

Datasheet of SAW Device

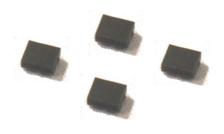
SAW Duplexer

for Band28B / Unbalanced / LR /1814

Murata PN: SAYEY733MBC0F0A

Feature

- > LTE-A
- High Isolation
- For Envelope Tracking



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



General Information

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

- Input Power : +30 dBm 5000 h +50 deg.C

D.C. Volatage between the terminals : 3V (25+/-2 deg.C)
 Minimum Resistance between the terminals : 10M ohm
 RoHS compliance : Yes

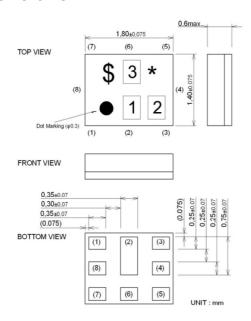
- ESD (ElectroStatic Discharge) sensitive device



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)

1:7

2 : E

3 : A

Terminal Number

(6): Ant

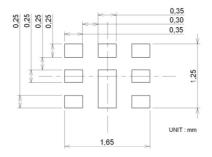
(3):TX

(1): RX

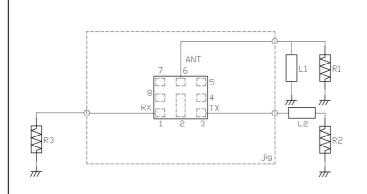
Others: GND

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. >

T				Characteristics (-20 to +85 deg.C)			Unit	Note	
					min.	typ.*	max.		
Center Frequency						733		MHz	
Insertion Loss	718.25		747.75			2.3	2.7	dB	
Dinale Deviation		to	745.5	MHz		1.7	2.3	dB _{INT}	Any 4.5MHz
Ripple Deviation VSWR		to	748. 748.	MHz MHz		0.9 1.8	1.5 2.0	dB	Any 5MHz
VSVVR		to	748.	MHz		1.6	2.0		TX ANT.
Absolute Attenuation		to to	698.	MHz	30	35	2.0	dB	ANT.
Absolute Attendation		to	710.	MHz	19	35		dB	DTV Rejection
		to	710.	MHz	30	35		dB	+23 to +27deg.C
		to	710.	MHz	30	40		dB	Average
		to	773.	MHz	15	32		dB	
	773.	to	803.	MHz	44	49		dB	RX
		to	894.	MHz	30	37		dB	
		to	1250.	MHz	35	39		dB	GPS L2
		to	1510.	MHz	32	38		dB	2f / B21 RX
	1559.	to	1563.	MHz	32	38		dB	Compass
	1565.42	to	1573.37	MHz	32	38		dB	Wideband GPS lower side
	1573.37	to	1577.47	MHz	32	38 38		dB	Regular GPS
	1577.47 1597.55	(O	1585.42 1605.89	MHz MHz	32 32	38		dB dB	Wideband GPS upper side GLONASS
			1880.	MHz	31	40		dB	DCS
		<u>to</u> to	1995.	MHz	31	41		dB	B2 / B25
		to	2025.	MHz	31	42		dB	B34
		to	2244.	MHz	28	35		dB	3f
		to	2484.	MHz	21	27		dB	ISM 2.4
		to	2620.	MHz	17	23		dB	B38
		to	2992.	MHz	15	18		dB	4f
	4900.	to	5950.	MHz	20	29		dB	ISM 5G
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^{*} Typical value at 25±2deg.C



