INNOVATOR IN ELECTRONICS

Datasheet of SAW Device

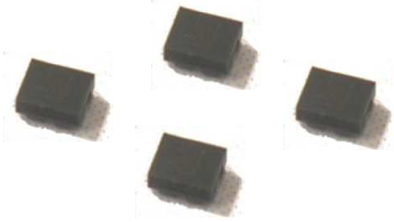
SAW Duplexer

for Band20 / Unbalanced / LR /1814

Murata PN: SAYEY806MBC0F0A

■ Feature

- LTE-A
- 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
G

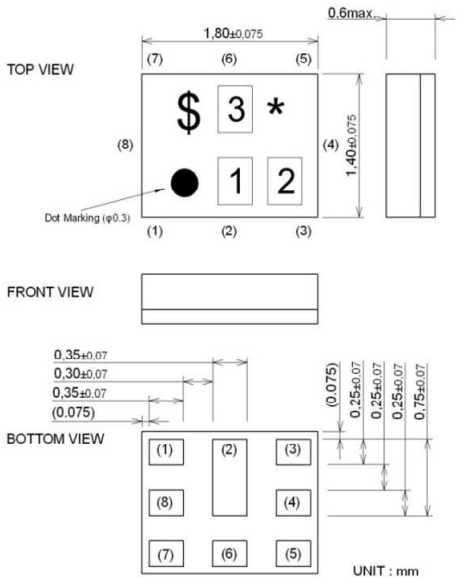
- Operating temperature : -20 to +85 deg.C
- Storage temperature : -40 to +85 deg.C
- Input Power : +29 dBm 5000 h 50 deg.C
- D.C. Volatage between the terminals : 3V (25+/-2 deg.C)
- Minimum Resistance between the terminals : 10M ohm
- RoHS compliance : Yes
- ESD (ElectroStatic Discharge) sensitive device

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

Package Dimensions & Recommended Land Pattern

unit: mm

Dimensions

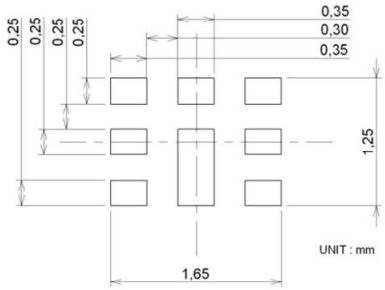


Marking : Laser Printing
* : Month code
$: Date code
1 : 7
2 : J
3 : A

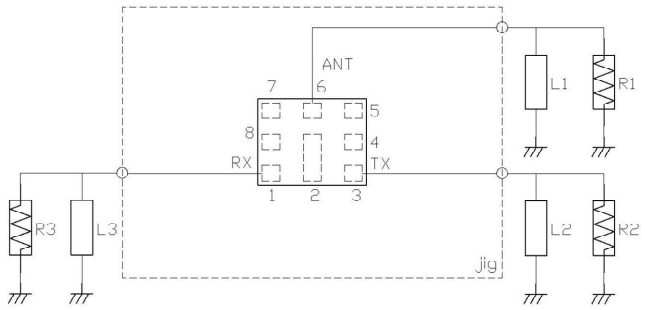
Terminal Number
(6) : Ant
(3) : TX
(1) : RX
Others : GND

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>
R2 : 50 ohm	L2 :20nH(Ideal inductor)
R3 : 50 ohm	L3 :35nH(Ideal inductor)

