

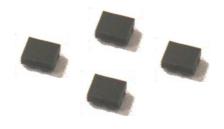
Datasheet of SAW Device

SAW Duplexer

for Band20 / Unbalanced / LR /1814

Murata PN: SAYEY806MBA0F0A

■ Feature > LTE-A



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 F



Operating temperature
 Storage temperature
 Maximum Input Power Level for short term(*)
 '-20 to +85 deg.C
 +85 deg.C
 +85 deg.C
 +29.0dBm at CW tone

: +28.7dBm at LTE modulation(**)

- Power Capacity : +29.0dBm +50deg.C 5000h at CW tone

- D.C. Volatage between the terminals : 3V (25+/-2 deg.C)

Minimum Resistance between the terminals : 10M ohm
 RoHS compliance : Yes

(*) -30 to 85 deg.C

(**) CBW 5MHz, RB(24, 1), QPSK

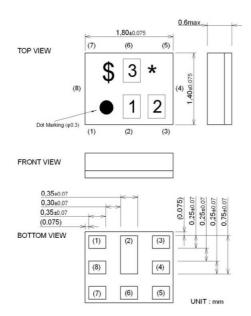
The input power shall be applied to Tx-port within own Tx passband frequency range.



Package Dimensions & Recommended Land Pattern

unit: mm

Dimensions



Marking: Laser Printing

*: Month code

\$: Date code

1:6

2:H

3 : A

Terminal Number

(6): Ant

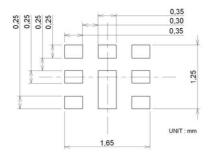
(3):TX

(1): RX

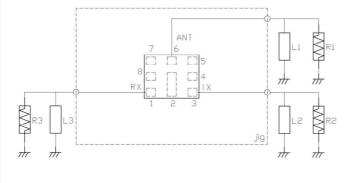
Others: GND

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

Land Pattern



Measurement Circuit (Top Thru View)



R1 : 50 ohm	L1 :9nH(Ideal inductor)
	:9.1nH(LQP03TN9N1)
	<reference></reference>
R2 : 50 ohm	L2 :25nH(Ideal inductor)
R3 : 50 ohm	L3 :7nH(Ideal inductor)



Electrical Characteristic < TX→ANT. >

$TX \! o \! ANT.$					Characteristics (-20 to +85 deg.C)			Unit	Note
			min.	typ.*	max.				
Center Frequency	200.05		224 75			847	0.5	MHz	
Insertion Loss	832.25		861.75			1.8	2.5	dB	A 4. FMI I-
Pinnla Doviction	834.5 832.	to	859.5 862.	MHz MHz		1.5 0.7	2.0 1.8	dB _{INT}	Any 4.5MHz
Ripple Deviation VSWR	832.	to to	862.	MHz		1.7	2.0	uБ	ANT.
VSVIC	832.	to	862.	MHz		1.6	2.0		TX
Absolute Attenuation	10.	to	771.	MHz	35	39	2.0	dB	
	771.	to	791.	MHz	40	43		dB	
		to	820.75	MHz	45	54		dB	RX
	793.5	to	818.5	MHz	45	54		dB	
	821.	to	827.	MHz	2.4	7.2		dB	
	925.	to	960.	MHz	38	41		dB	B8 RX
	1559.	to	1563.	MHz	43	46		dB	COMPASS
	1565.42	to	1573.37	MHz	40	46		dB	Lower GPS
	1573.37		1577.47	MHz	43	46		dB	Regular GPS
	1577.47	to	1585.42	MHz	40	46		dB	Upper GPS
	1597.55 1664.		1605.89 1724.	MHz MHz	43 25	46 47		dB dB	GLONASS 2f
	1805.	to to	1880.	MHz	30	50		dВ	B3 TX
		to	1919.6	MHz	30	51		dB	
	2110.	to	2170.	MHz	30	56		dB	B1 TX
	2400.	to	2500.	MHz	45	56		dB	ISM2.4
	2496.	to	2586.	MHz	40	48		dB	3f
	2570.	to	2620.	MHz	40	48		dB	B38
	2620.	to	2690.	MHz	30	51		dB	B7 TX
	3328.	to	3448.	MHz	20	47		dB	4f
	4160.	to	4310.	MHz	20	43		dB	5f
	4900.	to	5950.	MHz	20	40		dB	ISM 5G, 6f
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^{*} Typical value at 25±2deg.C