Electrical Characteristic < ANT.→RX >

775.5 to 800.5 MHz 1.8 2.1 dB _{INT} Any 4.5MHz Ripple Deviation 773. to 803. MHz 0.3 1.5 dB Any 5MHz	Electrical Characteristic (7/14).										
ANT. → RX Center Frequency 788 MHz Insertion Loss 773.25 to 800.5 MHz 1.8 2.1 dB _{INT} Any 4.5MHz Ripple Deviation 773. to 803. MHz 1.8 2.1 dB _{INT} Any 5MHz ANT. → RX 773. to 803. MHz 1.8 2.1 dB _{INT} Any 5MHz ANT. → RX 773. to 803. MHz 1.7 2.0 ANT. Absolute Attenuation 10. to 699. MHz 38 60 dB Absolute Attenuation 45. to 65. MHz 48 100 dB RX TX Absolute Attenuation 10. to 6000. MHz 48 56 dB Block-A TX 718. to 748. MHz 50 58 dB TX Alt. to 6000. MHz 12 20 dB OoB Rejection Absolute Attenuation 6957. to 7227. MHz 24 39 dB 9f Absolute Attenuation 6963. MHz 10 20 35 dB 10f Absolute Attenuation 6963. MHz 10 20 dB 11f Absolute Attenuation 10. to 6000. MHz 10. dB 12f Absolute Attenuation 10. to 6000. MHz 10. dB 13f Absolute Attenuation 10. to 6000. MHz 10. dB 13f Absolute Attenuation 10. to 6000. MHz 10. dB 13f Absolute Attenuation 10. to 6000. MHz 10. dB 13f Absolute Attenuation 10. to 10439. MHz 10 19 dB 14f Absolute Attenuation 10. to 10439. MHz 10 19 dB 14f Absolute Attenuation 10. to 10439. MHz 10 19 dB 14f Absolute Attenuation 10. to 10439. MHz 10. dB 15f Absolute Attenuation 10. to 10439. MHz 10. dB 15f Absolute Attenuation 10. to 1045. MHz 10. dB 15f Absolute Attenuation 10. to 1045. MHz 10. dB 15f Absolute Attenuation 10. to 1045. MHz 10. dB 15f Absolute Attenuation 10. to 1045. MHz 10. dB 15f Absolute Attenuation 10. to 1045. MHz 10. dB 15f Absolute Attenuation 10. to 1045. MHz 10. dB 15f Absolute Attenuation 10. to 1045. MHz 10. dB 15f Absolute Attenuation 10. to 1045. MHz 10. dB 15f Absolute Attenuation 10. to 1045. MHz 10. dB 10. to 1045				Cha	racteri	stics					
Min. typ.* max.	Al	$NT. \rightarrow RX$		(-201	Office			Note			
Transfer				min.	typ.*	max.					
Transport Tran	Center Frequency						MHz				
T75.5 T0 800.5 MHz	Insertion Loss	773.25 to 802.75	MHz			2.4	dB				
Ripple Deviation					1.8	2.1	dB _{INT}	Any 4.5MHz			
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. to 6000. MHz 12 20 dB OoB Rejection 6957. to 7227. MHz 24 39 dB 9f 7730. to 8030. MHz 20 35 dB 10f 8503. 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. to 12045. MHz 9.0 21.0 dB 15f	Ripple Deviation	773. to 803.					dB	Any 5MHz			
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10822. to 11242. MHz 10 19 dB 14f 11595. to 12045. MHz 9.0 21.0 dB 15f											
11595. to 12045. MHz 9.0 21.0 dB 15f											
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^{*} Typical value at 25±2deg.C



