

Datasheet of SAW Device

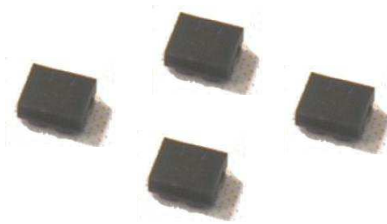
SAW Duplexer

for Band8 / Balanced / LR /1814

Murata PN: SAYEY897MCG0F0A

■ Feature

- Band8 LTE
- Low Insertion Loss
- High Attenuation



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

SAYEY897MCG0F0A (Band8 / Balanced / LR / 1814)

Revision Number	Date	Description
SAYEY897MCG0F0A_rev. A	Nov-20-2015	■ Initial Release/Updated for MP
SAYEY897MCG0F0A_rev. B	Sep-05-2016	■ Updated General Information
SAYEY897MCG0F0A_rev. C	Feb-28-2017	■ Updated General Information

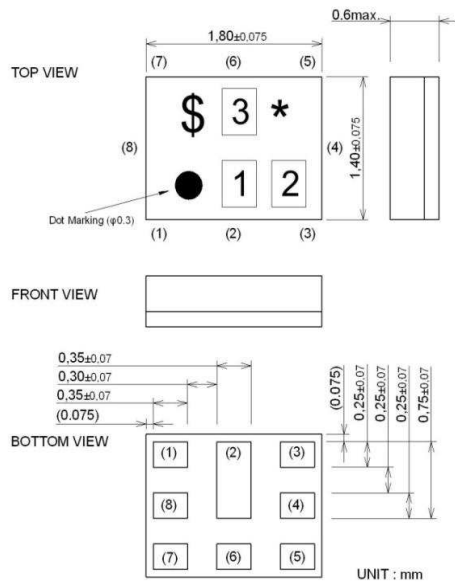
- Operating temperature : -20 to +85 deg.C
- Storage temperature : -40 to +85 deg.C
- Input Power : +29 dBm 5000 h +50 deg.C
- D.C. Volatage between the terminals : 3V (25+/-2 deg.C)
- Minimum Resistance between the terminals : 10Mohm
- RoHS compliance : Yes
- ESD (ElectroStatic Discharge) sensitive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

SAYEY897MCG0F0A (Band8 / Balanced / 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 : 8

2 : Q

3 : A

Terminal Number

(6) : Ant

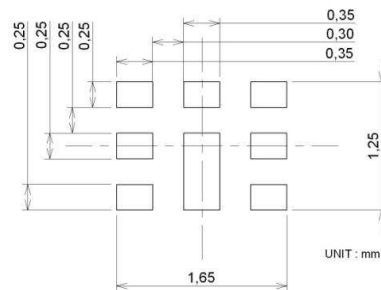
(3) : TX

(1)(8) : RX

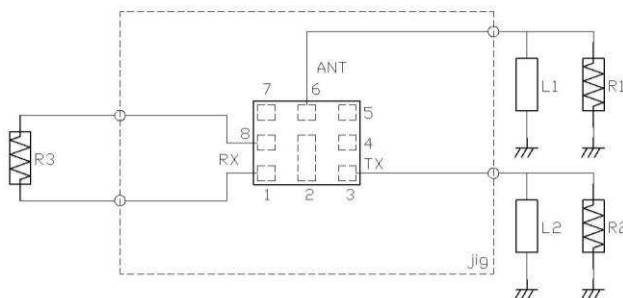
Others : GND

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

Land Pattern



Measurement Circuit (Top Thru View)



R1 : 50 ohm	L1 :7.5nH(Ideal inductor)
	:8.2nH(LQW15AN8N2)
	<Reference>
R2 : 50 ohm	L2 :30nH(Ideal inductor)
R3 : 100 ohm	

SAYEY897MCG0F0A (Band8 / Balanced / LR / 1814)

