INNOVATOR IN ELECTRONICS

Datasheet of SAW Device

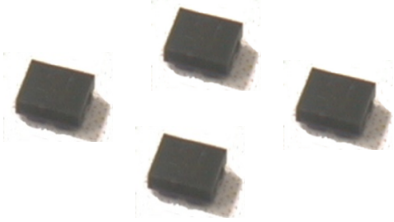
SAW Duplexer

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
F

SAYEY733MBC0F0A (Band28B / Unbalanced / LR / 1814)

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	

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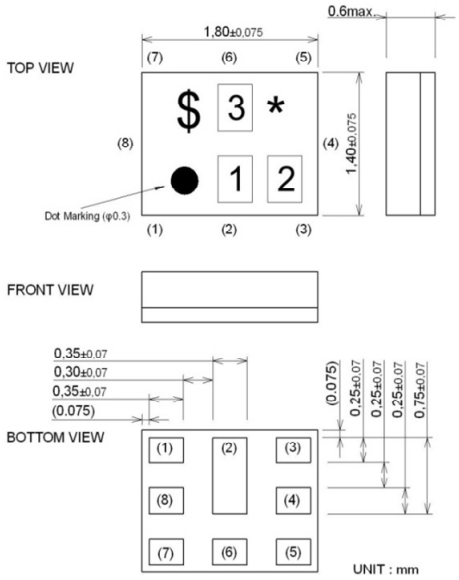
Package Dimensions & Recommended Land Pattern

unit: mm

Dimensions

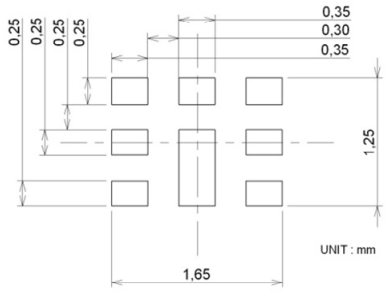


Marking : Laser Printing
* : Month code(Refer to the table A)
$: Date code(Refer to the table B)
1 : 7
2 : E
3 : A

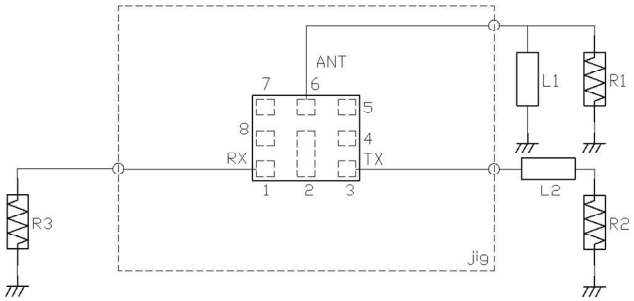
Terminal Number
(6) : Ant
(3) : TX
(1) : RX
Others : GND

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>
R2 : 50 ohm	L2 :10.4nH(Ideal inductor)
R3 : 50 ohm	

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Electrical Characteristic < TX→ANT. >

TX → ANT.				Characteristics (-20 to +85 deg.C)			Unit	Note
				min.	typ.*	max.		
Center Frequency					733		MHz	
Insertion Loss	718.25	to	747.75 MHz		2.3	2.7	dB	
	720.5	to	745.5 MHz		1.7	2.3	dB_{INT}	Any 4.5MHz
Ripple Deviation	718.	to	748. MHz		0.9	1.5	dB	Any 5MHz
VSWR	718.	to	748. MHz		1.8	2.0		TX
	718.	to	748. MHz		1.6	2.0		ANT.
Absolute Attenuation	10.	to	698. MHz	30	35		dB	
	698.	to	710. MHz	19	35		dB	DTV Rejection
	698.	to	710. MHz	30	35		dB	+23 to +27deg.C
	698.	to	710. MHz	30	40		dB	Average
	758.	to	773. MHz	15	32		dB	
	773.	to	803. MHz	44	49		dB	RX
	859.	to	894. MHz	30	37		dB	
	1225.	to	1250. MHz	35	39		dB	GPS L2
	1436.	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		dB	Regular GPS
	1577.47	to	1585.42 MHz	32	38		dB	Wideband GPS upper side
	1597.55	to	1605.89 MHz	32	38		dB	GLONASS
	1805.	to	1880. MHz	31	40		dB	DCS
	1930.	to	1995. MHz	31	41		dB	B2 / B25
	2010.	to	2025. MHz	31	42		dB	B34
	2154.	to	2244. MHz	28	35		dB	3f
	2400.	to	2484. MHz	21	27		dB	ISM 2.4
	2570.	to	2620. MHz	17	23		dB	B38
	2872.	to	2992. MHz	15	18		dB	4f
	4900.	to	5950. MHz	20	29		dB	ISM 5G

