

Datasheet of SAW Device

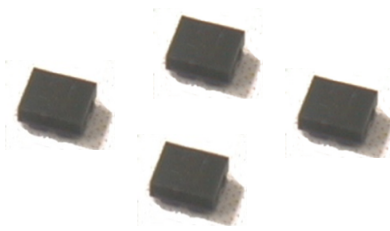
SAW Duplexer

for Band7 / Unbalanced / LR /1814

Murata PN: SAYEY2G53BA0F0A

■ Feature

- LTE-A
- High WiFi Attenuation
- Small Size



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

SAYEY2G53BA0F0A (Band7 / Unbalanced / LR / 1814)

Revision Number	Date	Description
SAYEY2G53BA0F0A_rev. A	Oct-08-2013	■ Initial Release/for MP
SAYEY2G53BA0F0A_rev. B	Nov-12-2013	■ Updated Electrical Characteristics
SAYEY2G53BA0F0A_rev. C	Dec-16-2014	■ Updated Electrical Characteristics
SAYEY2G53BA0F0A_rev. D	Feb-17-2015	■ Updated 5GHz attenuation
SAYEY2G53BA0F0A_rev. E	Sep-02-2015	■ Updated Feature
SAYEY2G53BA0F0A_rev. F	Sep-14-2015	■ Updated Feature
SAYEY2G53BA0F0A_rev. G	Sep-15-2016	■ Updated General Information
SAYEY2G53BA0F0A_rev. H	Jul-25-2017	■ Updated General Information
SAYEY2G53BA0F0A_rev. I	Aug-29-2017	■ Updated General Information

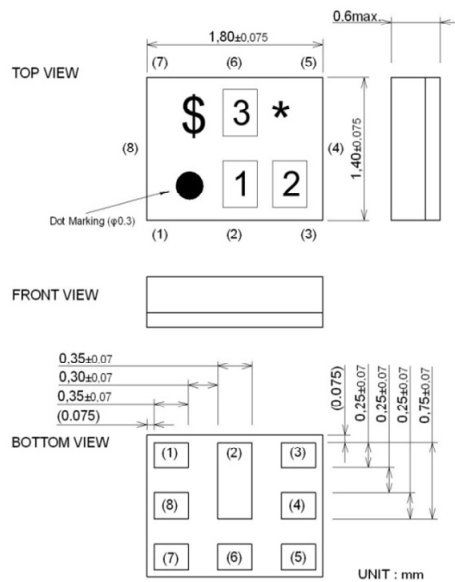
- Operating temperature : -20 to +85 deg.C
- Storage temperature : -40 to +85 deg.C
- Input Power : +29 dBm 5000 h +55 deg.C
- D.C. Volatage between the terminals : 3V (25+/-2 deg.C)
- Minimum Resistance between the terminals : 10M ohm
- RoHS compliance : Yes
- ESD (ElectroStatic Discharge) sensitive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

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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 : 5

2 : R

3 : A

Terminal Number

(6) : Ant

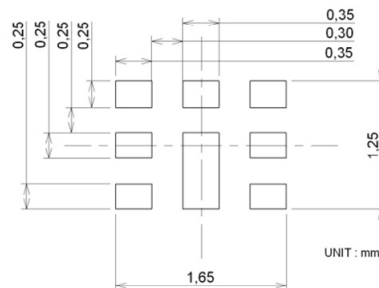
(3) : TX

(1) : RX

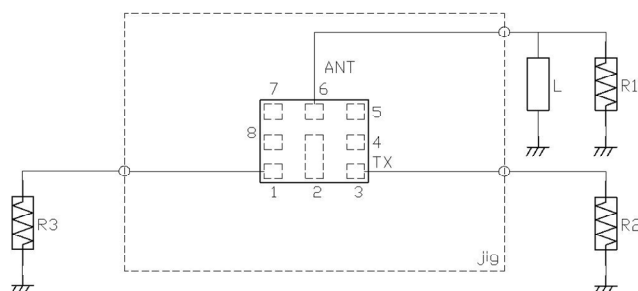
Others : GND

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

Land Pattern



Measurement Circuit (Top Thru View)



R1 : 50 ohm	L : 2.7nH(Ideal inductor)
	: 3.3nH(LQP03TN)
	<Reference>
R2 : 50 ohm	
R3 : 50 ohm	

SAYEY2G53BA0F0A (Band7 / Unbalanced / LR / 1814)