Electrical Characteristic < TX→RX. >

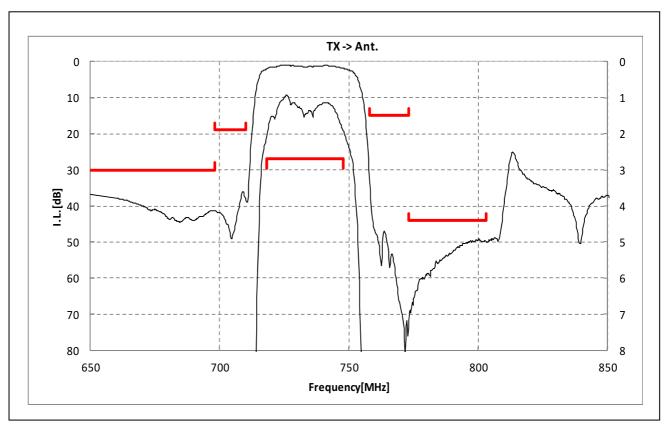
Electrical Orial									,		
					Cha	racteria to +85 d	stics				
T)	$X \rightarrow RX$							Unit	Note		
					min.	typ.*	max				
Isolation						71:					
Isolation	718.25	to	747.75	МНэ	58	61		dB	TX		
	710.25	to.	747.75	MHz	60	62					
1	773.25	10		N/L-	55	60		dB _{INT}	Any 4.5MHz, TX RX		
	113.25	10	802.75								
	775.5	to	800.5	MHz	55	61		dB _{INT}	Any 4.5MHz, RX		
1		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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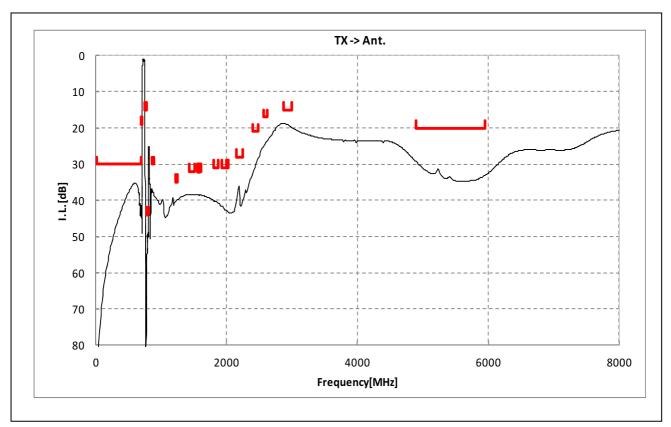
^{*} Typical value at 25±2deg.C



