

Datasheet of SAW Device

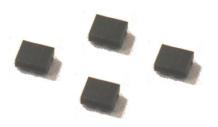
SAW Duplexer

for Band8 / Balanced / LR /1814

Murata PN: SAYEY897MCA0B0A

Feature

- > Smallest size
- ➤ Low I.L.
- > 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 No.	Date	Description
SAYEY897MCA0B0A_rev. A	Apr-04-2014	■ Initial Release
SAYEY897MCA0B0A_rev. B	May-12-2014	■ Updated specification
SAYEY897MCA0B0A_rev. C	Jun-05-2014	■ Updated for MP

Operating temperature : -20 to +85 deg.C
 Storage temperature : -40 to +85 deg.C
 Input Power : +29 dBm 5000 h 55 deg.C
 D.C. Volatage between the terminals : 3V (25+/-2 deg.C)

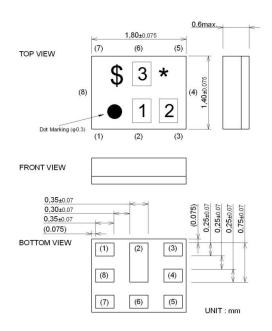
Minimum Resistance betweem the terminals
 RoHS compliance
 Yes



Package Dimensions & Recommended Land Pattern

unit: mm

Dimensions



Marking: Laser Printing

* : Month code(Refer to the table A)

\$: Date code(Refer to the table B)

1 · 6

2 : Y

3 : A

Terminal Number

(6): ANT.

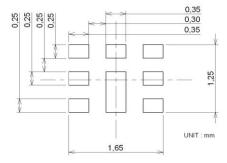
(3):TX

(1)(8):RX

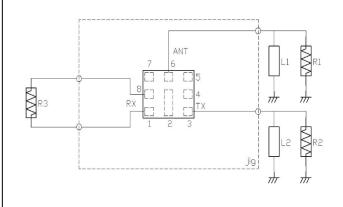
Others: GND.

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

Land Pattern



Measurement Circuit (Top View)



R1:50 ohm	L1:9.1 nH(Ideal inductor)
R2:50 ohm	L2 : 24 nH(Ideal inductor)
R3:100 ohm	



Electrical Characteristic $\langle TX \rightarrow ANT. \rangle$

Matching Impedance (nominal)

- : ANT. Port : 50 ohm // 9.1 nH(Ideal inductor), 9.1 nH(LQP0603TN9N1, Reference)

- : TX Port : 50 ohm // 24 nH(Ideal inductor)

- : RX Port : 100 ohm

T				racteris		I Init	Note			
1.	$X \to ANT$.				min.	typ.	max.	Unit	Note	
Center Frequency	1				111111.	897.5	max.	MHz	1	
Insertion Loss	880.	to	915.	MHz		2.1	3.0	dB		
miscition Eoss	880.25		914.75	MHz		2.1	3.0	dB		
	882.5	to	912.5	MHz		1.7	2.2	dB_{INT}	Any 4.5MHz	
Ripple Deviation	880.	to	915.	MHz		1.3	2.3	dB	THI THE THE	
VSWR	880.	to	915.	MHz		1.6	2.0	-	TX	
, , , , , , , , , , , , , , , , , , ,	880.	to	915.	MHz		1.6	2.0		ANT.	
Absolute Attenuation	10.	to	716.	MHz	30	37		dB		
	716.	to	728.	MHz	35	37		dB		
	728.	to	821.	MHz	30	37		dB		
	832.	to	862.	MHz	30	38		dB	B20 TX CA	
	925.	to	960.	MHz	44	55		dB	RX	
	1559.	to	1563.	MHz	33	38		dB	Compass	
		to	1573.37	MHz	33	38		dB	Wideband GPS lower side	
	1573.37		1577.47	MHz	33	38		dB	Regular GPS main lobe	
		to	1585.42	MHz	33	38		dB	Wideband GPS upper side	
	1597.55		1605.89	MHz	33	41		dB	GLONASS	
	1710.	to	1785.	MHz	30	48		dB	B3 TX CA	
	1760.	to	1840.	MHz	38	47		dB	2f	
	1840.	to	1880.	MHz	38	45		dB	21	
	1920.	to	1980.	MHz	30	40		dB	B1 TX CA	
	2110.	to	2170.	MHz	27	41		dB	B1 RX	
	2400.	to	2500.	MHz	32	37		dB	ISM2.4	
	2434.	to	2494.	MHz	32	37		dB	WLAN coexistence	
	2620.	to	2745.	MHz	30	35		dB	3f	
	3520.	to	3660.	MHz	20	31		dB	4f	
	4400.	to	4575.	MHz	20	29		dB	5f	
	4900.	to	5950.	MHz	15	21		dB	ISM 5G, 6f	
	6160.	to	6405.	MHz	15	21		dB	7f	
	7040.	to	7320.	MHz	12	20		dB	8f	
	7920.	to	8235.	MHz	12	17		dB	9f	
	8800.	to	9150.	MHz	12	18		dB	10f	
	9680.	to	10065.	MHz	12	18		dB	11f	
	10560.	to	10980.	MHz	7	14		dB	12f	
	11440.	to	11895.	MHz	5	11		dB	13f	
	12320.	to	12750.	MHz	5	10		dB	14f	
	12320.	10	12750.	WIIIZ		10		ub	1-11	
									<u> </u>	
									<u> </u>	
									1	
									<u> </u>	
									1	
	1					l	ı	I		

