

Datasheet of SAW Device

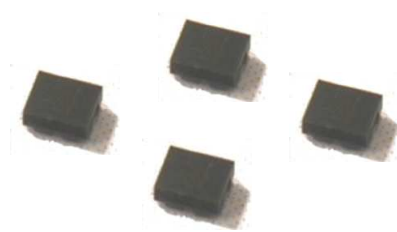
SAW Duplexer

for Band5 / Unbalanced / LR /1814

Murata PN: SAYEY836MBA0F0A

■ Feature

- LTE-A
- Low Insertion Loss & High Isolation



Note : Murata SAW Component is applicable for Cellular /Cordless phone (Terminal) relevant market only.
Please also read caution at the end of this document.

SAYEY836MBA0F0A (Band5 / Unbalanced / LR / 1814)

Revision Number	Date	Description
SAYEY836MBA0F0A_rev. A	Aug-06-2013	■ Initial Release
SAYEY836MBA0F0A_rev. B	Oct-16-2013	■ Updated specification
SAYEY836MBA0F0A_rev. C	Nov-19-2013	■ Updated for MP
SAYEY836MBA0F0A_rev. D	Jul-24-2015	■ Updated for MP
SAYEY836MBA0F0A_rev. E	Sep-02-2015	■ Updated Feature
SAYEY836MBA0F0A_rev. F	Sep-14-2015	■ Updated Feature
SAYEY836MBA0F0A_rev. G	Aug-30-2016	■ Updated General Information
SAYEY836MBA0F0A_rev. H	Apr-20-2017	■ Updated General Information

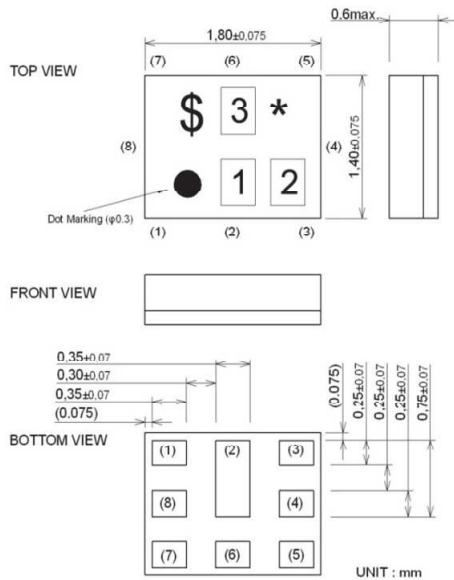
- Operating temperature : -20 to +85 deg.C
- Storage temperature : -40 to +85 deg.C
- Input Power : +29 dBm 5000 h 55 deg.C
- D.C. Volatage between the terminals : 3V (25+/-2 deg.C)
- Minimum Resistance between the terminals : 10M ohm
- RoHS compliance : Yes
- ESD (ElectroStatic Discharge) sensitive device

SAYEY836MBA0F0A (Band5 / Unbalanced / LR / 1814)

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 : 5

2 : V

3 : A

Terminal Number

(6) : Ant

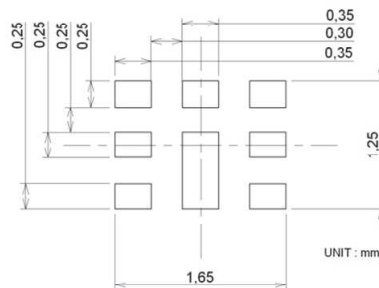
(3) : TX

(1) : RX

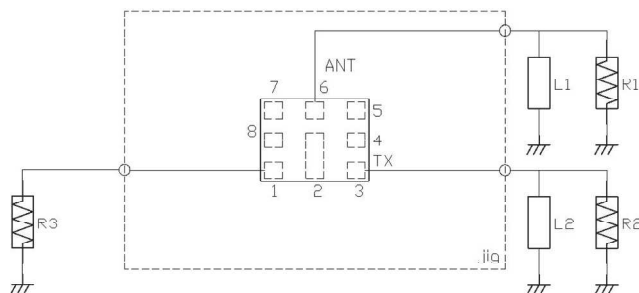
Others : GND

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

Land Pattern



Measurement Circuit (Top Thru View)



R1 : 50 ohm	L1 : 7.2nH(Ideal inductor)
	: 8.2nH(LQP03TN8N2)
	<Reference>
R2 : 50 ohm	L2 : 25nH(Ideal inductor)
R3 : 50 ohm	

SAYEY836MBA0F0A (Band5 / Unbalanced / LR / 1814)