Electrical Characteristic < TX→ANT. >

TX → ANT.		Characteristics (-20 to +85 deg.C)			Unit	Note
		min.	typ.*	max.		
		Center Frequency		897.5		
Insertion Loss	882.5 to 912.5 MHz	1.6	2.5	dB _{INT}	Any 4.5MHz	
	882.4 to 912.6 MHz	1.6	2.5	dB _{INT}	Any 3.84MHz	
Ripple Deviation	880. to 915. MHz	0.7	1.6	dB	Any 5MHz	
VSWR	880. to 915. MHz	1.6	2.0		Ant	
	880. to 915. MHz	1.5	2.0		Tx	
Absolute Attenuation	10. to 716. MHz	30	34	dB		
	716. to 728. MHz	30	34	dB		
	728. to 793. MHz	30	34	dB		
	832. to 862. MHz	30	39	dB	B20 Tx	
	927.5 to 957.5 MHz	40	53	dB _{INT}	Any 4.5MHz	
	927.4 to 957.6 MHz	40	53	dB _{INT}	Any 3.84MHz	
	1559. to 1563. MHz	40	46	dB	Compass	
	1565.42 to 1573.37 MHz	40	46	dB	Wideband GPS, lower side lobe	
	1573.37 to 1577.47 MHz	40	46	dB	Regular GPS, main lobe	
	1577.47 to 1585.42 MHz	40	45	dB	Wideband GPS, upper side lobe	
	1597.55 to 1605.89 MHz	40	46	dB	GLONASS	
	1710. to 1785. MHz	30	42	dB	B3Tx	
	1760. to 1840. MHz	30	41	dB	2f	
	1840. to 1880. MHz	30	40	dB		
	1920. to 1980. MHz	30	39	dB	B1 Tx	
	2110. to 2170. MHz	27	36	dB		
	2400. to 2500. MHz	30	34	dB	2.4GHz ISM	
	2434. to 2494. MHz	30	34	dB		
	2620. to 2745. MHz	28	33	dB	3f	
	3520. to 3660. MHz	20	35	dB	4f	
	4400. to 4575. MHz	4.0	10.0	dB	5f	
	4900. to 5950. MHz	5.0	11.0	dB	5GHz ISM, 6f	
	6160. to 6405. MHz	10	20	dB	7f	
	7040. to 7320. MHz	10	19	dB	8f	
7920. to 8235. MHz	8.0	15.0	dB	9f		
8800. to 9150. MHz	5.0	11.0	dB	10f		
9680. to 10065. MHz	2.0	9.0	dB	11f		
10560. to 10980. MHz	1.0	6.0	dB	12f		
11440. to 11895. MHz	1.0	5.0	dB	13f		
12320. to 12750. MHz	2.0	6.0	dB	14f		

* Typical value at 25±2deg.C

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Electrical Characteristic < ANT.→RX >