* Typical value at 25±2deg.C

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SAYEY733MBC0F0A (Band28B / Unbalanced / LR / 1814)

Electrical Characteristic < ANT.→RX >

ANT. → RX				Characteristics (-20 to +85 deg.C)			Unit	Note
				min.	typ.*	max.		
Center Frequency					788		MHz	
Insertion Loss	773.25	to	802.75 MHz		2.0	2.4	dB	
	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
VSWR	773.	to	803. MHz		1.8	2.1		RX
	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
	12368.	to	12750. MHz	1.0	15.0		dB	16f

* Typical value at 25±2deg.C

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SAYEY733MBC0F0A (Band28B / Unbalanced / LR / 1814)

Electrical Characteristic < TX→RX. >

TX → RX		Characteristics (-20 to +85 deg.C) min.	typ.*	max.	Unit	Note
Isolation						
	718.25 to 747.75 MHz	58	61		dB	TX
	720.5 to 745.5 MHz	60	62		dB_{INT}	Any 4.5MHz, TX
	773.25 to 802.75 MHz	55	60		dB	RX
	775.5 to 800.5 MHz	55	61		dB_{INT}	Any 4.5MHz, RX
	1436. to 1496. MHz	30	64		dB	2f TX
	2154. to 2244. MHz	30	63		dB	3f TX
	2872. to 2992. MHz	30	59		dB	4f TX