^{*} Typical value at 25±2deg.C



Electrical Characteristic < ANT.→RX. >

Matching Impedance (nominal)

- : ANT. Port : 50 ohm // 9.1 nH(Ideal inductor), 9.1 nH(LQP0603TN9N1, Reference)

- : TX Port : 50 ohm // 24 nH(Ideal inductor)

- : RX Port : 100 ohm

A				racteris to +85 d		Unit	Note		
	$NT. \rightarrow RX$				min.	typ.	max.	Cint	1,000
Center Frequency	1					942.5		MHz	
Insertion Loss	925.	to	960.	MHz		2.4	3.8	dB	
	925.25		959.75	MHz		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		1.1	3.0	dB	
VSWR	925.	to	960.	MHz		1.9	2.3		RX
	925.	to	960.	MHz		1.9	2.3		ANT.
Amplitude Balance	925.	to	960.	MHz	-1.0	0.2	1.0	dB	
Phase Balance	925.	to	960.	MHz	170	184	190	deg.	
Absolute Attenuation	0.2	to	880.	MHz	45	66		dB	
			45.	MHz	50	114		dB	RX-TX
	835.	to	870.	MHz	40	66		dB	2TX-RX
	880.	to	915.	MHz	45	56		dB	TX rejection
	902.5	to	910.	MHz	30	63		dB	(RX+TX)/2
	980.	to	1045.	MHz	25	31		dB	
	1427.	to	1448.	MHz	40	68		dB	B11 TX CA
	1710.	to	1785.	MHz	40	65		dB	B3 TX CA
	1805.	to	1920.	MHz	40	65		dB	RX+TX and 2f
	1920.	to	1980.	MHz	40	65		dB	B1 TX CA
	1980.	to	13025.	MHz	15	45		dB	
	2400.	to	2500.	MHz	40	63		dB	ISM2.4
	2500.	to	2570.	MHz	40	63		dB	B7 TX CA
	2685.	to	2790.	MHz	40	63		dB	RX+2TX
	2775.	to	2880.	MHz	40	62		dB	3f
	2880.	to	3700.	MHz	35	60		dB	
	3700.	to	3840.	MHz	40	60		dB	4f
	4625.	to	4800.	MHz	40	57		dB	5f
	4900.	to	5950.	MHz	40	55		dB	ISM 5G
	6475.	to	6720.	MHz	20	54		dB	7f
	7400.	to	7680.	MHz	15	47		dB	8f
	8325.	to	8640.	MHz	15	43		dB	9f
	9250.	to	9600.	MHz	15	44		dB	10f
	10175.	to	10560.	MHz	15	48		dB	11f
	11100.	to	11520.	MHz	15	49		dB	12f
	12025.	to	12480.	MHz	15	38		dB	13f
						 			<u> </u>
						-			
						 			<u> </u>
						ļ			
						-			
	-					-			
						-			
						-			
							1		

^{*} Typical value at 25±2deg.C



Electrical Characteristic $\langle TX \rightarrow RX. \rangle$

Matching Impedance (nominal)

- : ANT. Port : 50 ohm // 9.1 nH(Ideal inductor), 9.1 nH(LQP0603TN9N1, Reference)

- : TX Port : 50 ohm // 24 nH(Ideal inductor)