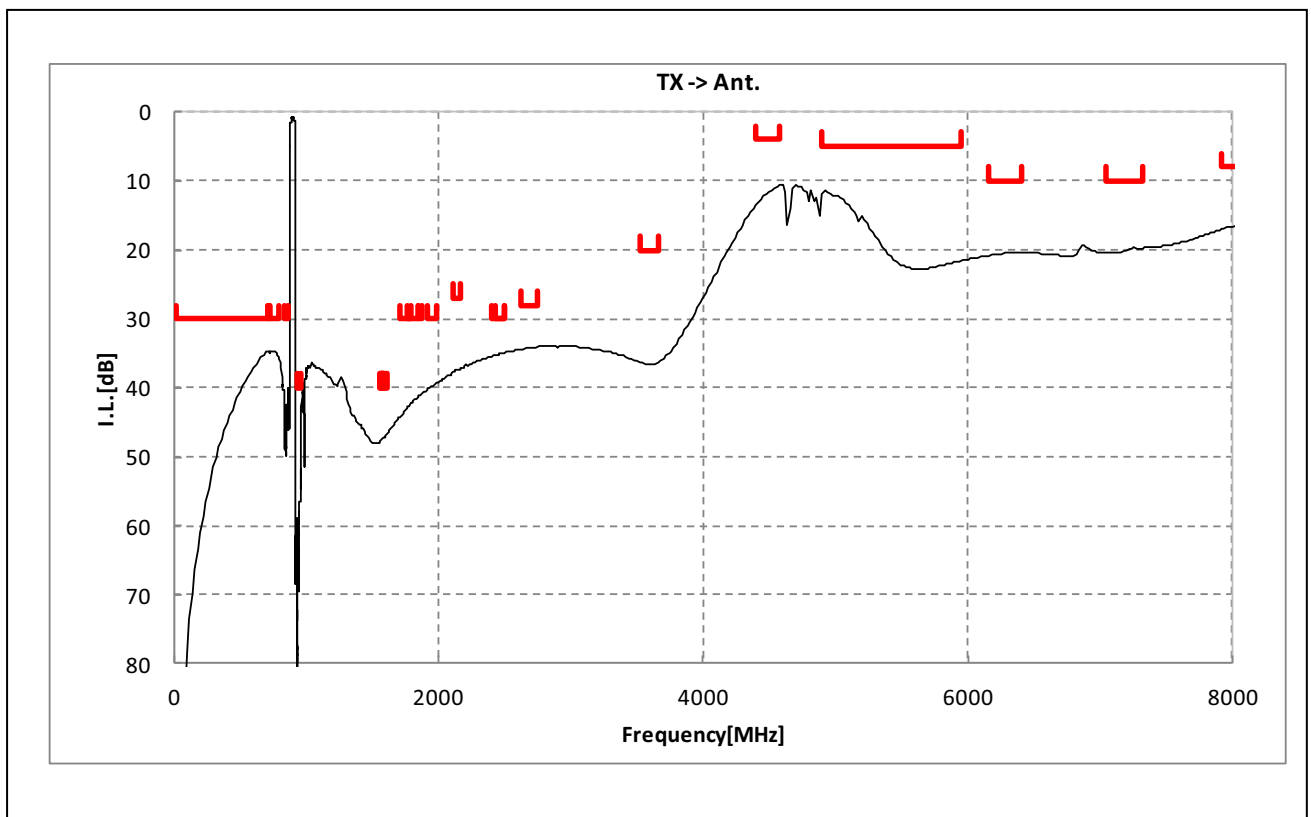
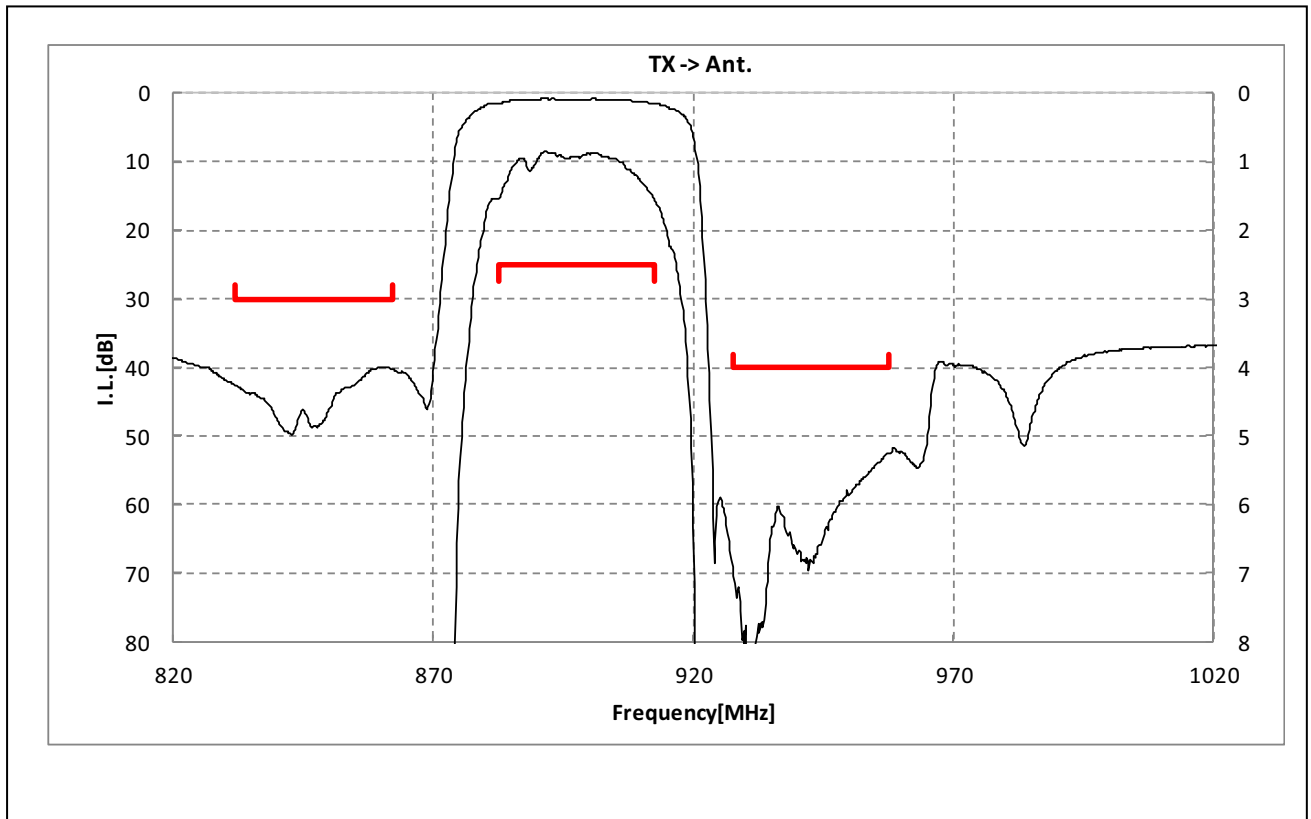
ANT. → RX	Characteristics (-20 to +85 deg.C)			Unit	Note	
	min.	typ.*	max.			
	Center Frequency		942.5			
Insertion Loss	927.5 to 957.5 MHz	1.8	2.7	dB _{INT}	Any 4.5MHz	
	927.4 to 957.6 MHz	1.8	2.7	dB _{INT}	Any 3.84MHz	
Ripple Deviation	925. to 960. MHz	0.5	2.2	dB	Any 5MHz	
VSWR	925. to 960. MHz	1.7	2.0		Ant	
	925. to 960. MHz	1.8	2.0		Rx	
Amplitude Balance	925. to 960. MHz	-1.8	-1.2	1.8	dB	
Phase Balance	925. to 960. MHz	168	174	192	deg.	
Absolute Attenuation	0.2 to 880. MHz	45	58		dB	
	45. to 45. MHz	50	106		dB	Rx-Tx
	835. to 870. MHz	40	62		dB	2Tx-Rx
	882.5 to 912.5 MHz	45	63		dB _{INT}	Any 4.5MHz
	882.4 to 912.6 MHz	45	63		dB _{INT}	Any 3.84MHz
	902.5 to 910. MHz	30	64		dB	(Rx+Tx)/2