* Typical value at 25±2deg.C

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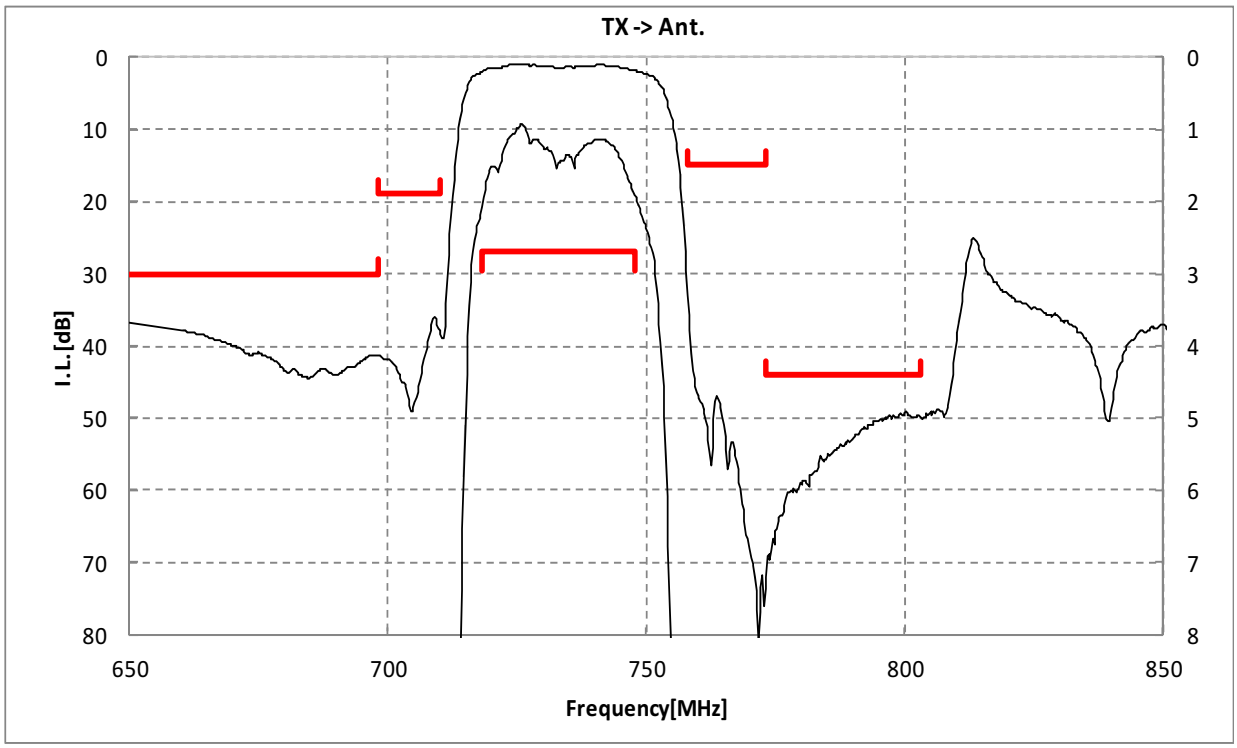
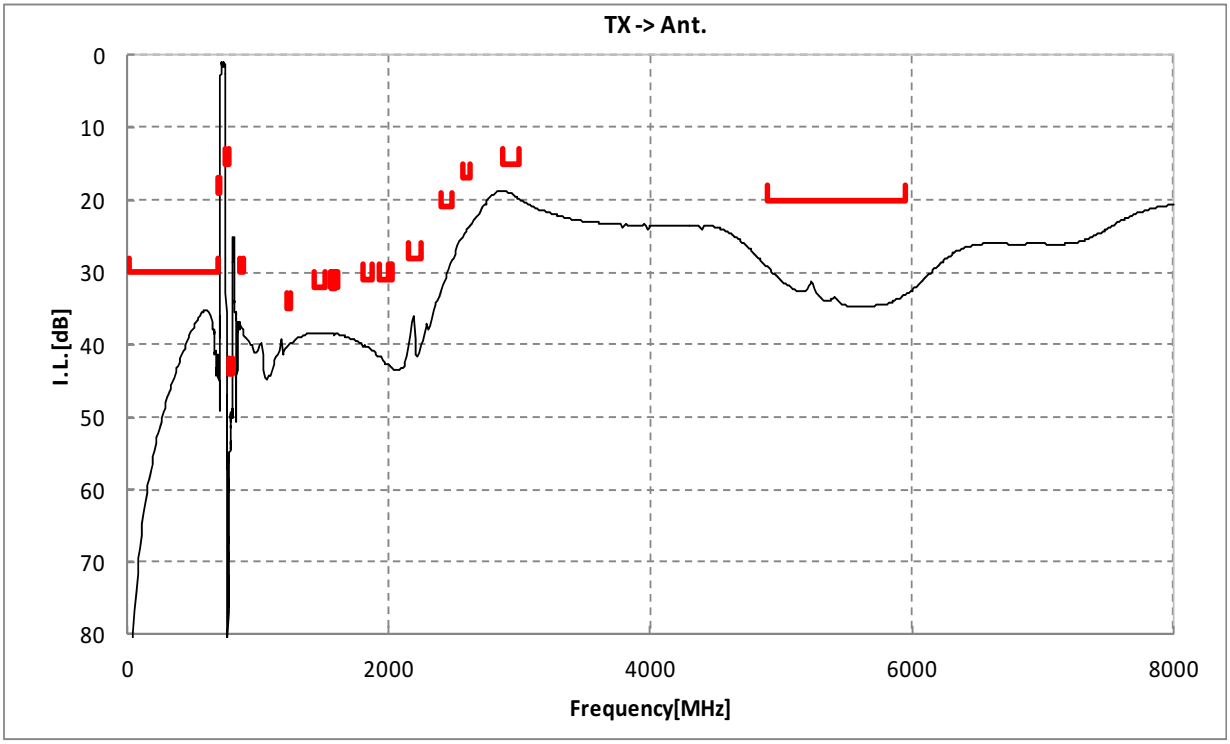
Electrical Characteristic