Electrical Characteristic < TX→ANT. >

TX → ANT.				Characteristics (-20 to +85 deg.C)			Unit	Note
				min.	typ.*	max.		
Center Frequency					847		MHz	
Insertion Loss	832.25	to	861.75 MHz		1.7	2.4	dB	
	834.5	to	859.5 MHz		1.5	2.0	dB_{INT}	Any 4.5MHz
Ripple Deviation	832.	to	862. MHz		0.8	1.8	dB	
VSWR	832.	to	862. MHz		1.3	2.0		ANT.
	832.	to	862. MHz		1.4	2.0		TX
Absolute Attenuation	10.	to	771. MHz	30	36		dB	
	771.	to	791. MHz	40	44		dB	
	791.25	to	820.75 MHz	45	51		dB	RX
	793.5	to	818.5 MHz	45	51		dB	
	821.	to	827. MHz	2.5	5.2		dB	
	925.	to	960. MHz	33	38		dB	B8 RX
	1559.	to	1563. MHz	40	45		dB	COMPASS
	1565.42	to	1573.37 MHz	40	45		dB	Lower GPS
	1573.37	to	1577.47 MHz	40	45		dB	Regular GPS
	1577.47	to	1585.42 MHz	40	45		dB	Upper GPS
	1597.55	to	1605.89 MHz	40	46		dB	GLONASS
	1664.	to	1724. MHz	25	47		dB	2f
	1805.	to	1880. MHz	30	49		dB	B3 TX
	1884.5	to	1919.6 MHz	30	51		dB	
	2110.	to	2170. MHz	30	54		dB	B1 TX
	2400.	to	2500. MHz	45	57		dB	ISM2.4
	2496.	to	2586. MHz	40	50		dB	3f
	2570.	to	2620. MHz	40	50		dB	B38
	2620.	to	2690. MHz	30	58		dB	B7 TX
	3328.	to	3448. MHz	20	52		dB	4f
	4160.	to	4310. MHz	20	50		dB	5f
	4900.	to	5950. MHz	20	32		dB	ISM 5G, 6f

* Typical value at 25±2deg.C

SAYEY806MBC0F0A (Band20 / Unbalanced / LR / 1814)

Electrical Characteristic < ANT.→RX >

ANT. → RX			Characteristics (-20 to +85 deg.C)			Unit	Note
			min.	typ.*	max.		
Center Frequency				806		MHz	
Insertion Loss	791.25 to 820.75	MHz		2.7	3.6	dB	
	793.5 to 818.5	MHz		2.2	3.0	dB_{INT}	Any 4.5MHz
Ripple Deviation	791. to 821.	MHz		1.7	3.0	dB	
VSWR	791. to 821.	MHz		1.8	2.2		ANT.
	791. to 821.	MHz		1.9	2.3		RX
Absolute Attenuation	10. to 760.	MHz	40	45		dB	
	41.	MHz	50	105		dB	TX - RX
	760. to 770.	MHz	10	54		dB	
	832.25 to 861.75	MHz	45	58		dB	TX
	880. to 915.	MHz	40	44		dB	B8 TX
	1710. to 1785.	MHz	40	52		dB	B3 TX
	2373. to 2463.	MHz	40	56		dB	3f
	2400. to 2500.	MHz	40	56		dB	ISM2.4
	2500. to 2570.	MHz	40	66		dB	B7 TX
	4900. to 5950.	MHz	40	46		dB	ISM 5G
	6328. to 6568.	MHz	25	35		dB	8f
	7119. to 7389.	MHz	25	31		dB	9f
	7910. to 8210.	MHz	20	28		dB	10f
	8701. to 9031.	MHz	15	33		dB	11f
	9492. to 9852.	MHz	15	28		dB	12f
	10283. to 10673.	MHz	15	27		dB	13f
	11074. to 11494.	MHz	15	25		dB	14f
	11865. to 12315.	MHz	10	24		dB	15f
	12656. to 12750.	MHz	10	22		dB	16f

* Typical value at 25±2deg.C

SAYEY806MBC0F0A (Band20 / Unbalanced / LR / 1814)