	980. to 1045. MHz	15	23		dB	
	1045. to 6000. MHz	35	39		dB	
	1427. to 1448. MHz	40	65		dB	B11Tx
	1710. to 1785. MHz	40	60		dB	B3Tx
	1805. to 1920. MHz	40	59		dB	Rx+Tx and 2x
	1920. to 1980. MHz	40	59		dB	B1Tx
	1980. to 13025. MHz	15	20		dB	
	2400. to 2500. MHz	40	55		dB	2.4Ghz ISM
	2500. to 2570. MHz	40	55		dB	B7Tx
	2685. to 2790. MHz	40	54		dB	Rx+2Tx
	2775. to 2880. MHz	40	53		dB	3f
	2880. to 3700. MHz	35	48		dB	
	3700. to 3840. MHz	40	47		dB	4f
	4625. to 4800. MHz	35	40		dB	5f
	4900. to 5950. MHz	35	39		dB	5GHz ISM, 6f
	6475. to 6720. MHz	20	38		dB	7f
7400. to 7680. MHz	15	32		dB	8f	
8325. to 8640. MHz	15	26		dB	9f	
9250. to 9600. MHz	15	23		dB	10f	
10175. to 10560. MHz	15	21		dB	11f	
11100. to 11520. MHz	15	22		dB	12f	
12025. to 12480. MHz	15	23		dB	13f	