Electrical Characteristic < TX→ANT. >

TX → ANT.		Characteristics			Unit	Note
		(-20 to +85 deg.C)				
		min.	typ.*	max.		
Center Frequency			2535		MHz	
Insertion Loss	2500. to 2570. MHz		2.3	2.9	dB	
	2500. to 2570. MHz		2.3	2.8		
Ripple Deviation	2500. to 2570. MHz		1.0	2.0	dB	+23 to +27deg.C
	2500. to 2570. MHz		0.3	1.1		
VSWR	2500. to 2570. MHz		1.6	2.2		TX
	2500. to 2570. MHz		1.4	2.2		
Absolute Attenuation	10. to 1565.42 MHz	30	44		dB	FM, 921-960MHz, etc
	1559. to 1563. MHz	38	44			
	1565.42 to 1573.37 MHz	38	44		dB	Wideband GPS, lower side-lobe
	1573.37 to 1577.47 MHz	38	44			
	1577.47 to 1585.42 MHz	38	44		dB	Wideband GPS, upper side-lobe
	1597.55 to 1605.89 MHz	38	44			
	1605.89 to 1680. MHz	35	43		dB	
	1805. to 1880. MHz	32	42			
	1900. to 1920. MHz	32	42		dB	B33
	2010. to 2050. MHz	32	40			
	2110. to 2170. MHz	32	42		dB	B1
	2401. to 2468. MHz	40	56			
	2451. to 2473. MHz	40	55		dB _{INT}	CH1-10Average for any 18MHz over frequency range.
	2456. to 2478. MHz	21	48			
	2461. to 2483. MHz	12	24		dB _{INT}	CH12Average for any 18MHz over frequency range.
	2401. to 2468. MHz	40	56			
	2451. to 2473. MHz	40	55		dB _{INT}	+23 to +27deg.C, CH1-10Average for any 18MHz over frequency range.
	2456. to 2478. MHz	40	48			
	2461. to 2483. MHz	19	24		dB _{INT}	+23 to +27deg.C, CH12Average for any 18MHz over frequency range.
	2590. to 2595. MHz	2.0	5.5			
	2595. to 2620. MHz	2.4	11.0		dB	B38
	2620. to 2690. MHz	45	54			
	5000. to 5140. MHz	43	55		dB	2f
5150. to 5850. MHz	41	53				
7500. to 7710. MHz	20	42		dB	3f	

* Typical value at 25±2deg.C

SAYEY2G53BA0F0A (Band7 / Unbalanced / LR / 1814)