- : RX Port : 100 ohm

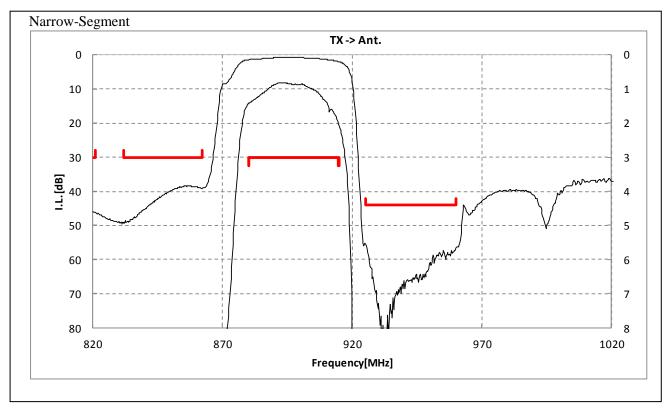
$TX \rightarrow RX$					Cha	racteris to +85 d	stics	Unit	Note
1	$\Lambda \rightarrow \Lambda \Lambda$				min.	typ.	max.	Omi	Note
Isolation						71			
Differential Mode	882.5 t		912.5	MHz	55	60		dB _{INT}	Any 4.5MHz, TX
	927.5 t		957.5	MHz	55	61		dB_{INT}	Any 4.5MHz, RX
Common Mode	880. t		915.	MHz	50	53		dB	TX
	882.5 t	0	912.5	MHz	50	53		dB _{INT}	Any 4.5MHz, TX
	-								
							_		
	ļ								
									