* Typical value at 25±2deg.C

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Electrical Characteristic

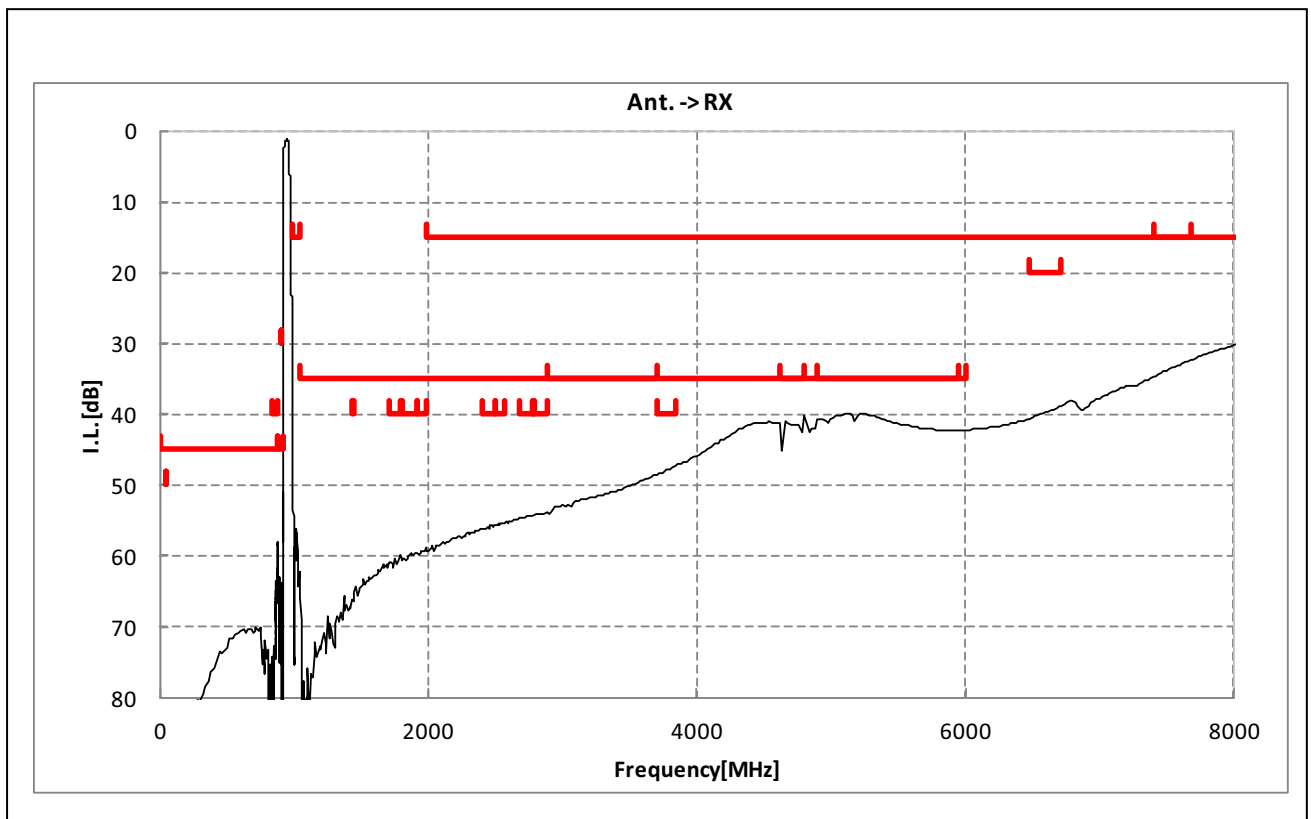
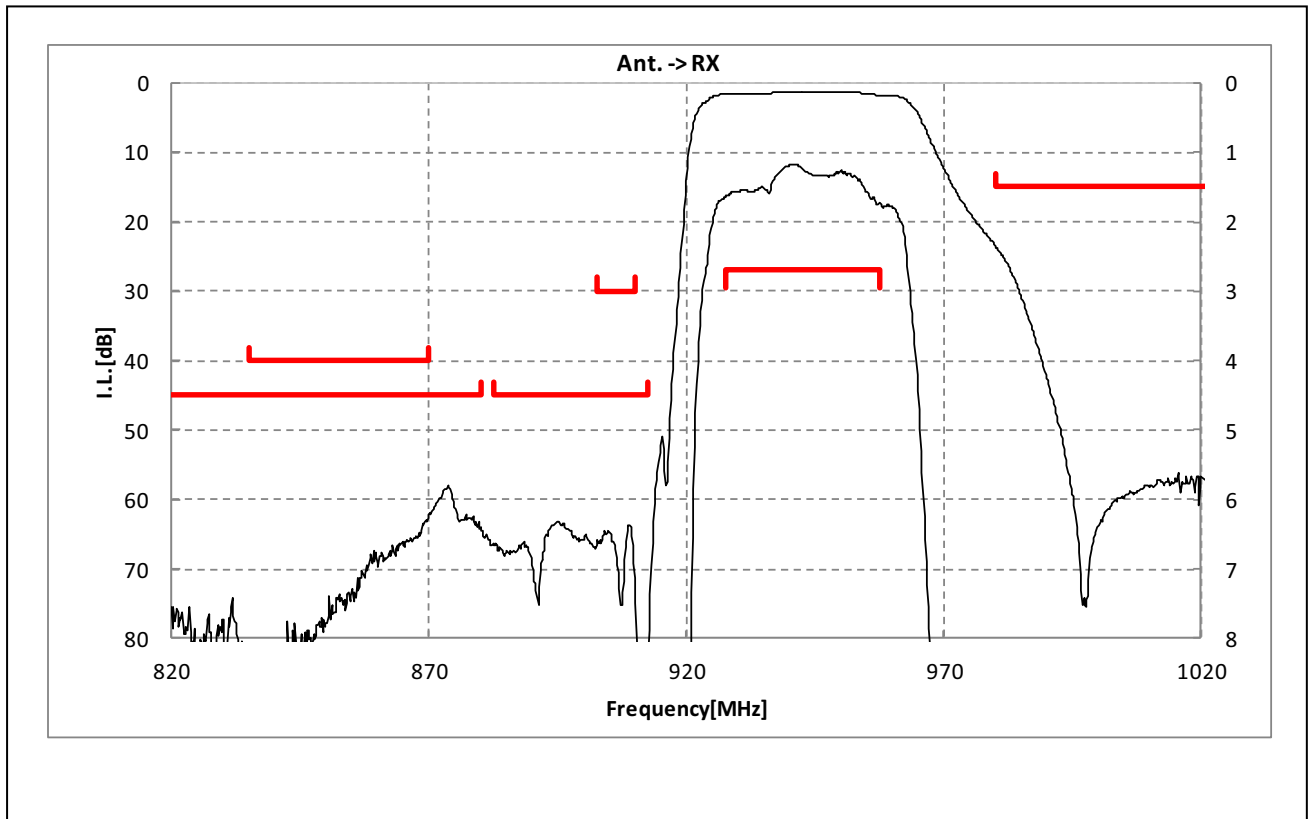
< TX→ANT. >



SAYEY897MCG0F0A (Band8 / Balanced / LR / 1814)

