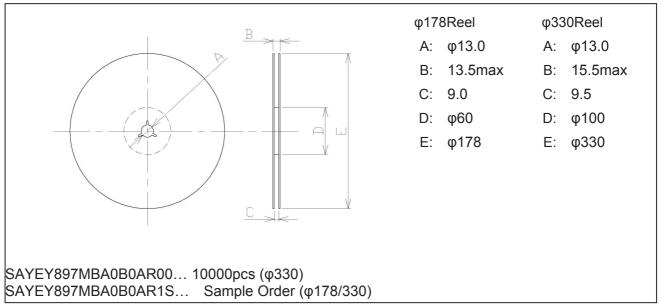
Carrier Tape



Таре



Reel





Marking Code

Table A: Month Code

2013	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec
2017 2021	A	В	С	D	E	F	G	Н	J	к	L	M
2014	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec
2018 2022	N	Ρ	Q	R	S	Т	U	v	W	х	Y	Z
2015	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec
2019 2023	а	b	īC	d	e	f	g	h	j	k	l	m
2016	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec
2020 2024	n	P	q	r	4	t	u	U	ω	æ	y	8

Table B: Date Code

date	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
code	А	В	С	D	E	F	G	Н	J	K	
date	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	
code	L	М	Ν	Р	Q	R	S	Т	U	V	
date	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31st
code	W	Х	Y	Z	а	b	С	d	е	f	g

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 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 specified in this specification.

Please note that the only warranty that we provide regarding the products 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 in any application listed below which requires especially high reliability for the prevention of such defect as may directly cause damage to the third party's life, body or property. You acknowledge and agree that, if you use our products in such applications, we will not be responsible for any failure to meet such requirements.

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 SUCH APPLICATIONS.



Important Notice (2/2)

- Aircraft equipment.
- Aerospace equipment
- Undersea equipment.
- Power plant control equipment Medical equipment.
- Transportation equipment (vehicles, trains, ships, elevator, etc.).
- Traffic signal equipment.
- Disaster prevention / crime prevention equipment.
- Burning / explosion control equipment
- Application of similar complexity and/ or reliability requirements to the applications listed in the above.

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.