Electrical Characteristic < TX→ANT. >

Tx->Ant.	Characteristics (-20 to +85 deg.C)			Unit	Note
	min.	typ.*	max.		
	Center Frequency		836.5		
Insertion Loss	824. to 849. MHz	1.6	1.9	dB	Any 4.5MHz
	826.5 to 846.5 MHz	1.3	1.7		
Ripple Deviation	824. to 849. MHz	0.8	1.3	dB	Any 3.84MHz
	824. to 849. MHz	0.5	1.2		
VSWR	824. to 849. MHz	1.3	2.0		Tx
	824. to 849. MHz	1.4	2.0		ANT.
Absolute Attenuation	10. to 420. MHz	30	42	dB	450MHz Rejection
	420. to 494. MHz	34	39		
	494. to 701. MHz	30	34		
	699. to 716. MHz	30	35	dB	B12 Tx
	701. to 728. MHz	30	35		
	704. to 716. MHz	30	35	dB	B17 Tx
	728. to 764. MHz	30	35		
	764. to 804. MHz	30	40	dB	700MHz Rejection
	860. to 869. MHz	5.0	10.0		
	869. to 894. MHz	44	56	dB	Rx
	1559. to 1563. MHz	32	36		
	1565.42 to 1573.37 MHz	32	36	dB	COMPASS
	1573.37 to 1577.47 MHz	32	36		
	1577.47 to 1585.42 MHz	32	36	dB	Lower GPS
	1597.55 to 1605.89 MHz	32	36		
	1638. to 1708. MHz	30	35	dB	Regular GPS
	1710. to 1785. MHz	30	35		
	1844.9 to 1879.9 MHz	30	34	dB	Upper GPS
	1884.5 to 1919.6 MHz	30	34		
	1920. to 1980. MHz	30	34	dB	GLONASS
	2110. to 2170. MHz	30	34		
	2400. to 2494. MHz	30	35	dB	2f
	3286. to 3406. MHz	5.0	12.0		
	4110. to 4255. MHz	5.0	10.0	dB	B4 Tx
	4900. to 5950. MHz	3.0	10.0		
	6582. to 6802. MHz	7.0	13.0	dB	B3 Tx
	7406. to 7651. MHz	10	16		
	8230. to 8500. MHz	12	23	dB	B1 Tx
	9054. to 9349. MHz	4.0	10.0		
	9878. to 10198. MHz	2.0	7.0	dB	B1 Rx
	10702. to 11047. MHz	3.0	8.0		
	11526. to 11896. MHz	5.0	11.0	dB	ISM2.4, 3f
	12350. to 12745. MHz	3.0	9.0		
					4f
					5f
					ISM 5G, 6f, 7f
					8f
					9f
					10f
					11f
					12f
					13f
					14f
					15f

* Typical value at 25±2deg.C

SAYEY836MBA0F0A (Band5 / Unbalanced / LR / 1814)