Electrical Characteristic

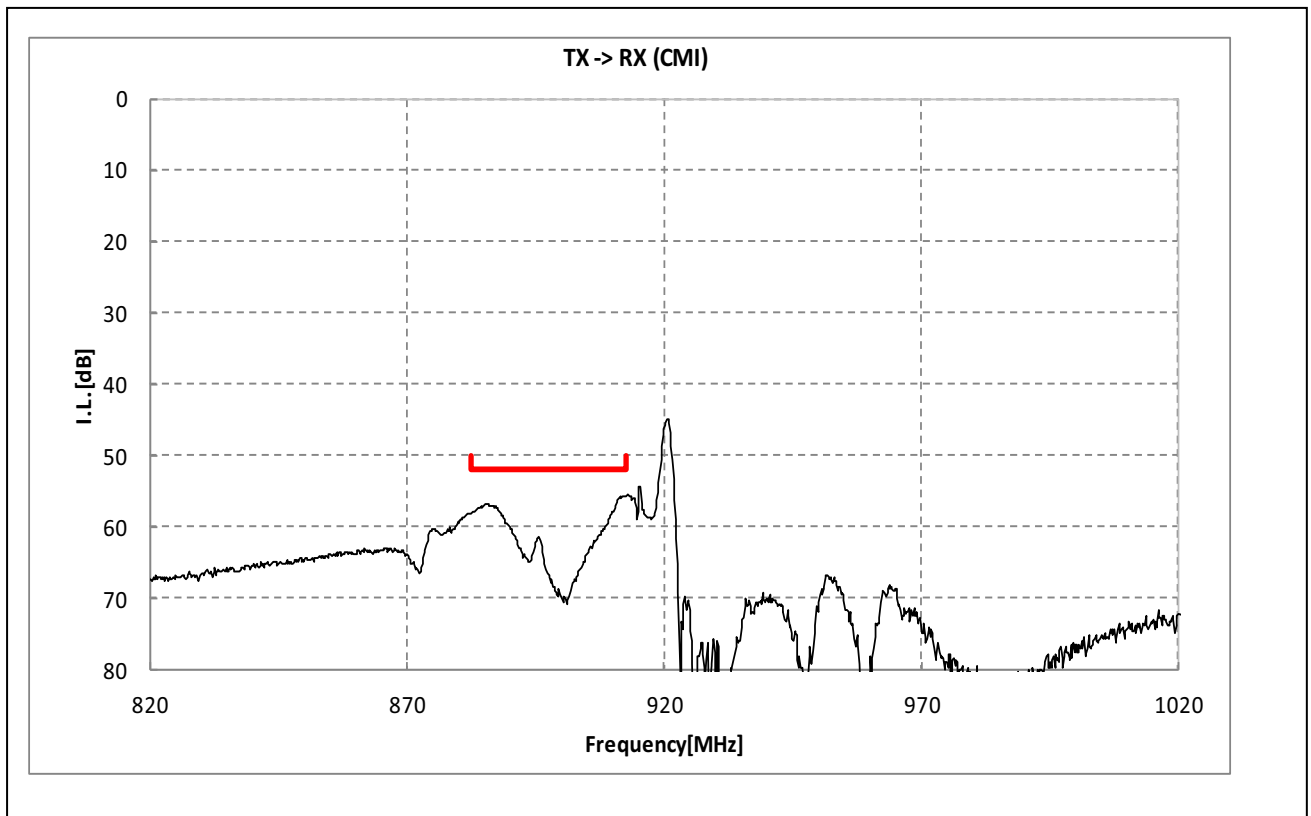
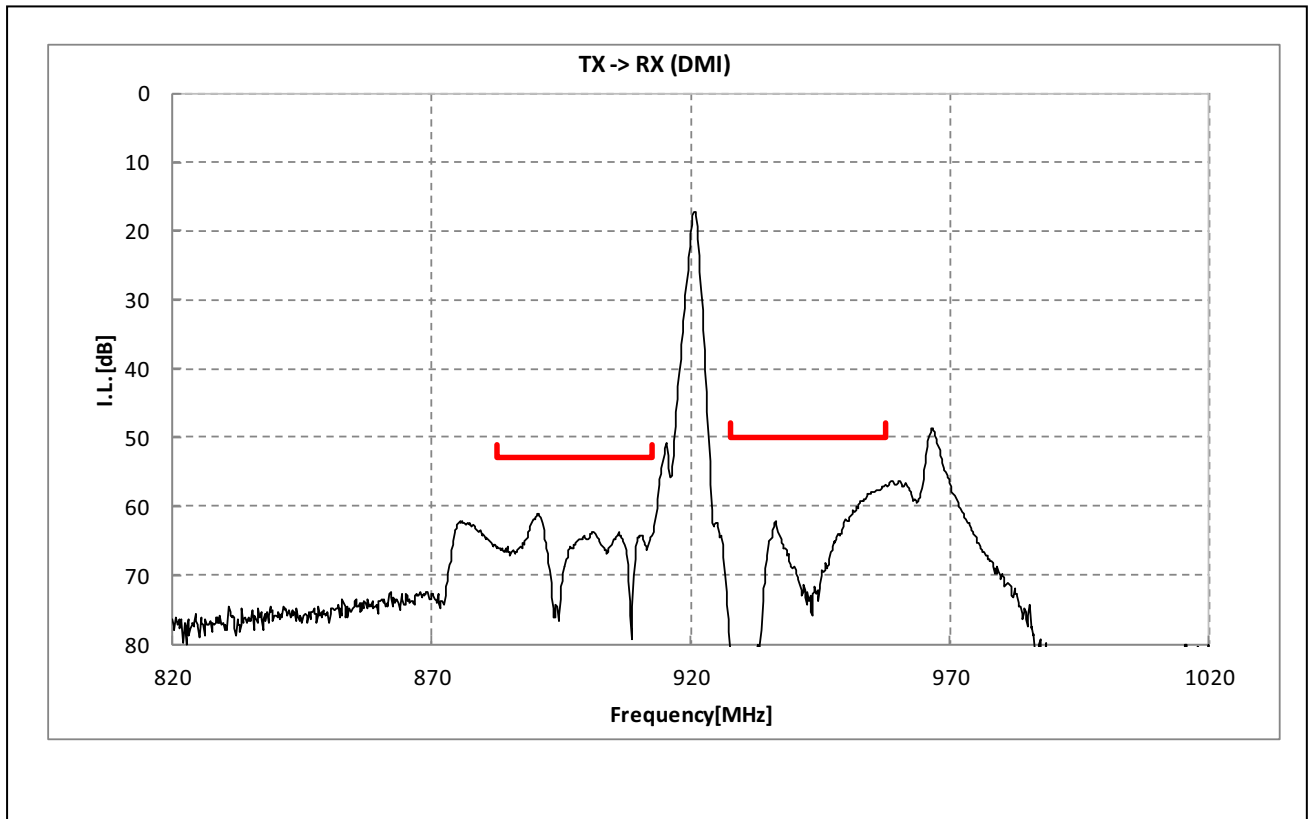
< ANT. → RX >