Electrical Characteristic < ANT.→RX >

Licetifical Offaractoristic ANT. ANT.									
			Characteristics						
ANT. o RX				(-20 to +85 deg.C)		Unit	Note		
			min.	typ.*	max.				
Center Frequency					806		MHz		
Insertion Loss	791.25 to	820.75	MHz		2.5	3.6	dB		
	793.5 to		MHz		1.9	2.5	dB _{INT}	Any 4.5MHz	
Ripple Deviation	791. to		MHz		1.5	3.0	dB		
VSWR	791. to		MHz		1.7	2.0		ANT.	
	791. to		MHz		1.7	2.0		RX	
Absolute Attenuation	10. to		MHz	35	42		dB		
		41.	MHz	50	125		dB	TX - RX	
	760. tc	770.	MHz	10	43		dB		
	832.25 tc	861.75	MHz	45	57		dB	TX	
	880. tc		MHz	40	50		dB	B8 TX	
	1710. tc) 1785.	MHz	40	56		dB	B3 TX	
	2373. to		MHz	40	62		dB	3f	
	2400. to	2500.	MHz	40	62		dB	ISM2.4	
	2500. to	2570.	MHz	40	65		dB	B7 TX	
	4900. to		MHz	40	48		dB	ISM 5G	
	6328. to		MHz	25	54		dB	8f	
	7119. to		MHz	30	48		dB	9f	
	7910. to		MHz	20	43		dB	10f	
	8701. to		MHz	15	43		dB	11f	
	9492. to		MHz	15	43		dB	12f	
	10283. to		MHz	15	43		dB	13f	
	11074. to		MHz	15	43		dB	14f	
		12315.	MHz	10	43		dB	15f	
	12656. to	12750.	MHz	10	43		dB	16f	
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^{*} Typical value at 25±2deg.C



Electrical Characteristic < TX→RX. >

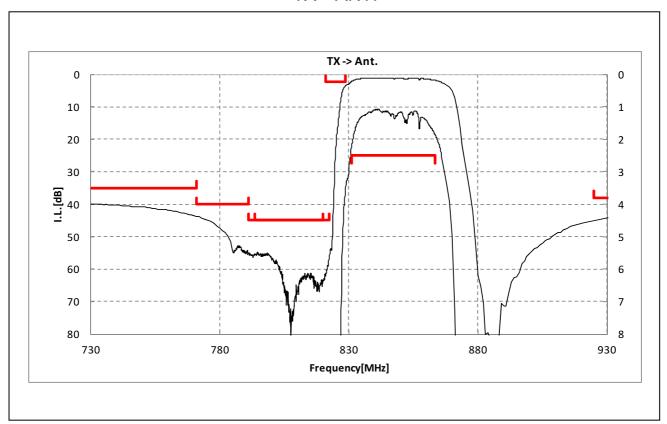
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$TX \rightarrow RX$			Characteristics (-20 to +85 deg.C)			Unit	Note	
				typ.*	max.	Orne	Note	
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Isolation	832.25 to	861.75	MHz	53	57		dB	TX
	834.5 to	859.5	MHz	57	58		dB _{INT}	TX, Any 4.5MHz
	791.25 to	820.75	MHz	53	56		dB	IRX
	793.5 to	818.5	MHz	53	56		dB _{INT}	RX, Any 4.5MHz
	1574. to	1577.	MHz	40	58		dB	
	1664. to	1724.	MHz	20	57		dB	
	2496. to	2586.	MHz	20	54		dB	
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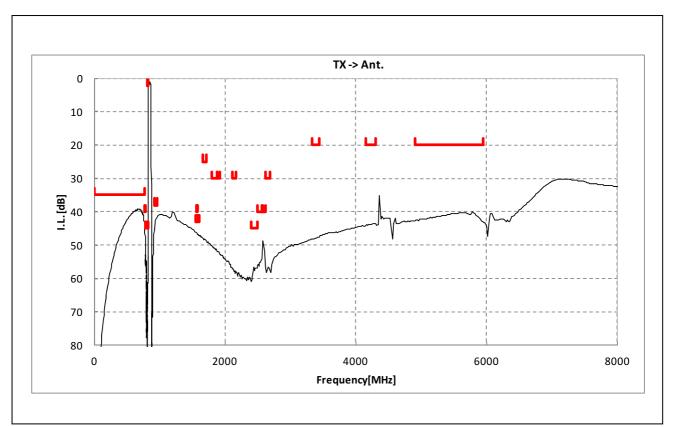
^{*} Typical value at 25±2deg.C