Electrical Characteristic < ANT. → RX >

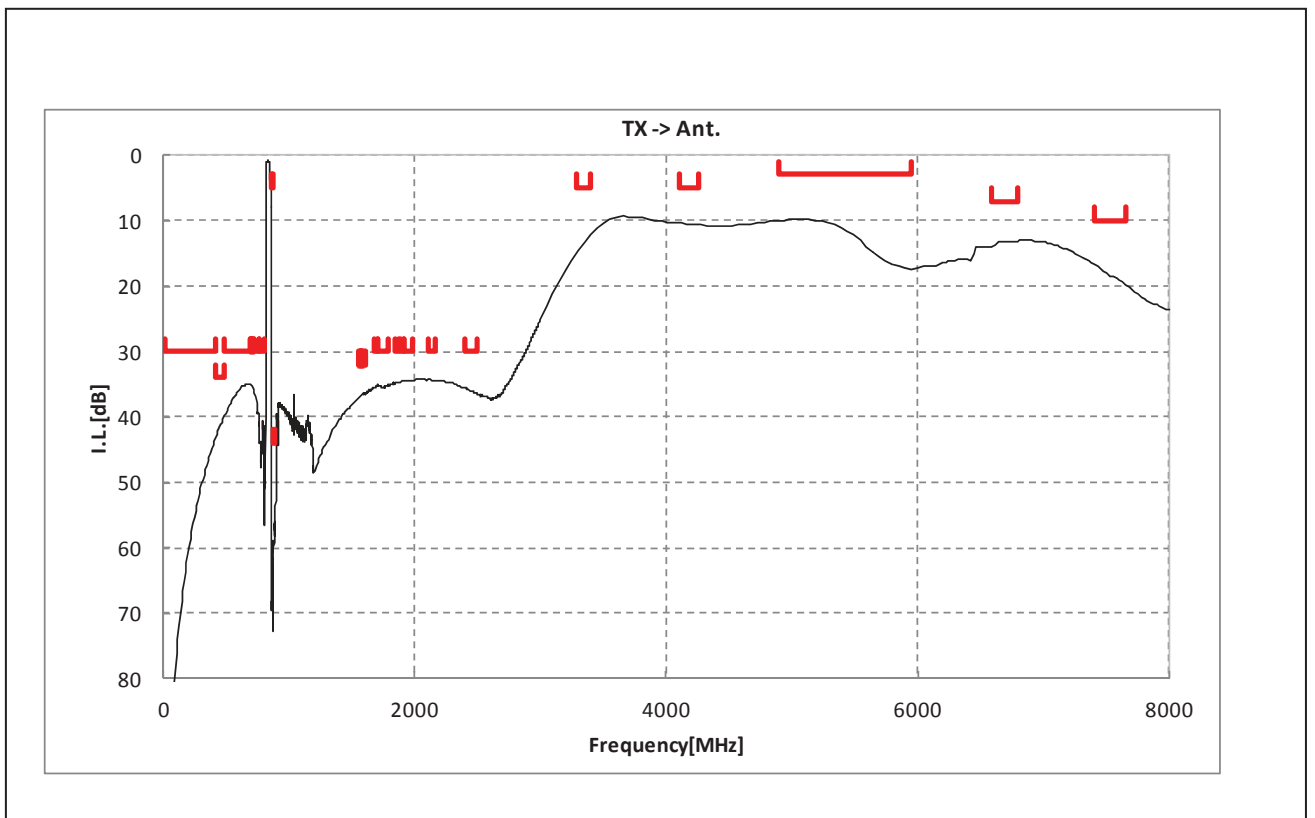
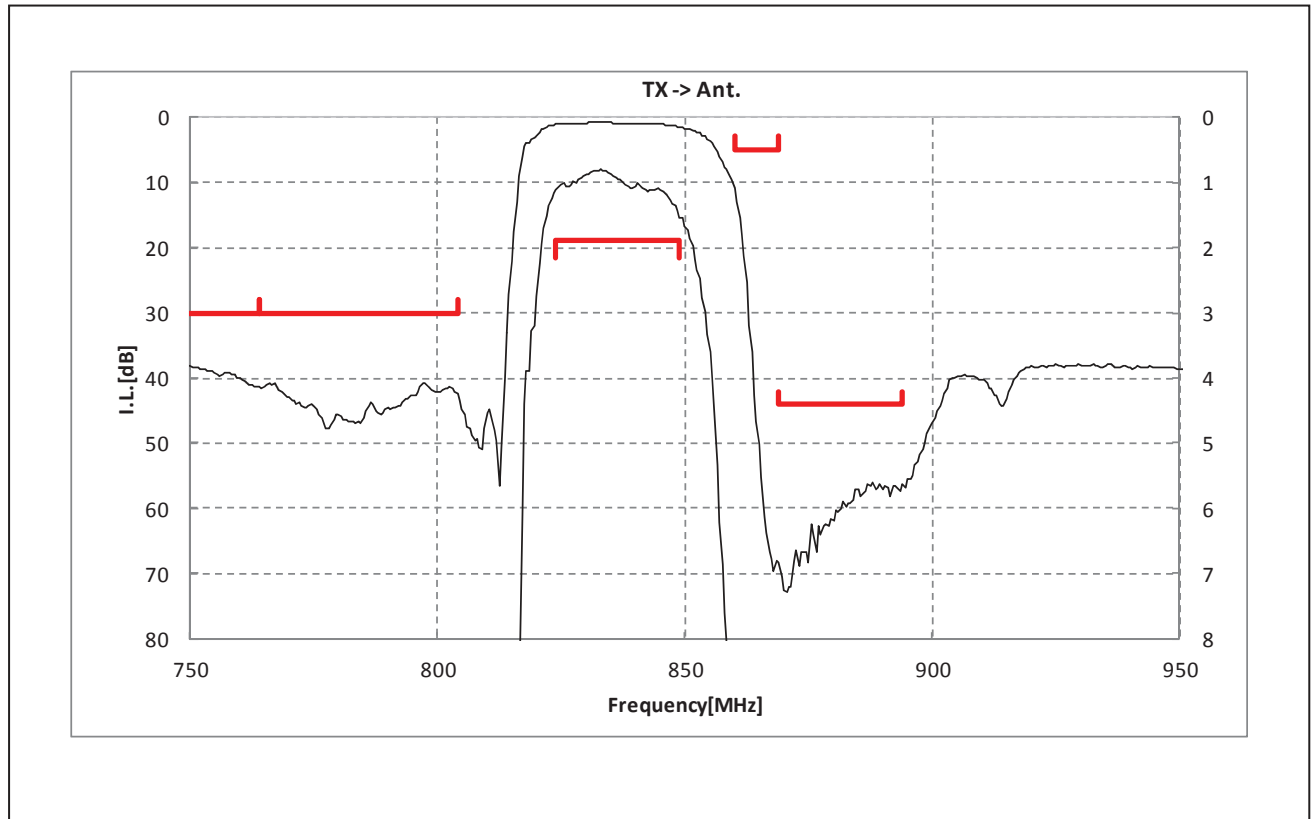
Ant.→Rx	Characteristics (-20 to +85 deg.C)			Unit	Note		
	min.	typ.*	max.				
			881.5				MHz
Center Frequency							
Insertion Loss	869. to 894.		1.7	2.1	dB		
	871.5 to 891.5		1.6	1.9	dB _{INT}	Any 4.5MHz	
Ripple Deviation	869. to 894.		0.3	1.0	dB		
	869. to 894.		0.2	0.8	dB	Any 3.84MHz	
VSWR	869. to 894.		1.4	2.0		Rx	
	869. to 894.		1.5	2.0		ANT.	
Absolute Attenuation	10. to 447.	45	60		dB		
		45.	50	100		dB	Rx - Tx
	447. to 824.	40	51		dB		
	779. to 804.	40	53		dB	2Tx - Rx	
	824. to 849.	45	58		dB	Tx	
	849. to 854.	30	56		dB	(Rx + Tx) / 2	
	909. to 979.	12	19		dB		
	1693. to 1743.	40	63		dB	Rx + Tx	
	1710. to 1785.	50	62		dB	B3 Tx	
	1788. to 1788.	40	63		dB	2f	
	1850. to 1920.	40	66		dB	B2 Tx	
	1920. to 1980.	40	69		dB	B1 Tx	
	1980. to 2400.	35	70		dB		
	2305. to 2315.	40	73		dB	B30 Tx	
	2400. to 2500.	40	67		dB	ISM2.4	
	2467. to 2494.	44	68		dB	WLAN Co-ex	
	2517. to 2592.	40	64		dB	Rx + 2Tx	
	2607. to 2682.	40	63		dB	3f	
	3476. to 3576.	35	60		dB	4f	
	4345. to 4470.	35	59		dB	5f	
	4900. to 5950.	37	47		dB	ISM 5G	
	5214. to 5364.	30	48		dB	6f	
	6083. to 6258.	20	54		dB	7f	
	6952. to 7152.	15	48		dB	8f	
	7821. to 8046.	15	40		dB	9f	
	8690. to 8940.	15	34		dB	10f	
	9559. to 9834.	15	29		dB	11f	
10428. to 10728.	15	24		dB	12f		
11297. to 11622.	15	21		dB	13f		
12166. to 12516.	15	23		dB	14f		