< TX→ANT. >





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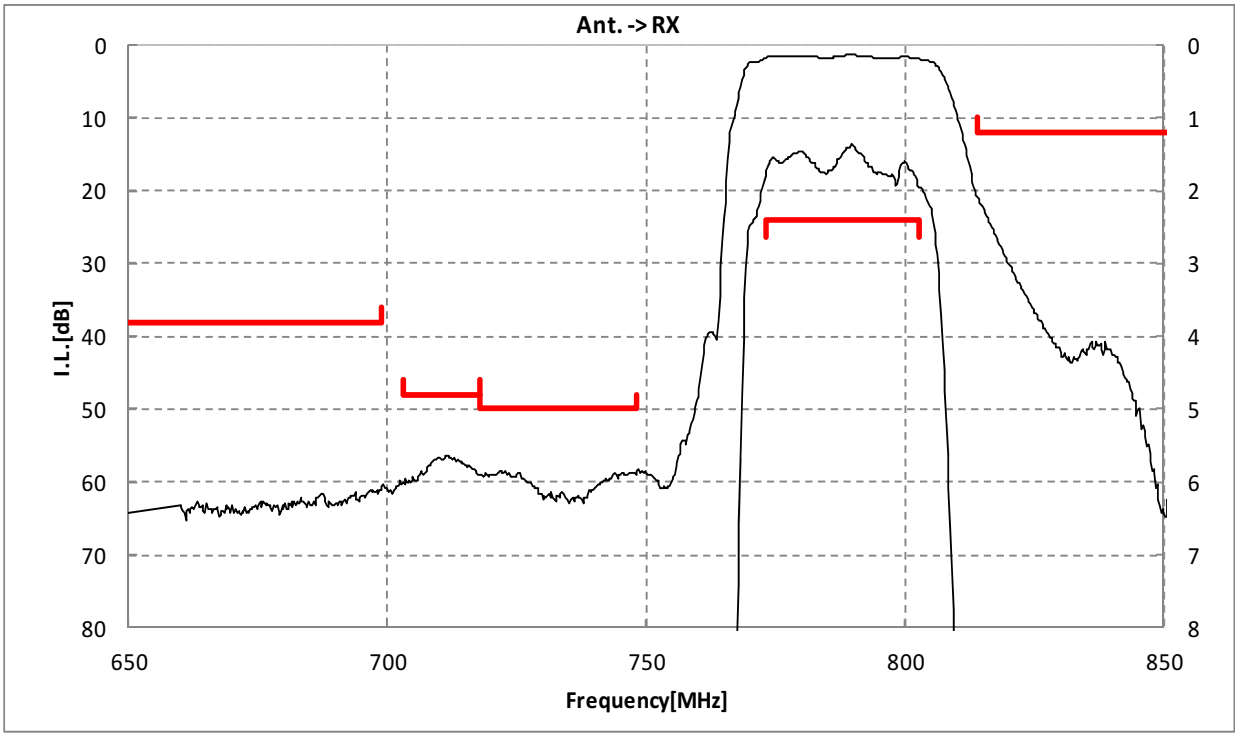
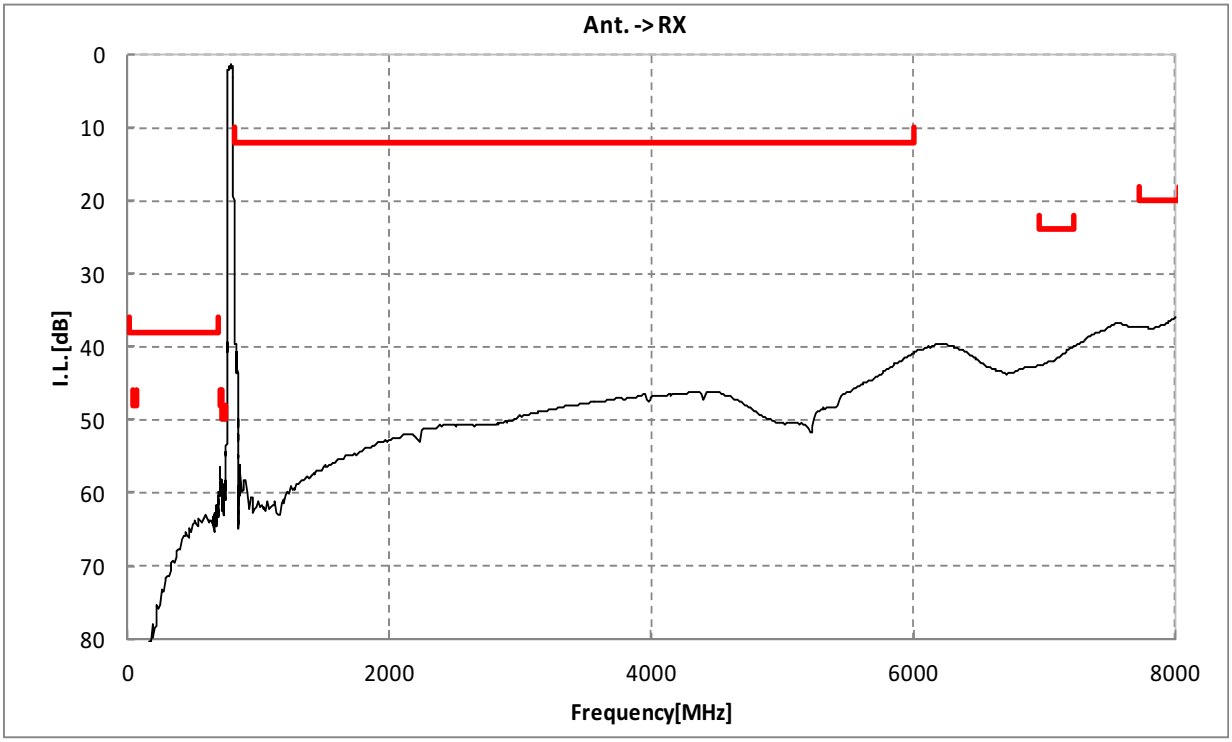
Electrical Characteristic