Electrical Characteristic

< TX→ANT. >

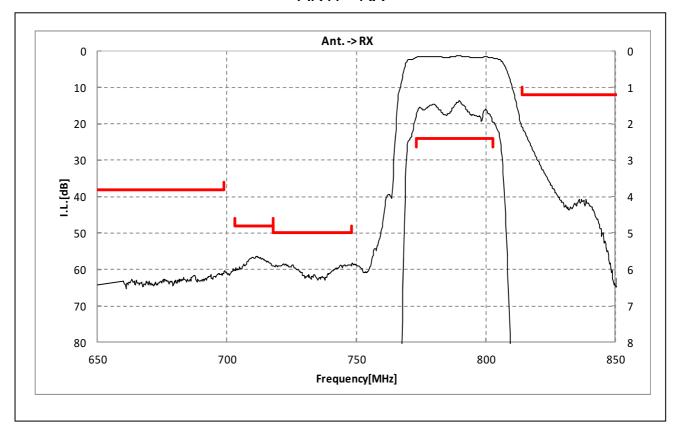


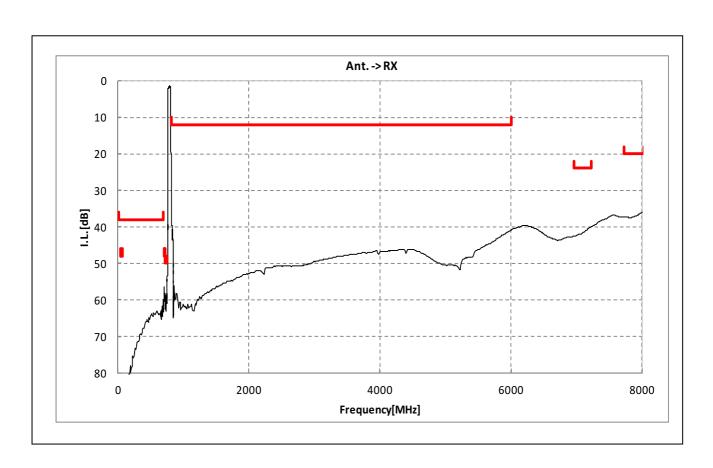




Electrical Characteristic

< ANT.→RX >

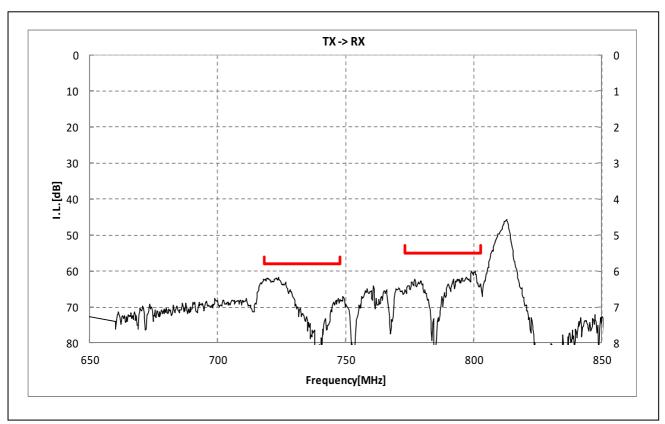


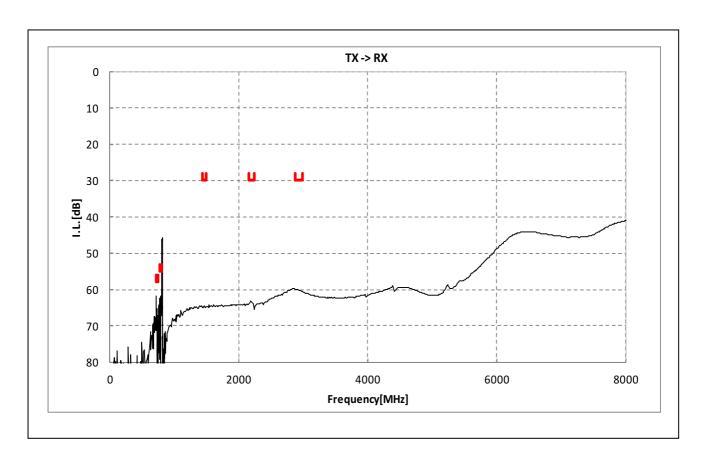




Electrical Characteristic

< TX→RX. >

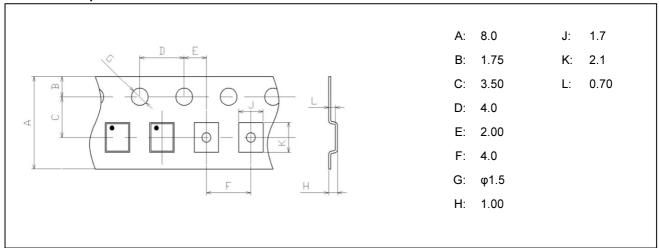




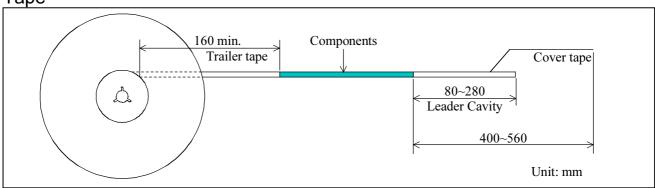


Dimensions of Tape & Reel unit: mm

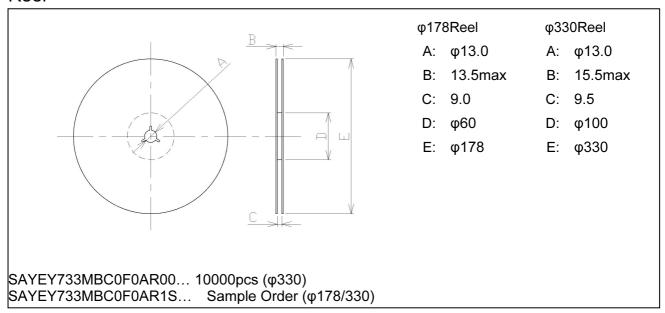
Carrier Tape



Tape



Reel





Marking Code

Table A: Month Code

2013	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2017 2021	Α	В	С	D	Е	F	G	Ι	٦	K	١	М
2014	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2018 2022	N	Р	Ø	R	S	Т	U	٧	W	Х	Y	Z
2015	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2019 2023	а	ь	10	d	е	f	9,0	h	j	k	Q	m
2016	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2020 2024	n	P	G	r	4	t	a	V	W	x	y	8

Table B: Date Code

date code	21st W	22nd X	23rd	24th	25th a	26th b	27th	28th	29th e	30th	31st g
code	L	М	N	Р	Q	R	S	T	U	V	
date	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	
code	Α	В	С	D	Е	F	G	Н	J	K	
date	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	

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.

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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.

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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.

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In particular we disclaim liability for damages caused by

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 - ·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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