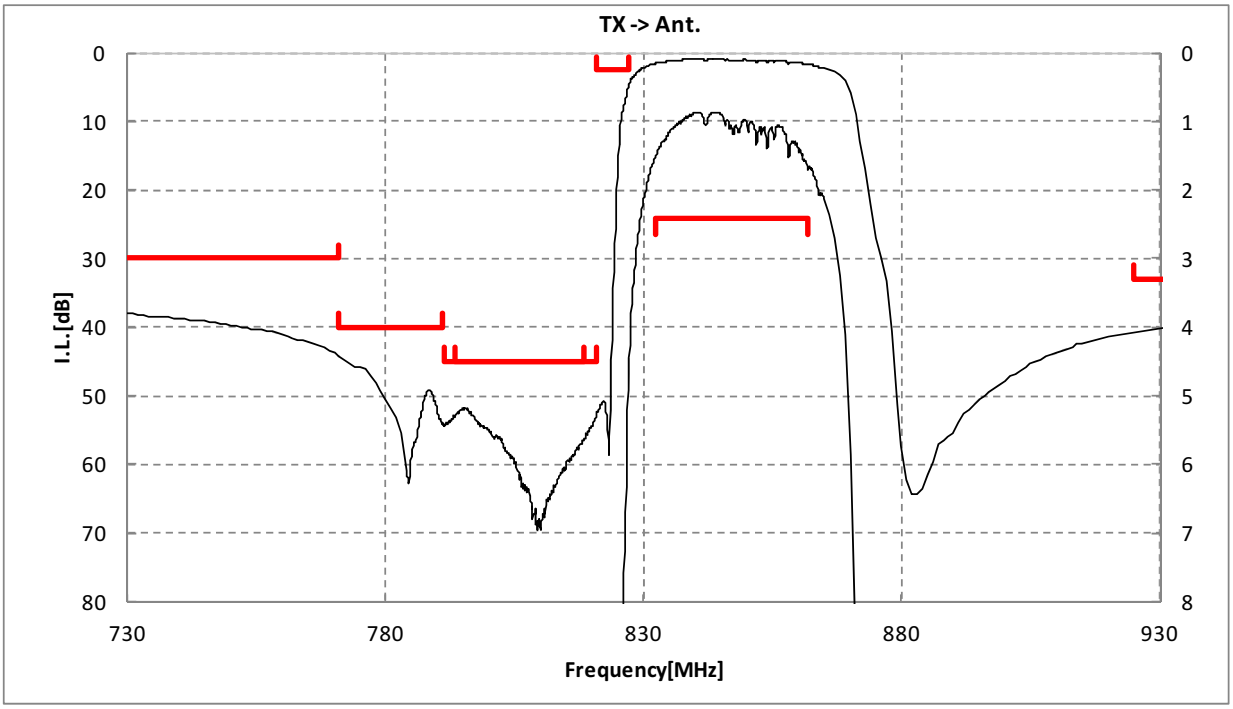
Electrical Characteristic < TX→RX. >

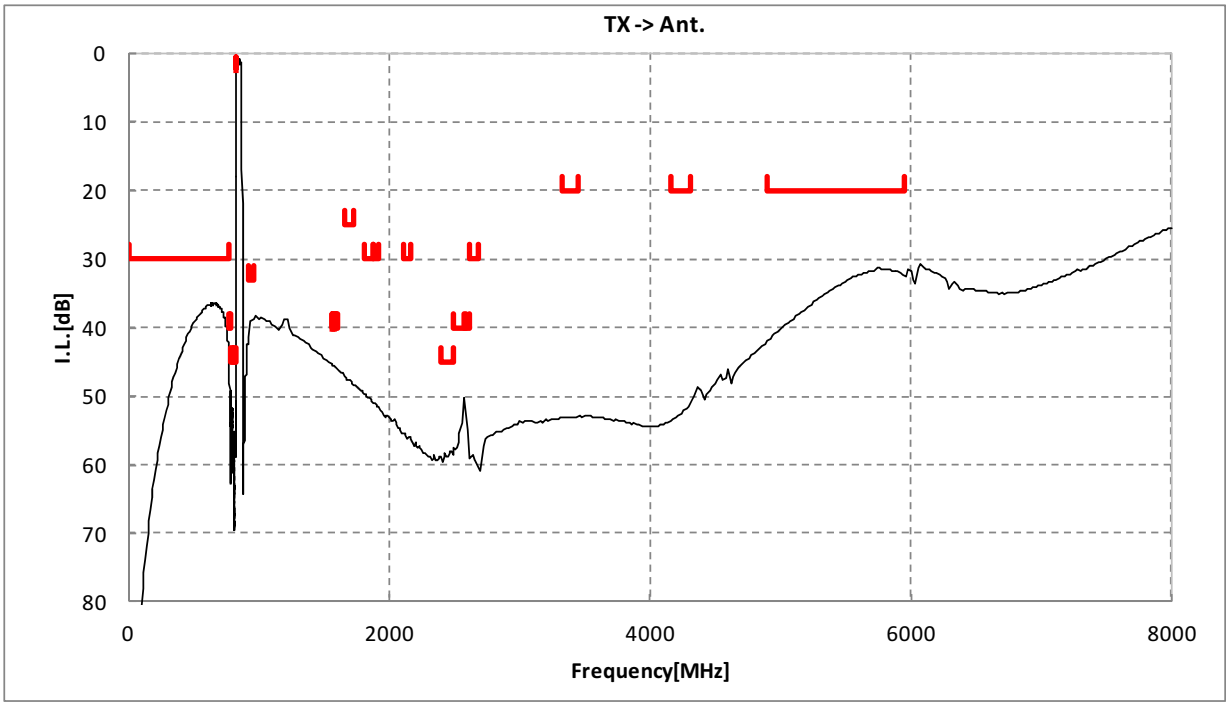
TX → RX				Characteristics (-20 to +85 deg.C)			Unit	Note
				min.	typ.*	max.		
Isolation	834.5	to	859.5 MHz	57	61		dBINT	TX, Any 4.5MHz
	793.5	to	818.5 MHz	53	55		dBINT	RX, Any 4.5MHz