* Typical value at 25±2deg.C

SAYEY836MBA0F0A (Band5 / Unbalanced / LR / 1814)

Electrical Characteristic

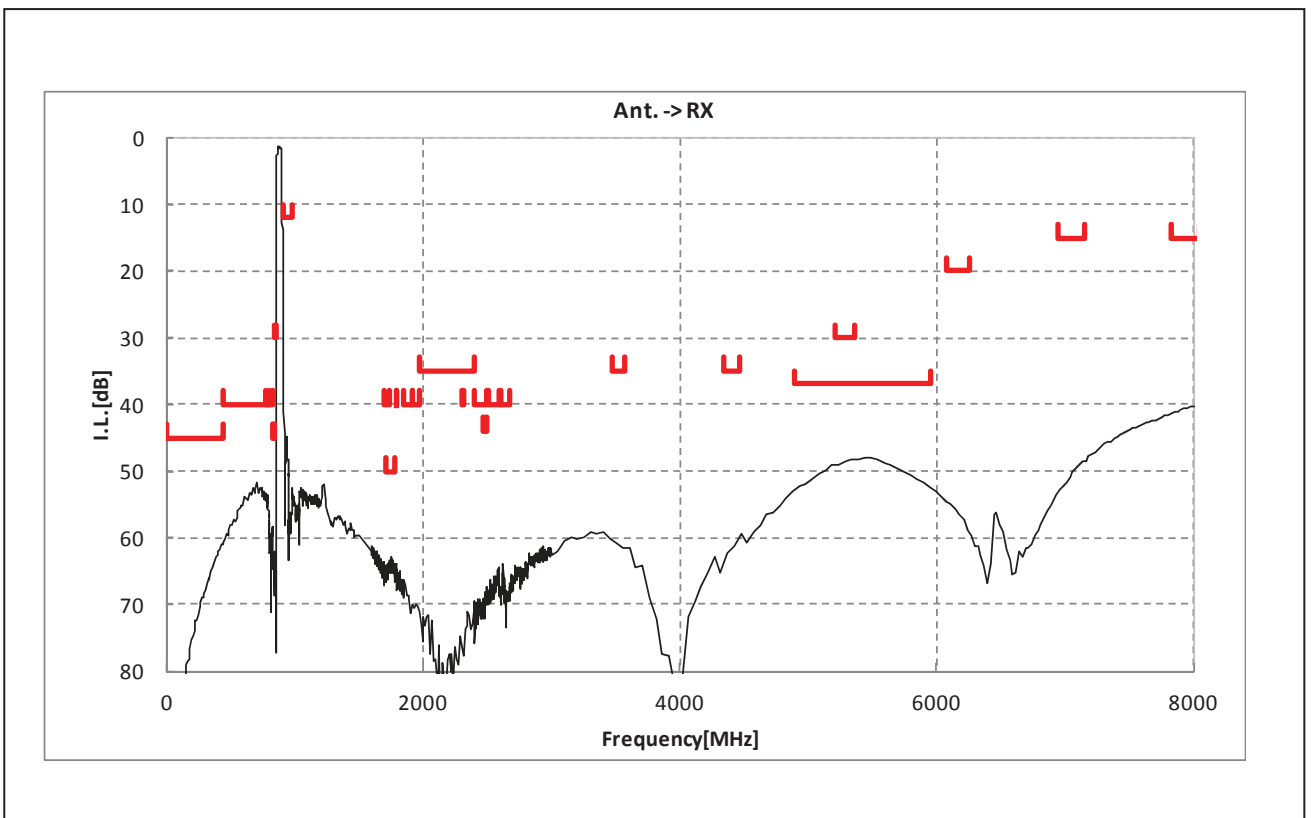
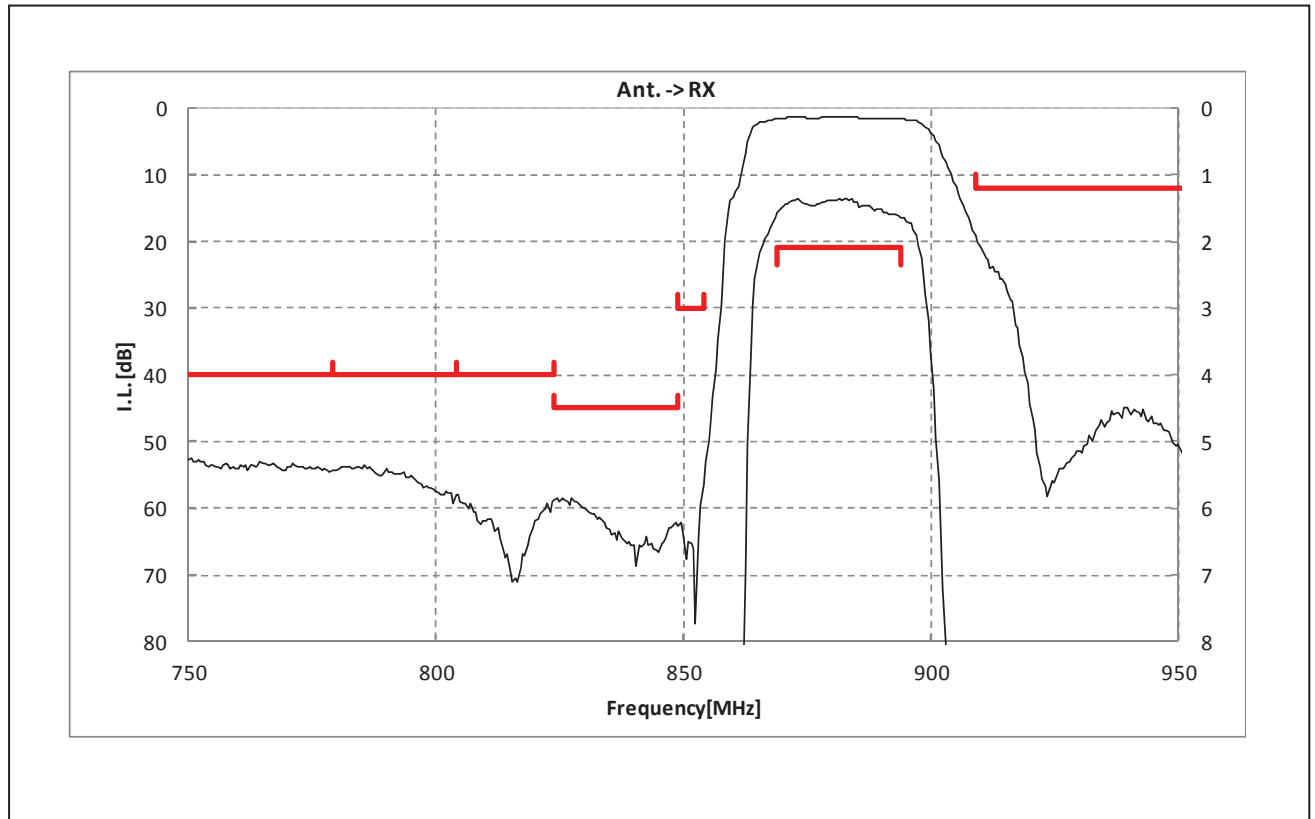
< TX→ANT. >