	<u> </u>								
	<u> </u>								* T

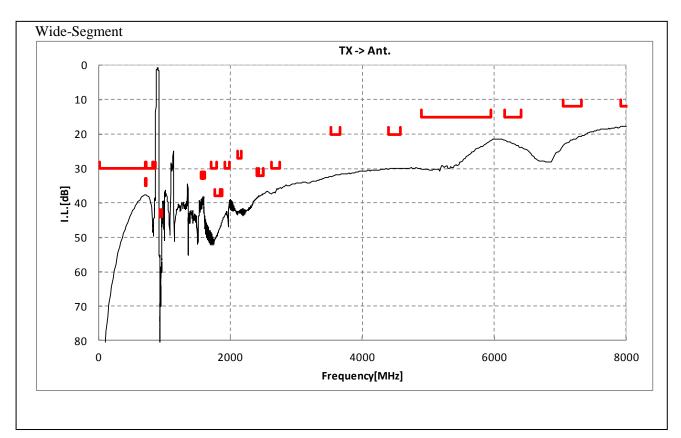
^{*} Typical value at 25±2deg.C



Electrical Characteristic

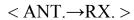
< TX \rightarrow ANT. >

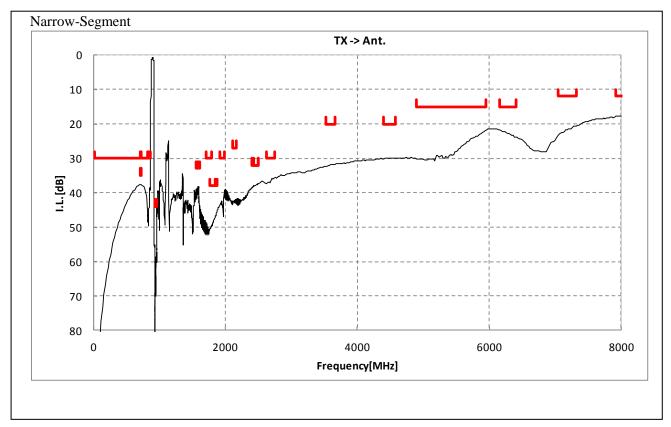


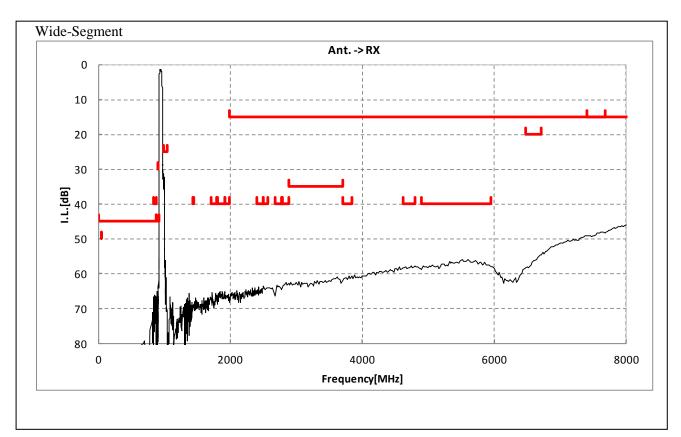




Electrical Characteristic

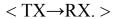


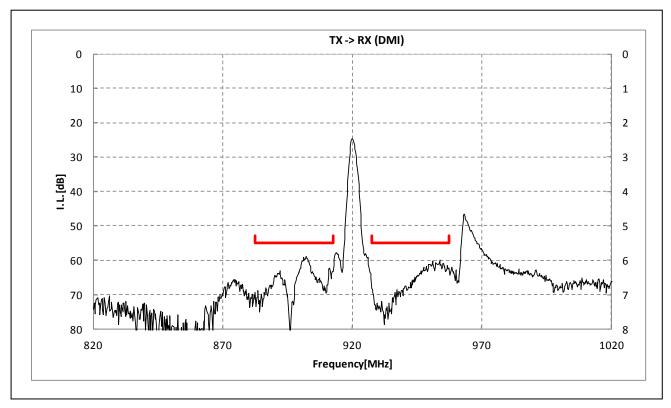


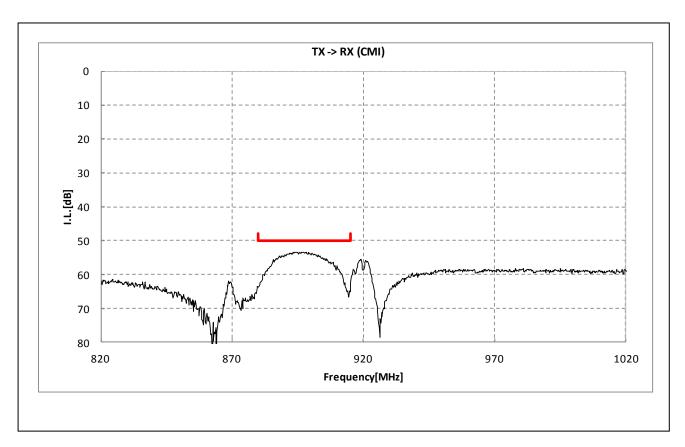




Electrical Characteristic



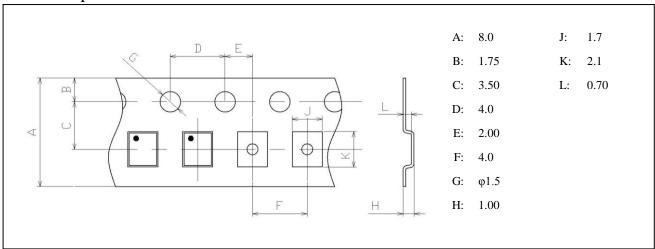




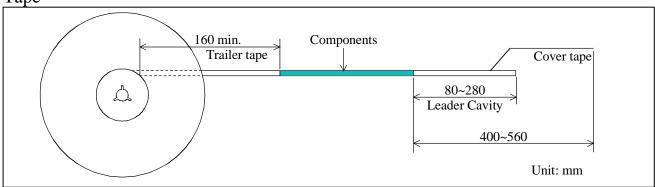


Dimensions of Tape & Reel unit: mm

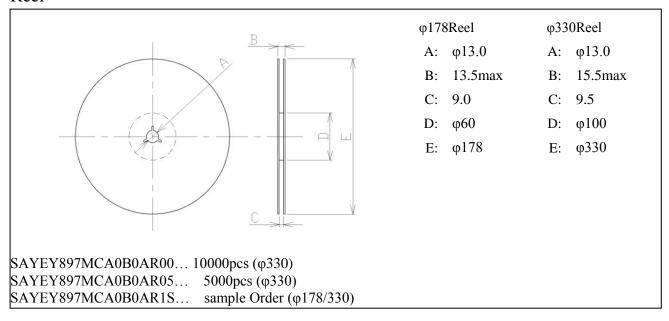
Carrier Tape



Tape



Reel





Marking Code

TD . 1. 1		N /	. 41.	α 1.
Tanı	e A:	JVI01	ntn	Code

2009	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2013 2017	Α	В	С	D	Е	F	G	Н	J	K	L	М
2010	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2014 2018	N	Р	Ø	R	S	Т	U	٧	W	X	Υ	Z
2011	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2015 2019	а	b	10	d	Φ	f	g	h	j	k	Q	m
2012	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2016 2020	n	p	G	r	1	t	u	V	W	×	y	3

Table B: Date Code

date	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
code	Α	В	C	D	Е	F	G	Ι	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	Υ	Z	а	b	10	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 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.



Important Notice (2/2)

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.

- 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.

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.