Electrical Characteristic < ANT. →RX >

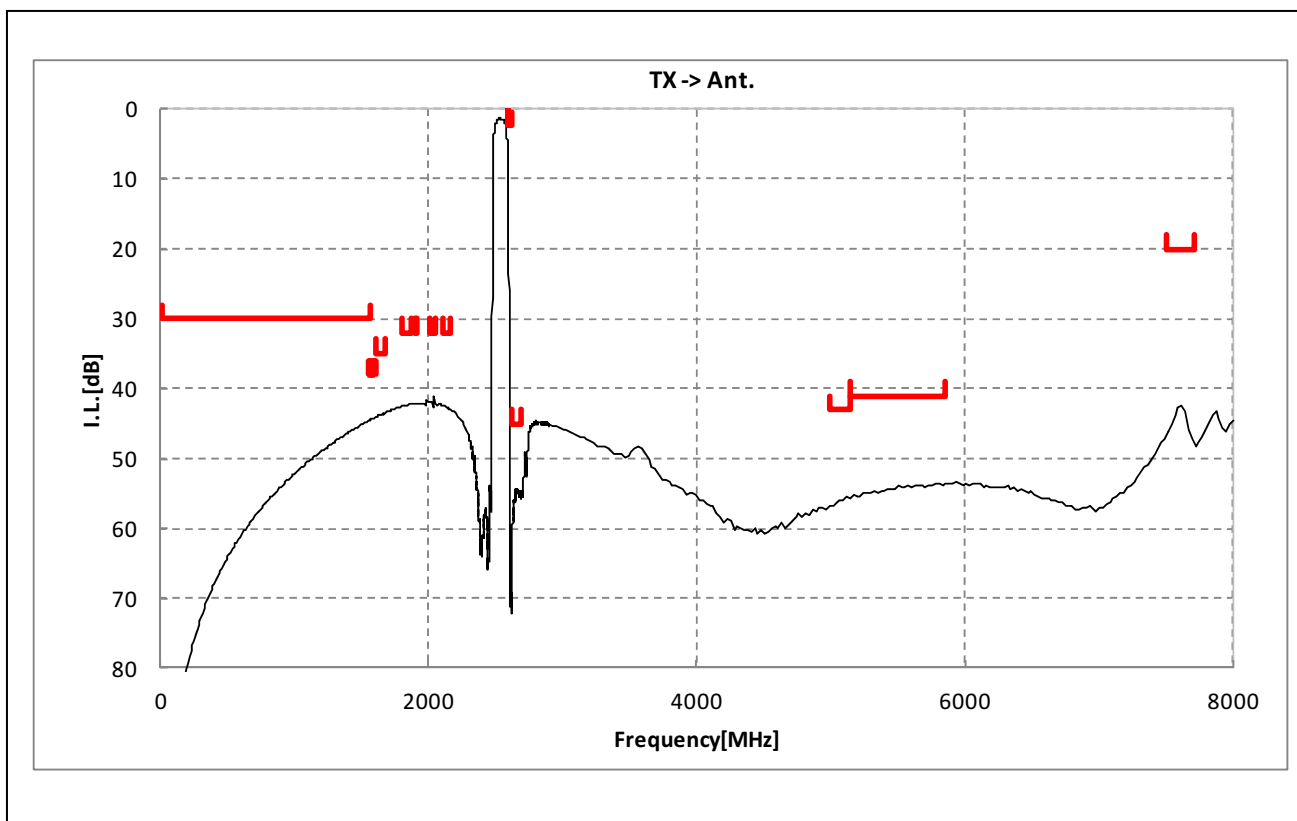
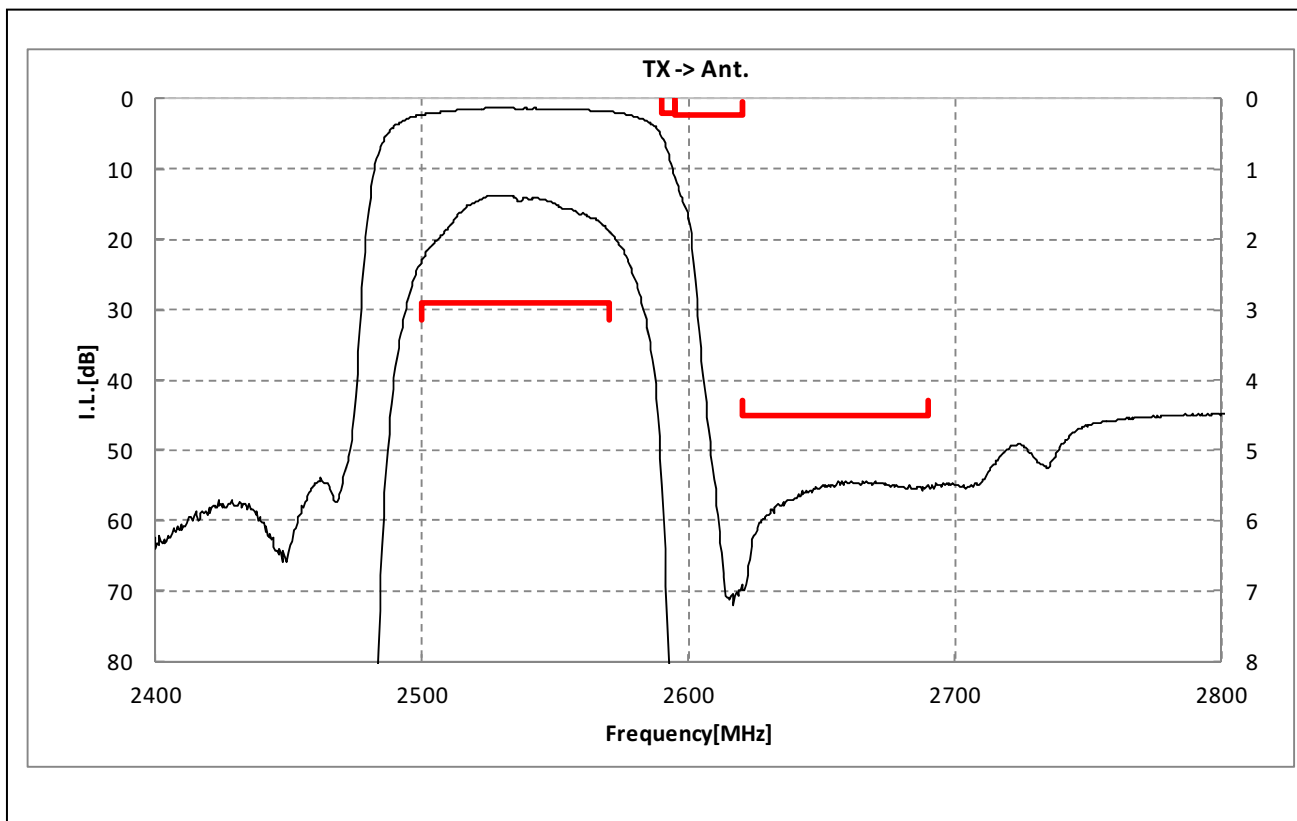
ANT. → RX				Characteristics (-20 to +85 deg.C)			Unit	Note							
				min.	typ.*	max.									
				Center Frequency						2655		MHz			
Insertion Loss				2620.	to	2690.	MHz		2.1	2.9		dB			
				2620.	to	2690.	MHz		2.1	2.8				+23 to +27deg.C	
Ripple Deviation				2620.	to	2690.	MHz		0.5	1.7					
VSWR				2620.	to	2690.	MHz		1.8	2.3			ANT.		
				2620.	to	2690.	MHz		2.0	2.4				RX	
Absolute Attenuation				1.	to	2500.	MHz	40	52						
						45.	MHz	50	100						
				832.	to	862.	MHz	40	63						Rx-Tx
				1710.	to	1785.	MHz	40	52						B20 Tx
				2500.	to	2570.	MHz	45	52						Tx
				2570.	to	2600.	MHz	2.5	10.0						(Rx + Tx)/2
				2775.	to	6000.	MHz	40	50						
				2400.	to	2500.	MHz	40	53						ISM 2.4G
				4900.	to	5950.	MHz	40	50						ISM 5G
				7620.	to	7830.	MHz	35	46						Rx + 2Tx
				7860.	to	8070.	MHz	35	46						3f
				10480.	to	10760.	MHz	20	36						4f
				6000.	to	12750.	MHz	15	34						