SAYEY836MBA0F0A (Band5 / Unbalanced / LR / 1814)

Electrical Characteristic

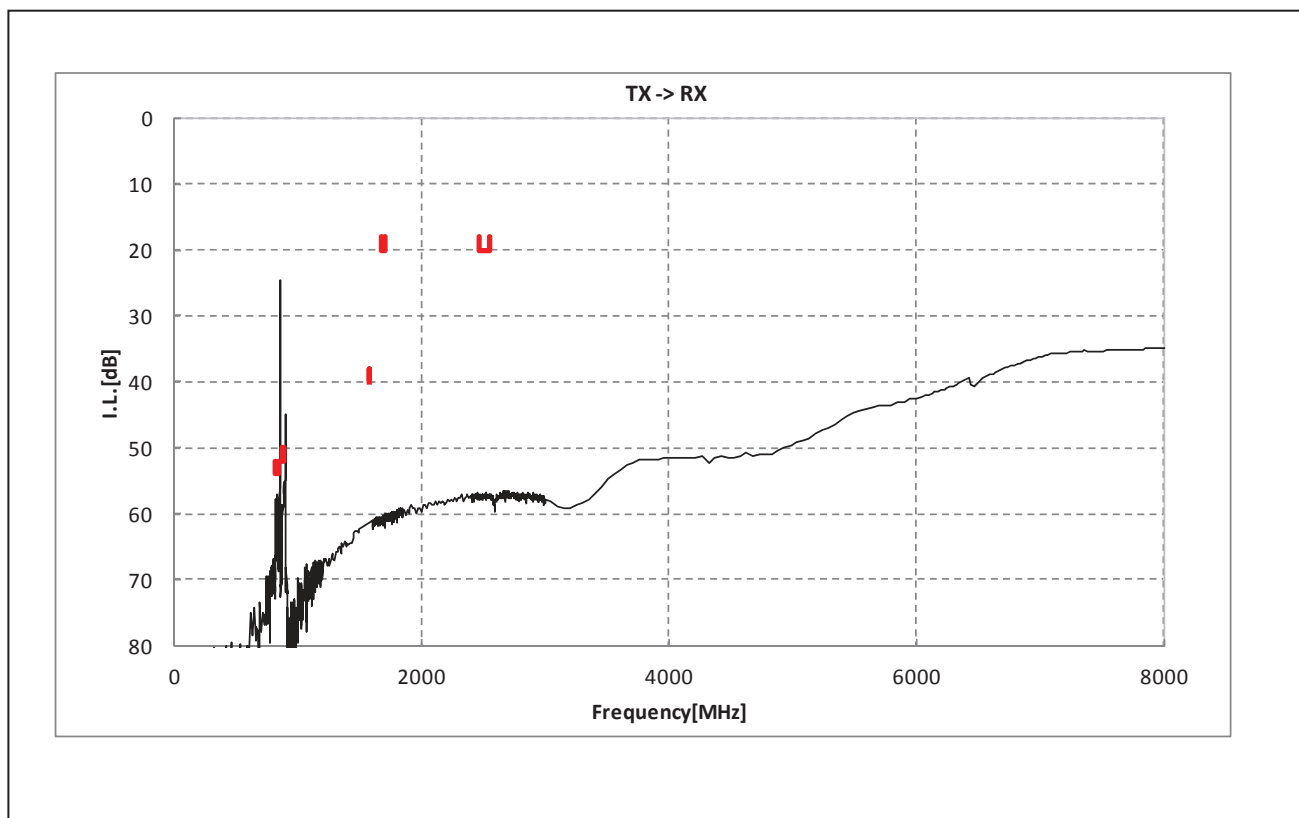
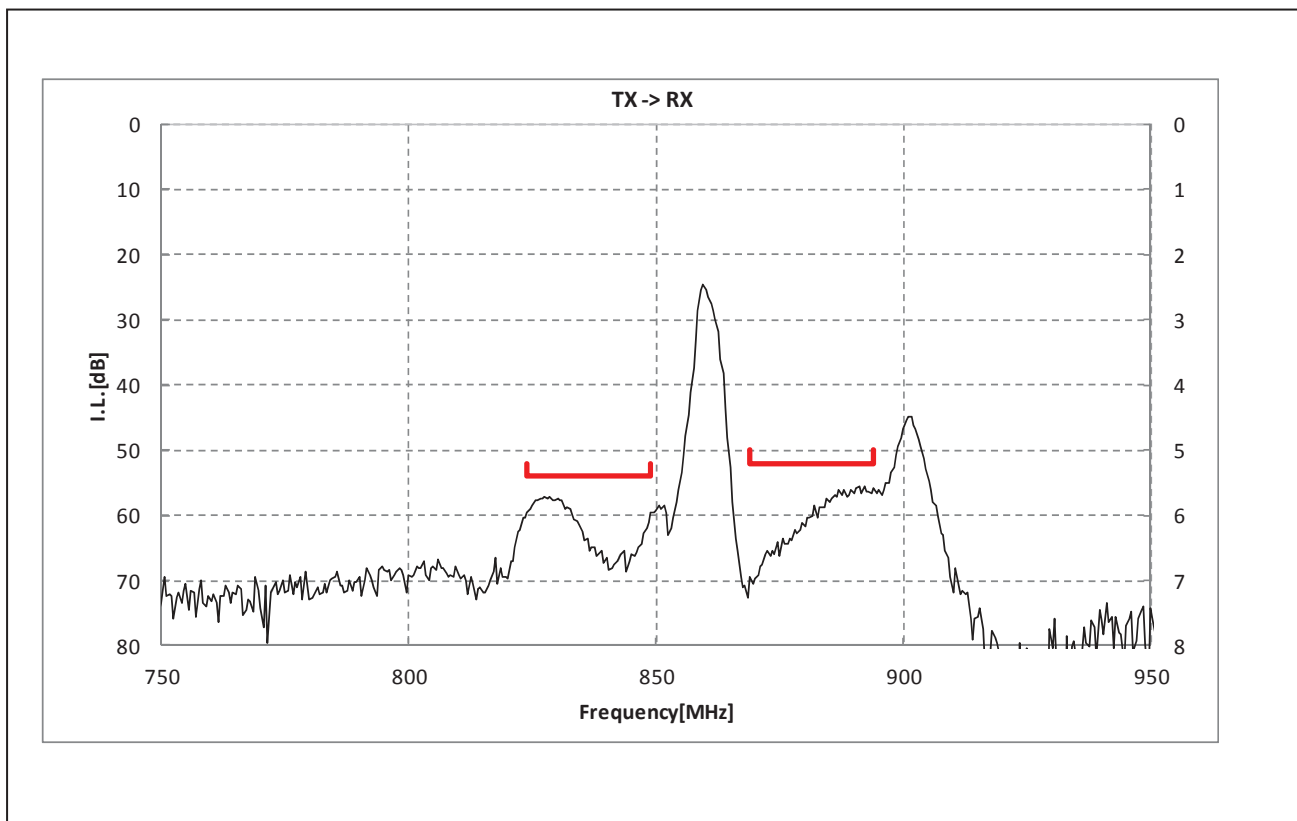
< ANT. → RX >