SAYEY897MCG0F0A (Band8 / Balanced / LR / 1814)

Electrical Characteristic

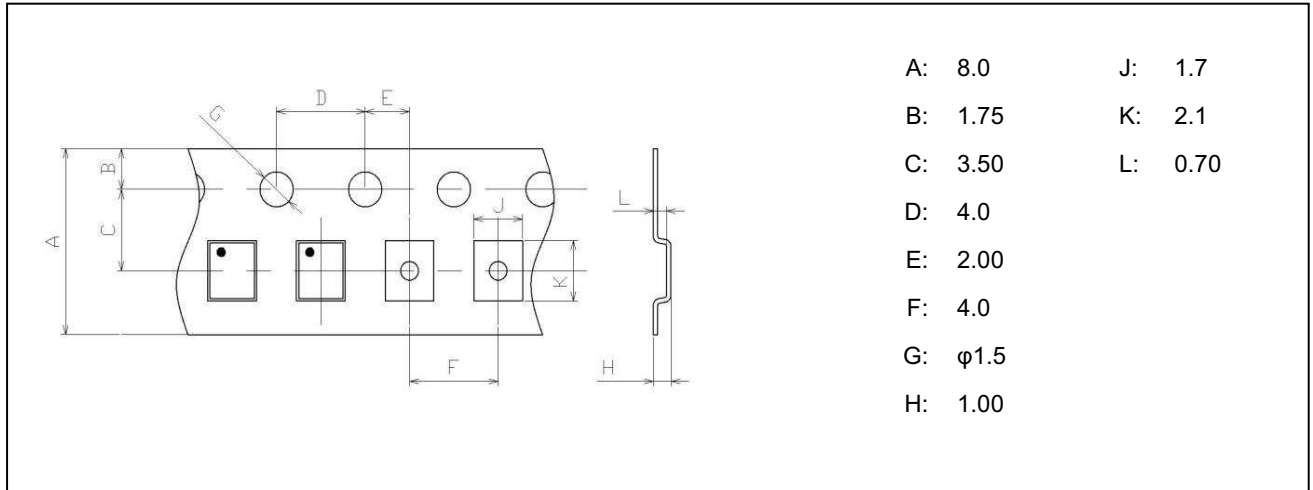
< TX→RX. >



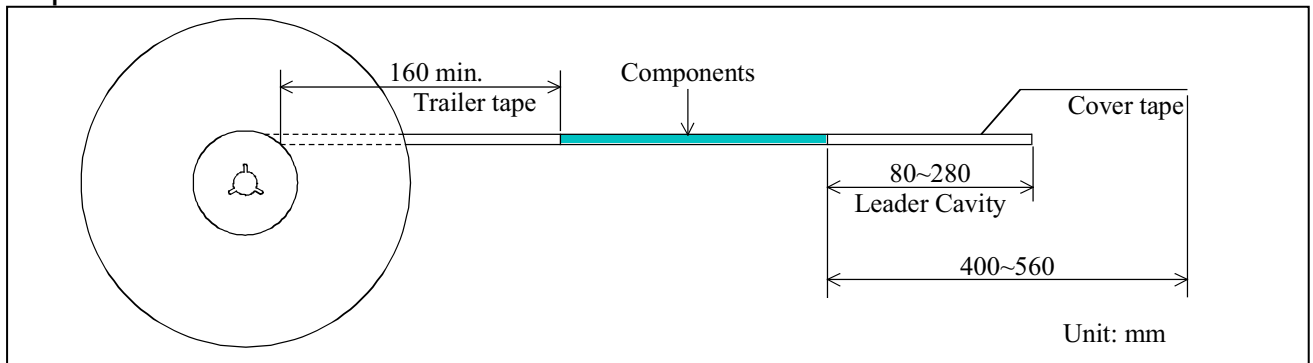
SAYEY897MCG0F0A (Band8 / Balanced / LR / 1814)

Dimensions of Tape & Reel unit: mm

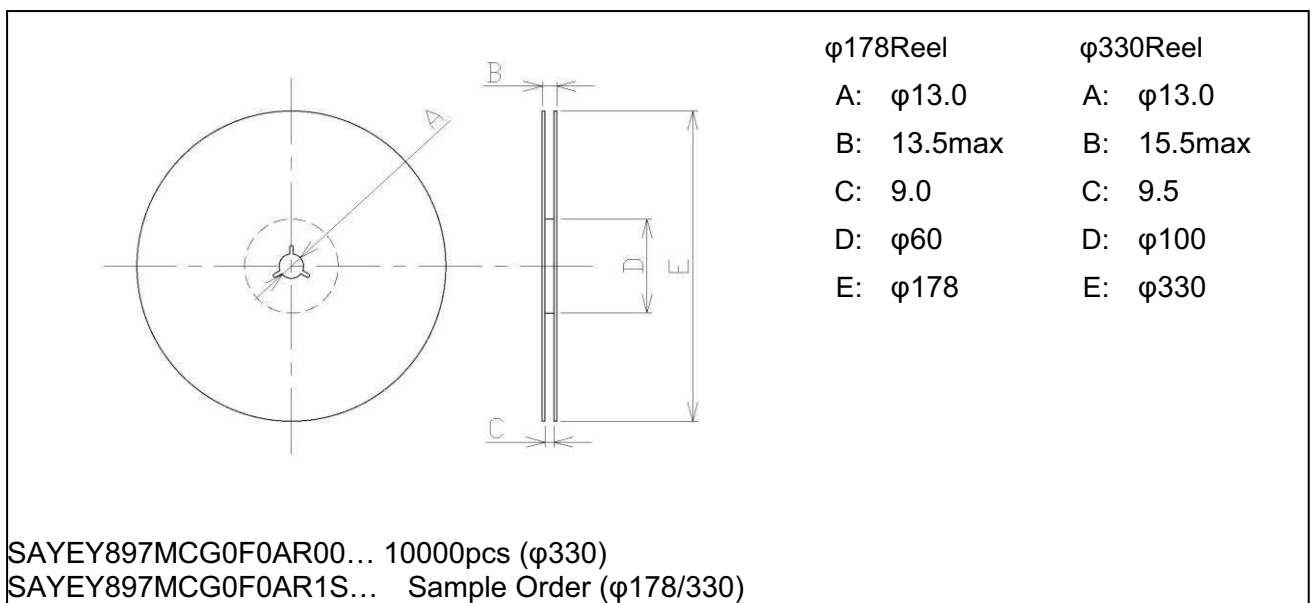
Carrier Tape



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

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.

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 surge voltage.

We do not warrant or represent that any license, either express or implied, is granted under any our patent right, copyright, mask work right, or our other intellectual property right relating to any combination, machine, or process in which our products or services are used. Information provided by us regarding third-party products or services does not constitute a license from us to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from us under our patents or other intellectual property.

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.

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

We reject any liability or product warranty for engineering samples.

In particular we disclaim liability for damages caused by

- the use of the engineering sample other than for evaluation purposes, particularly the installation or integration in the product to be sold by you,
- 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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