< ANT.→RX >





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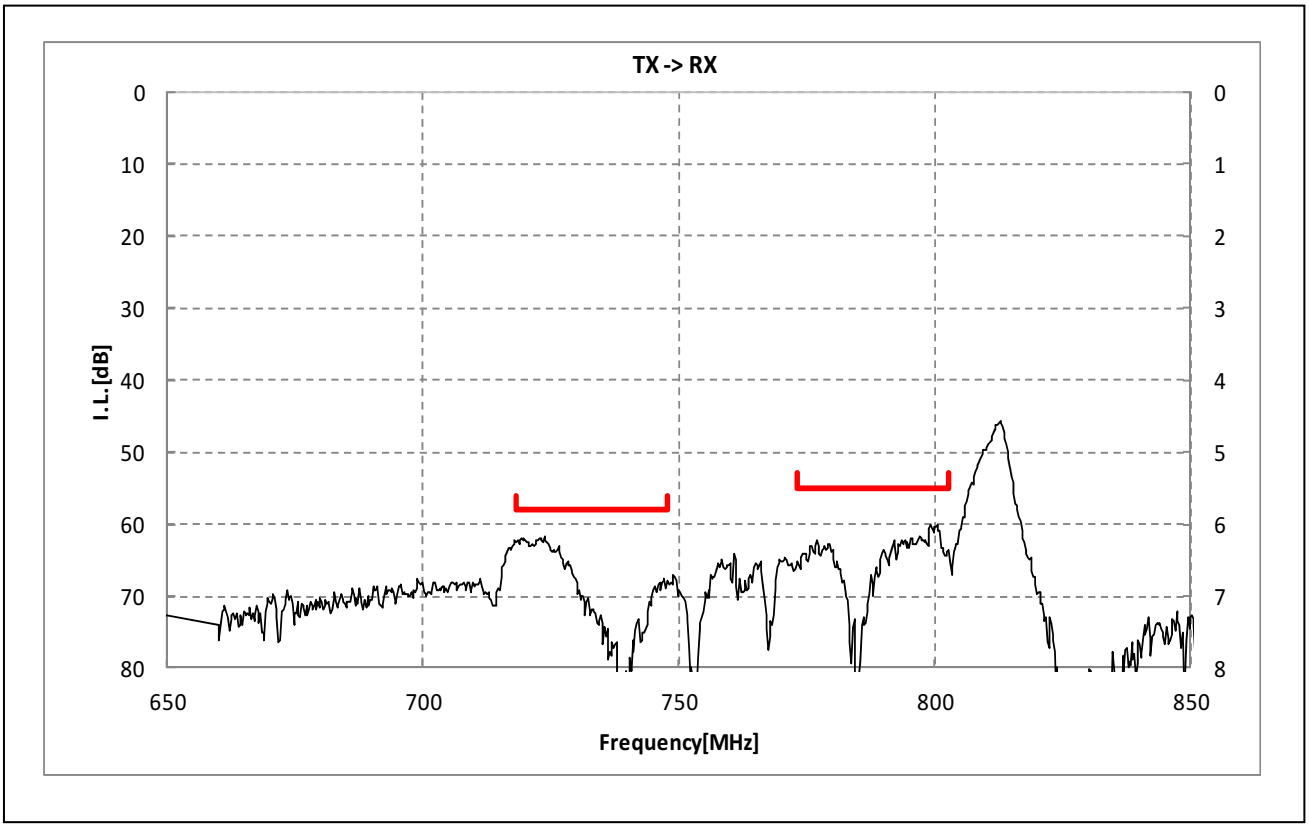
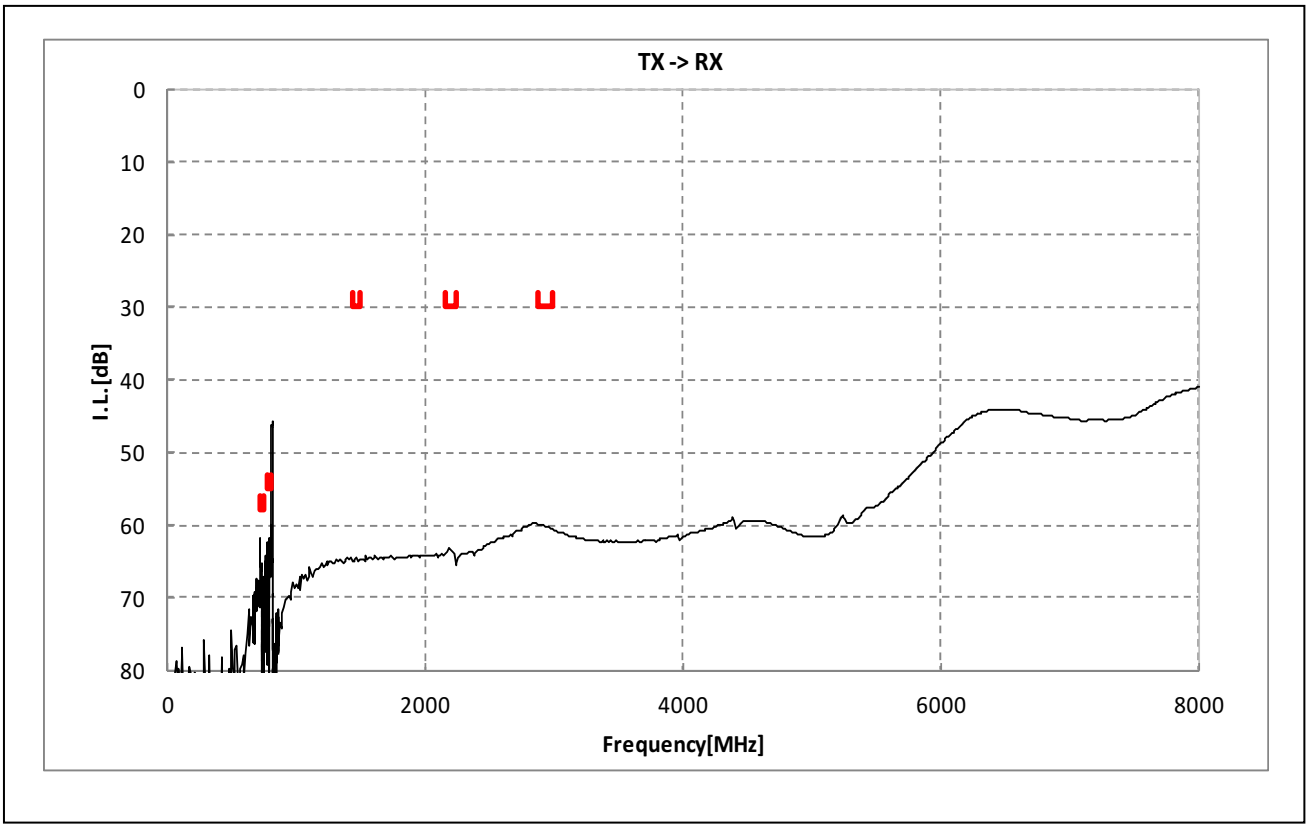
Electrical Characteristic