* Typical value at 25±2deg.C

Electrical Characteristic

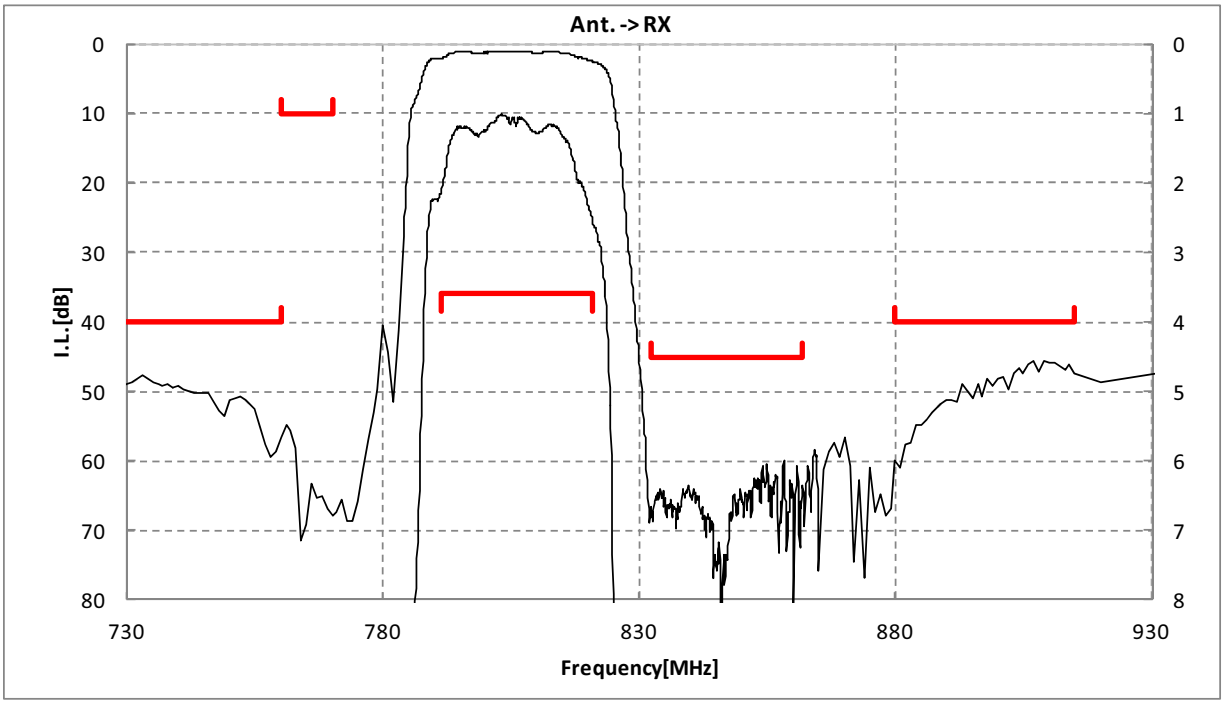
< TX→ANT. >

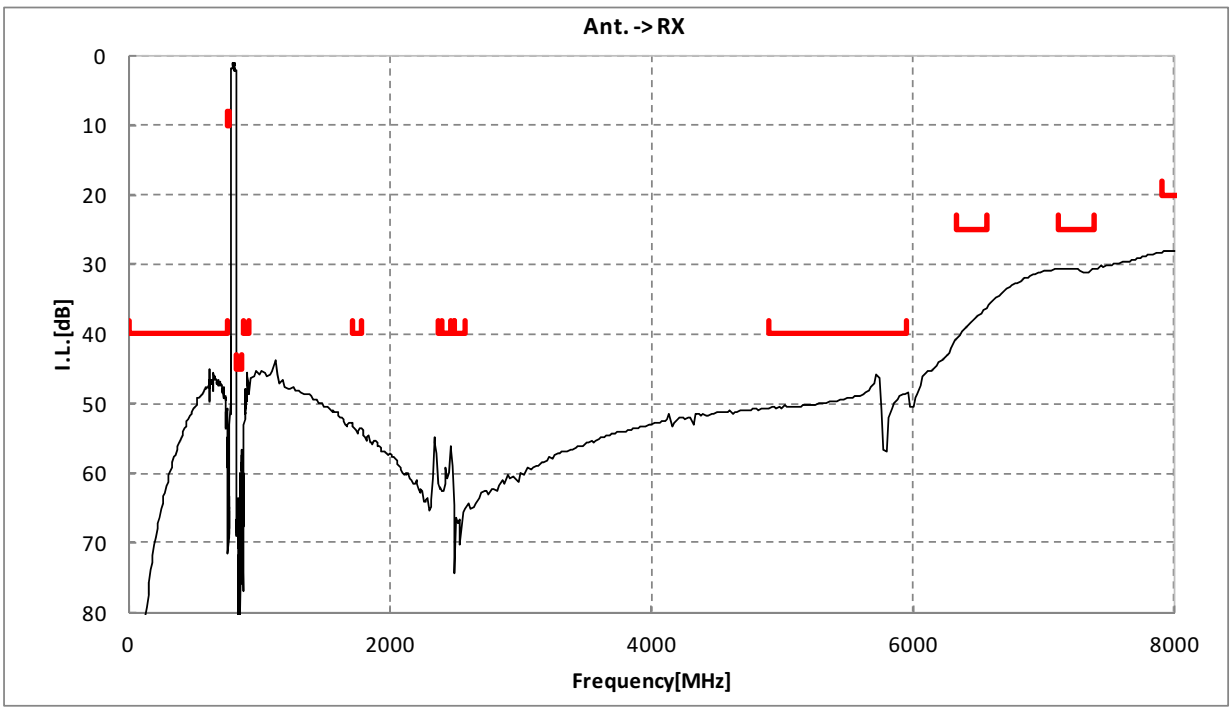




Electrical Characteristic

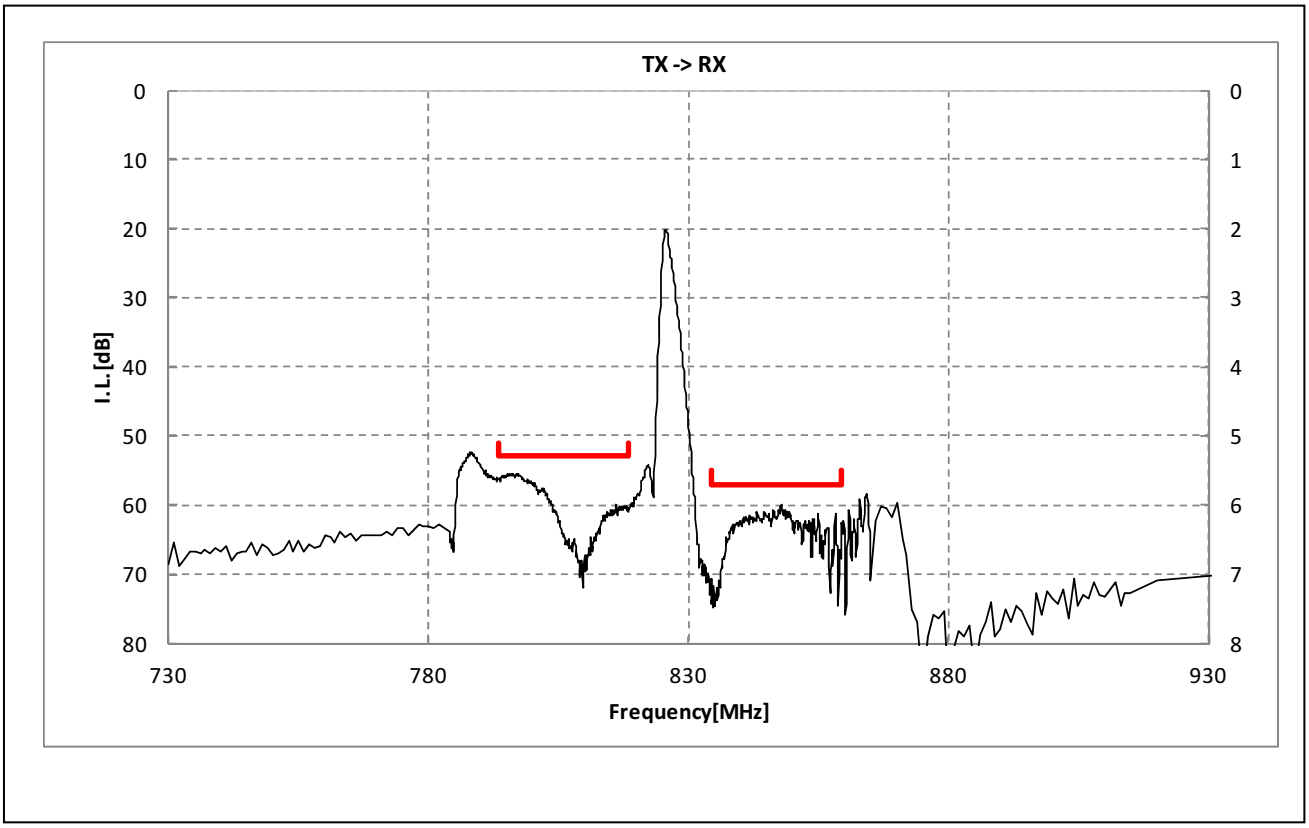
< ANT.→RX >

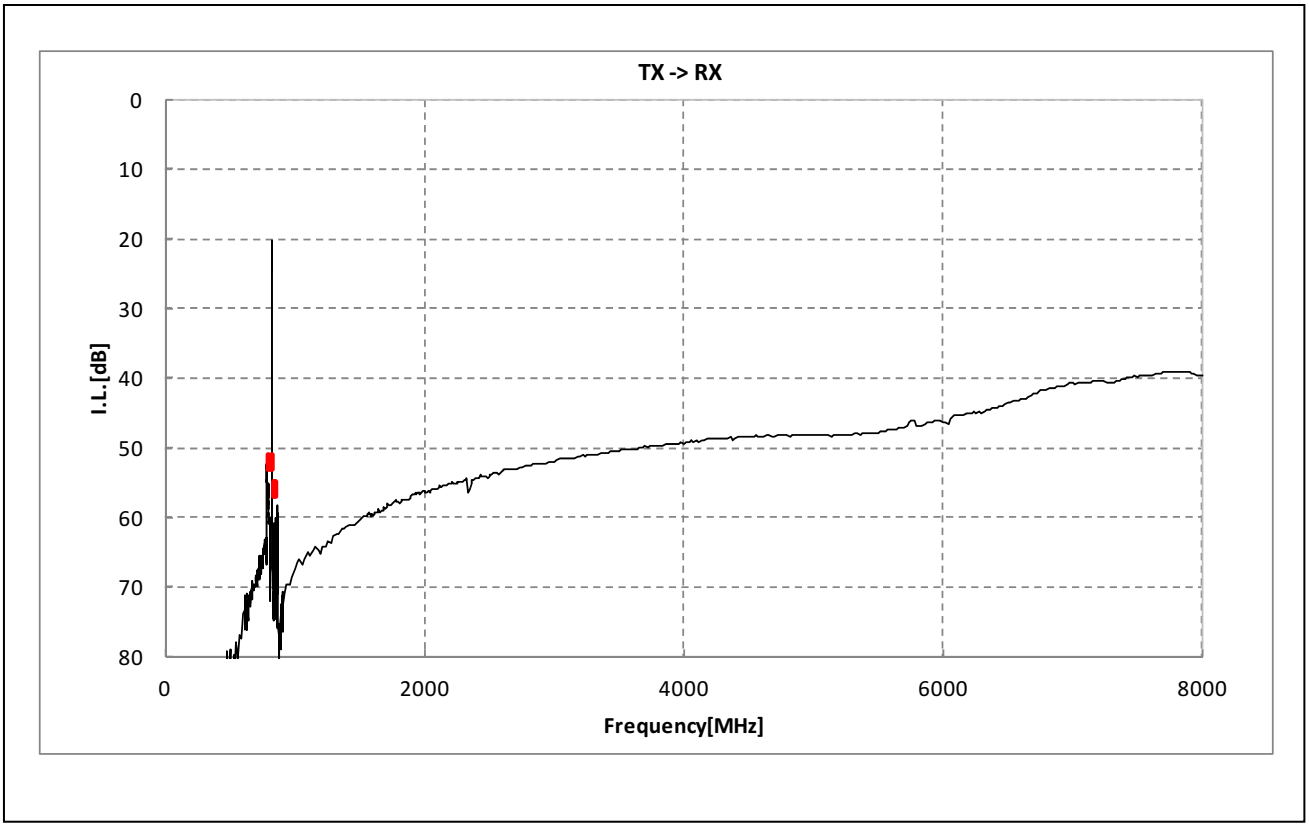