SAYEY836MBA0F0A (Band5 / Unbalanced / LR / 1814)

Electrical Characteristic

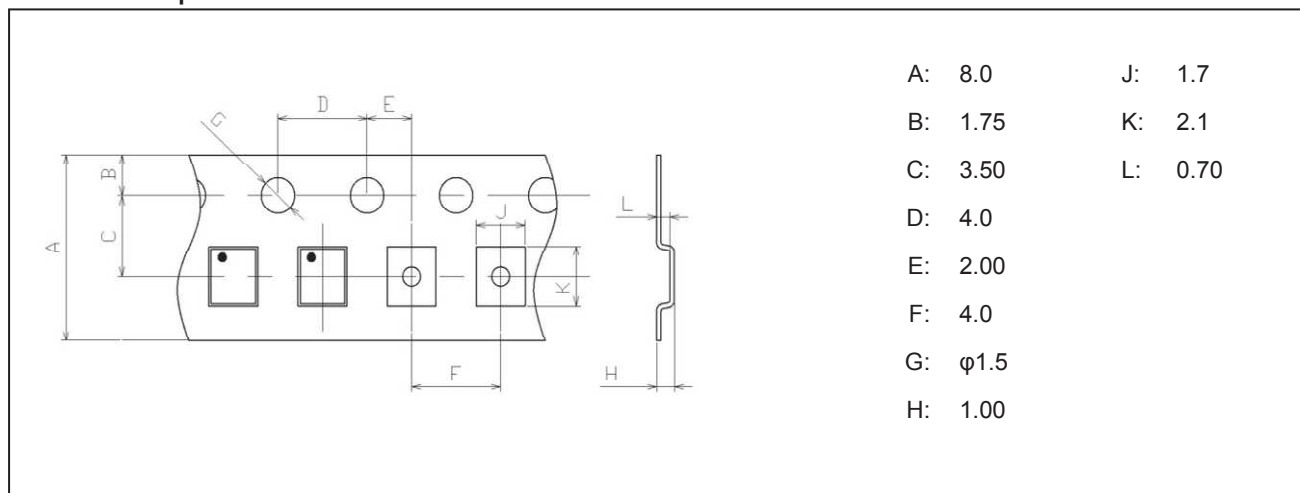
< TX→RX. >



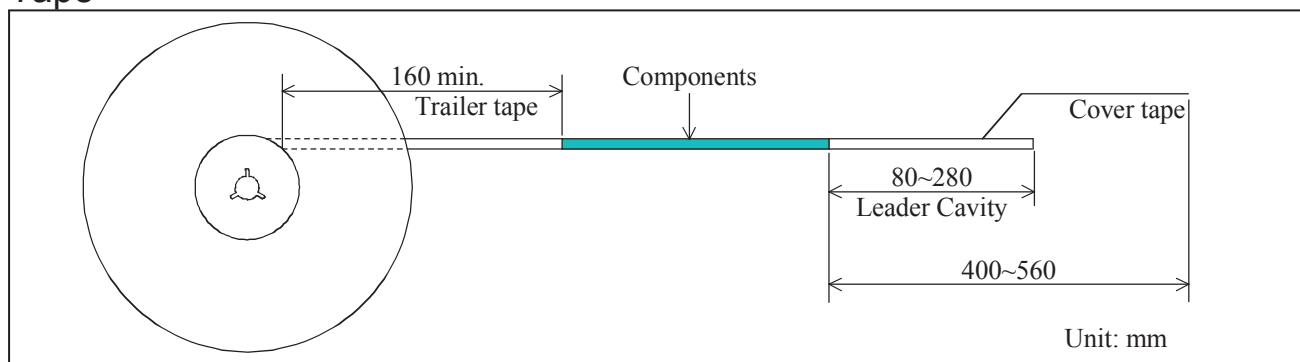
SAYEY836MBA0F0A (Band5 / Unbalanced / LR / 1814)

Dimensions of Tape & Reel unit: mm

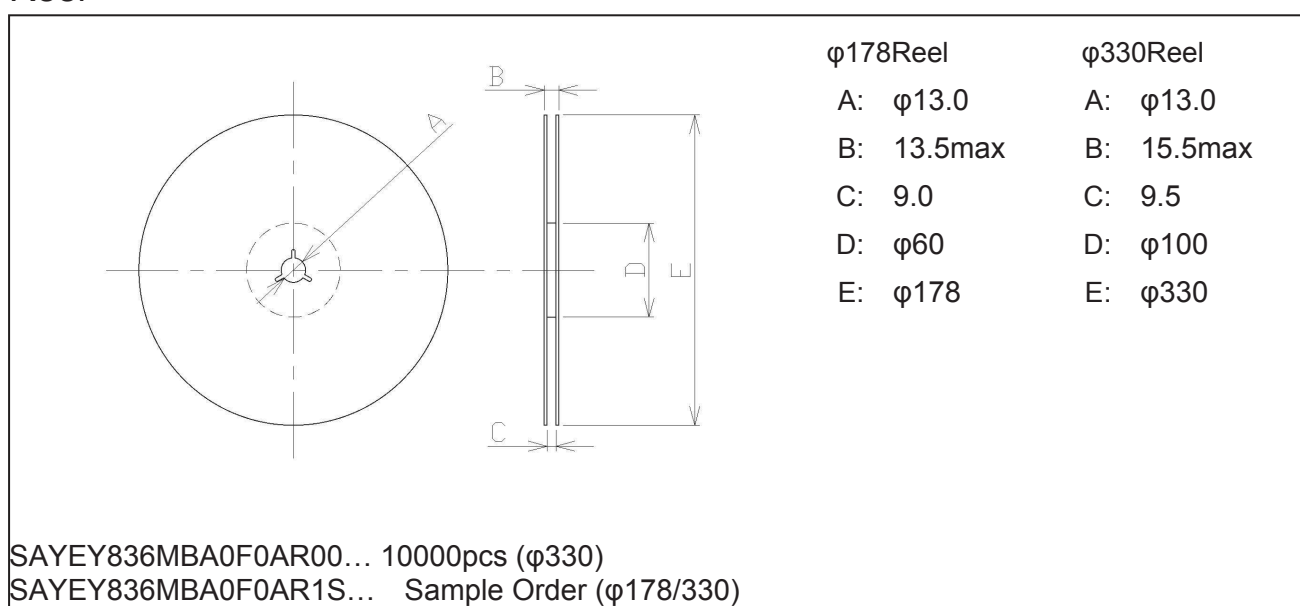
Carrier Tape



Tape



Reel



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

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- 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 surge voltage.

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Customer acknowledges that engineering samples may deviate from specifications and may contain defects due to their development status.

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- deviation or lapse in function of engineering sample,
- improper use of engineering samples.

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