Electrical Characteristic

< TX→ANT. >

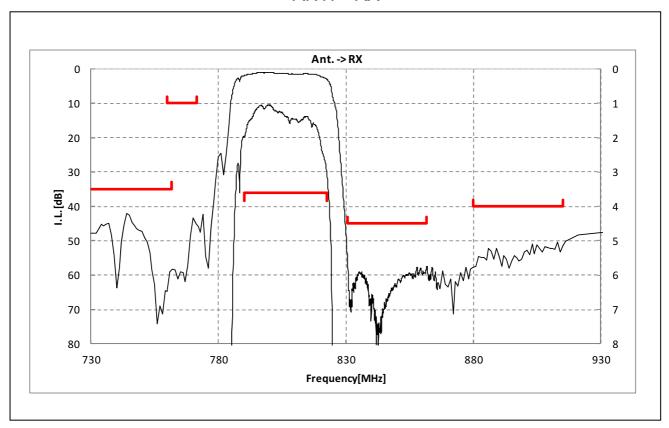


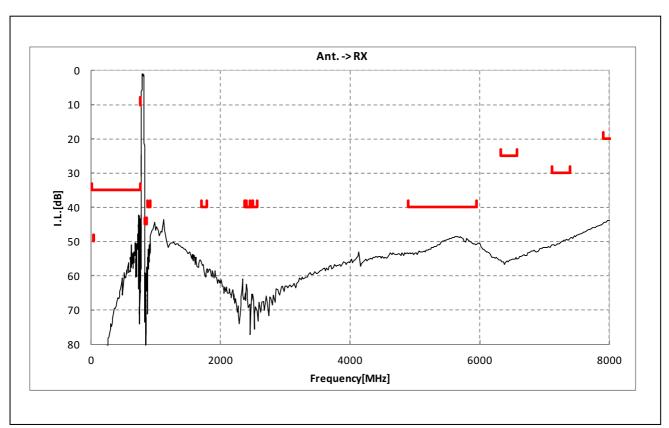




Electrical Characteristic

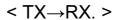
< ANT.→RX >

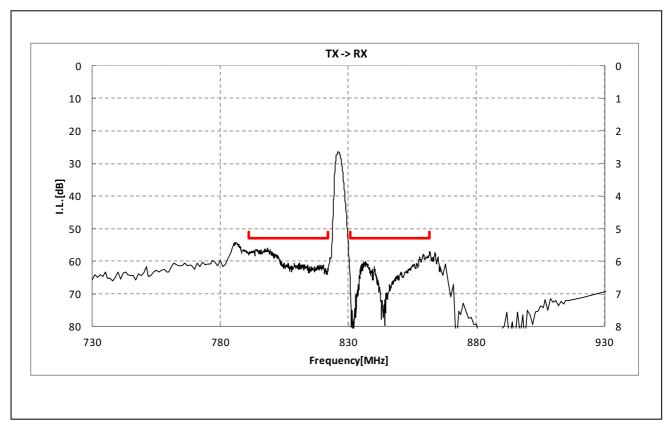


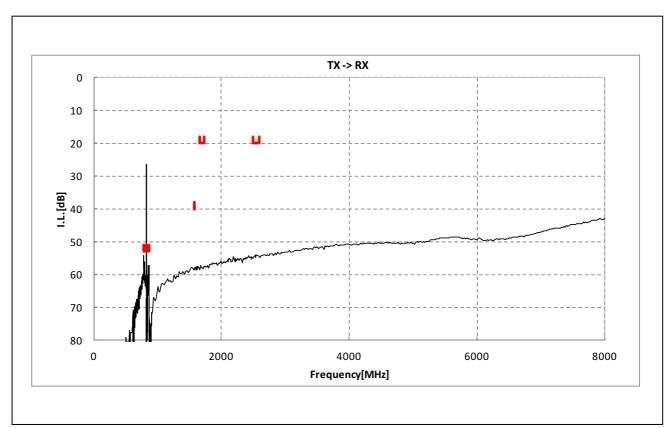




Electrical Characteristic



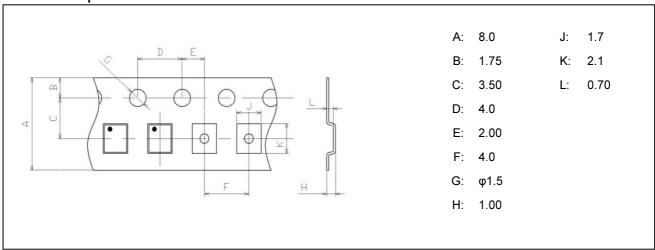




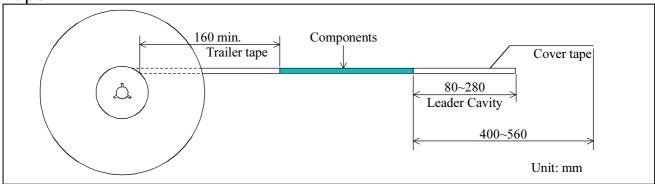


Dimensions of Tape & Reel unit: mm

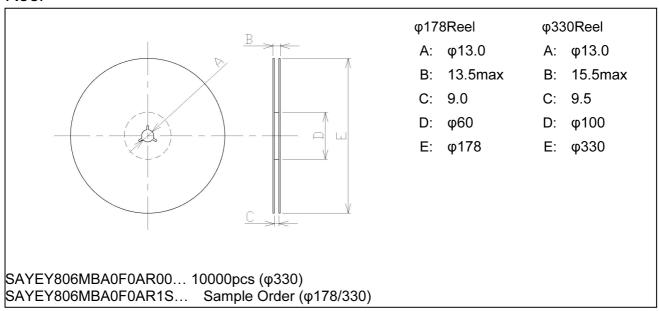
Carrier Tape



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.

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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)

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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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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.

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In particular we disclaim liability for damages caused by

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