Electrical Characteristic

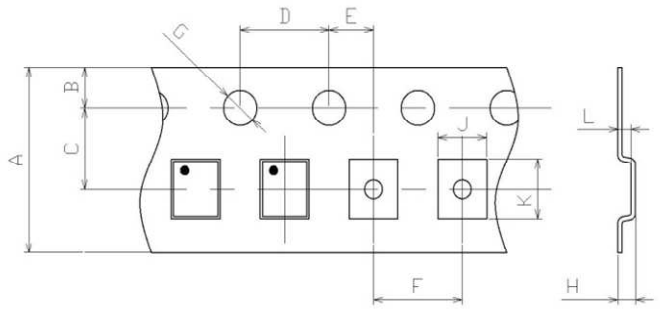
< TX→RX. >





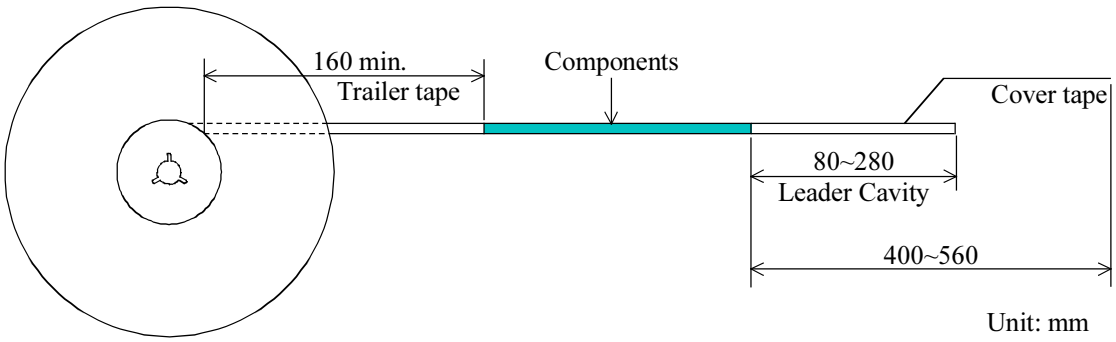
Dimensions of Tape & Reel unit: mm

Carrier Tape

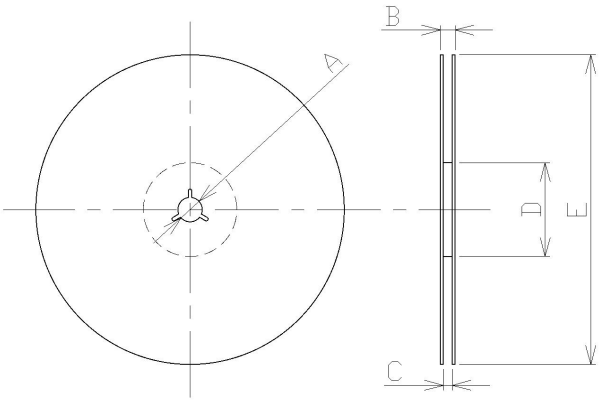


A:	8.0	J:	1.7
B:	1.75	K:	2.1
C:	3.50	L:	0.70
D:	4.0		
E:	2.00		
F:	4.0		
G:	φ1.5		
H:	1.00		

Tape



Reel



φ178Reel		φ330Reel	
A:	φ13.0	A:	φ13.0
B:	13.5max	B:	15.5max
C:	9.0	C:	9.5
D:	φ60	D:	φ100
E:	φ178	E:	φ330

SAYEY806MBC0F0AR00… 10000pcs (φ330)
SAYEY806MBC0F0AR1S… Sample Order (φ178/330)

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.

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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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・deviation or lapse in function of engineering sample,

・improper use of engineering samples.

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