< TX→RX. >





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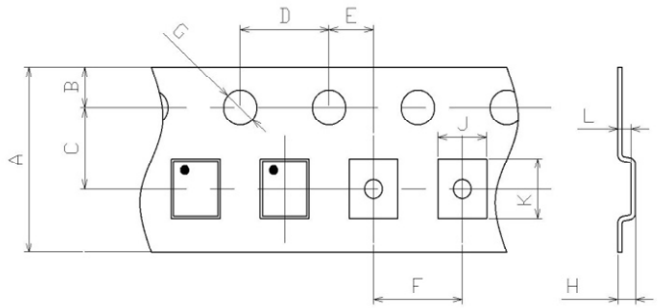
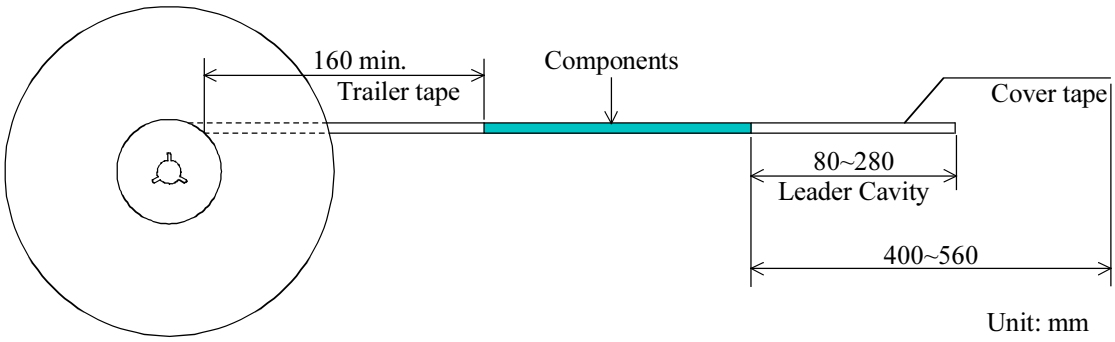
Dimensions of Tape & Reel unit: mm

Carrier Tape

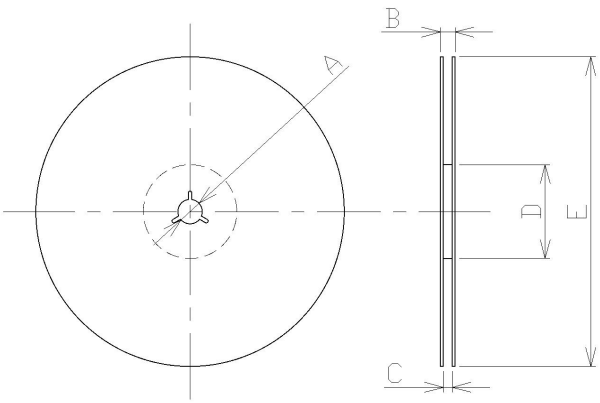


A:	8.0	J:	1.7
B:	1.75	K:	2.1
C:	3.50	L:	0.70
D:	4.0		
E:	2.00		
F:	4.0		
G:	φ1.5		
H:	1.00		

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

SAYEY733MBC0F0AR00… 10000pcs (φ330)
SAYEY733MBC0F0AR1S… Sample Order (φ178/330)

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Marking Code

Table A: Month Code

2013 2017 2021	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	A	B	C	D	E	F	G	H	J	K	L	M
2014 2018 2022	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	N	P	Q	R	S	T	U	V	W	X	Y	Z
2015 2019 2023	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	a	b	c̄	d	e	f	g	h	j	k	l	m
2016 2020 2024	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	n	p	q	r	s	t	u	v	w	x	y	z

Table B: Date Code

date	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
code	A	B	C	D	E	F	G	H	J	K	
date	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	
code	L	M	N	P	Q	R	S	T	U	V	
date	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31st
code	W	X	Y	Z	a	b	c̄	d	e	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.

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.

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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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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.

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The product shall not be used in any other application/model than that of claimed to Murata.

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・deviation or lapse in function of engineering sample,

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