* Typical value at 25±2deg.C

SAYEY2G53BA0F0A (Band7 / Unbalanced / LR / 1814)

Electrical Characteristic

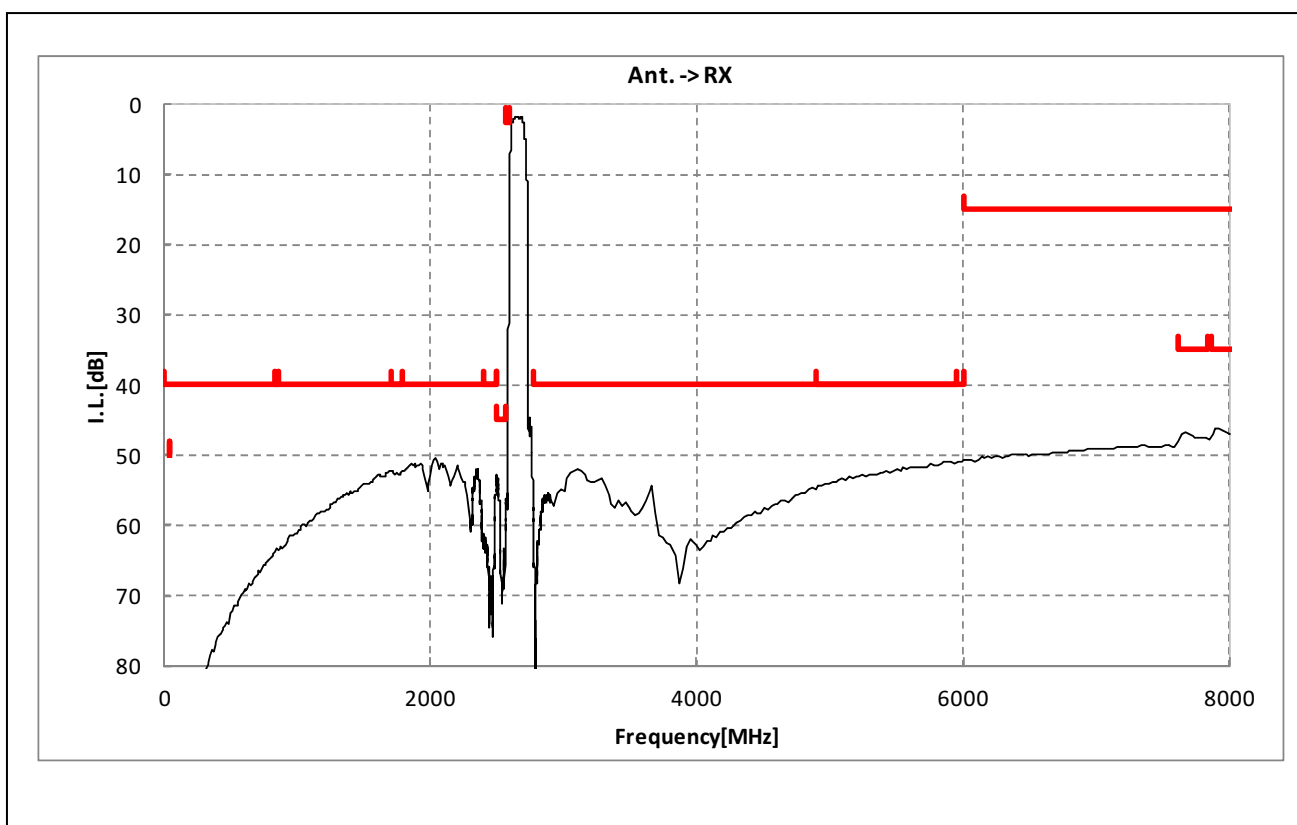
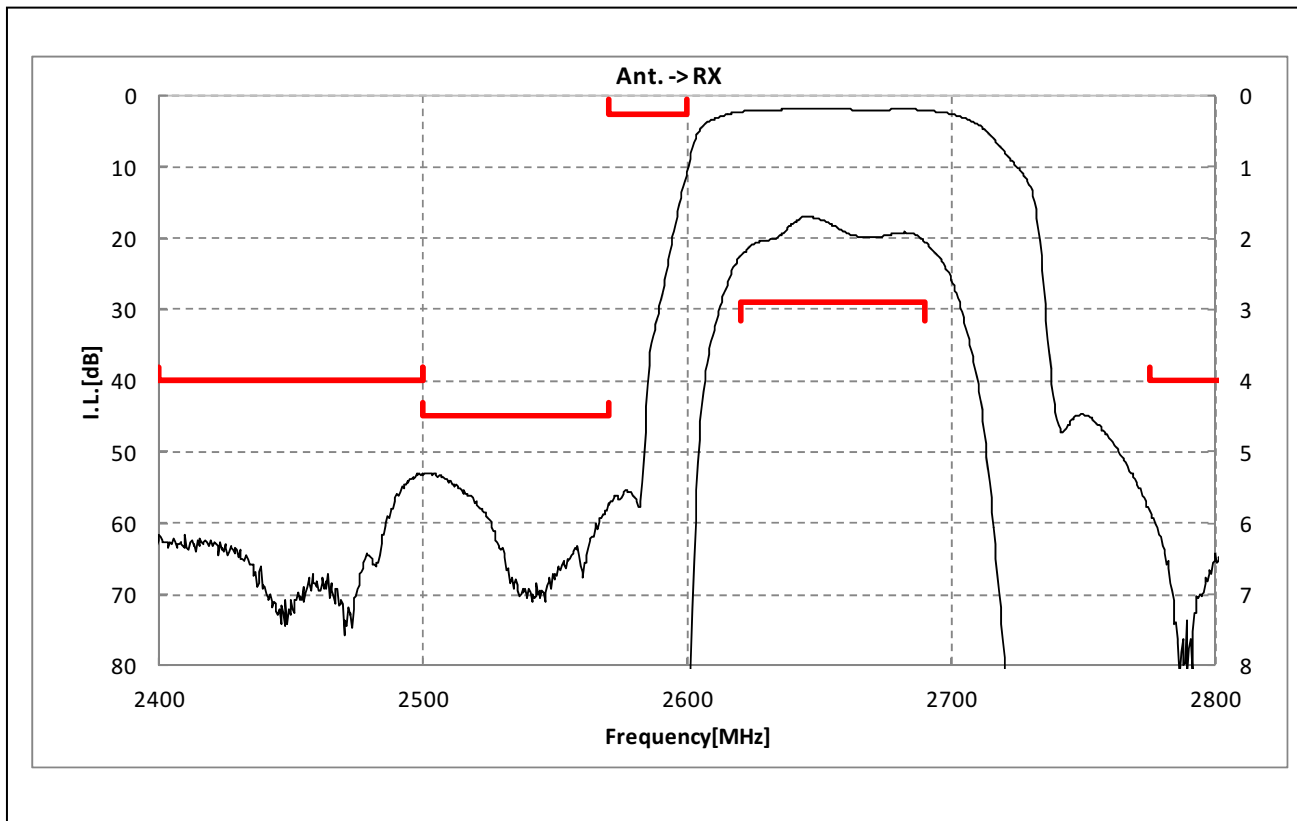
< TX→ANT. >



SAYEY2G53BA0F0A (Band7 / Unbalanced / LR / 1814)

Electrical Characteristic

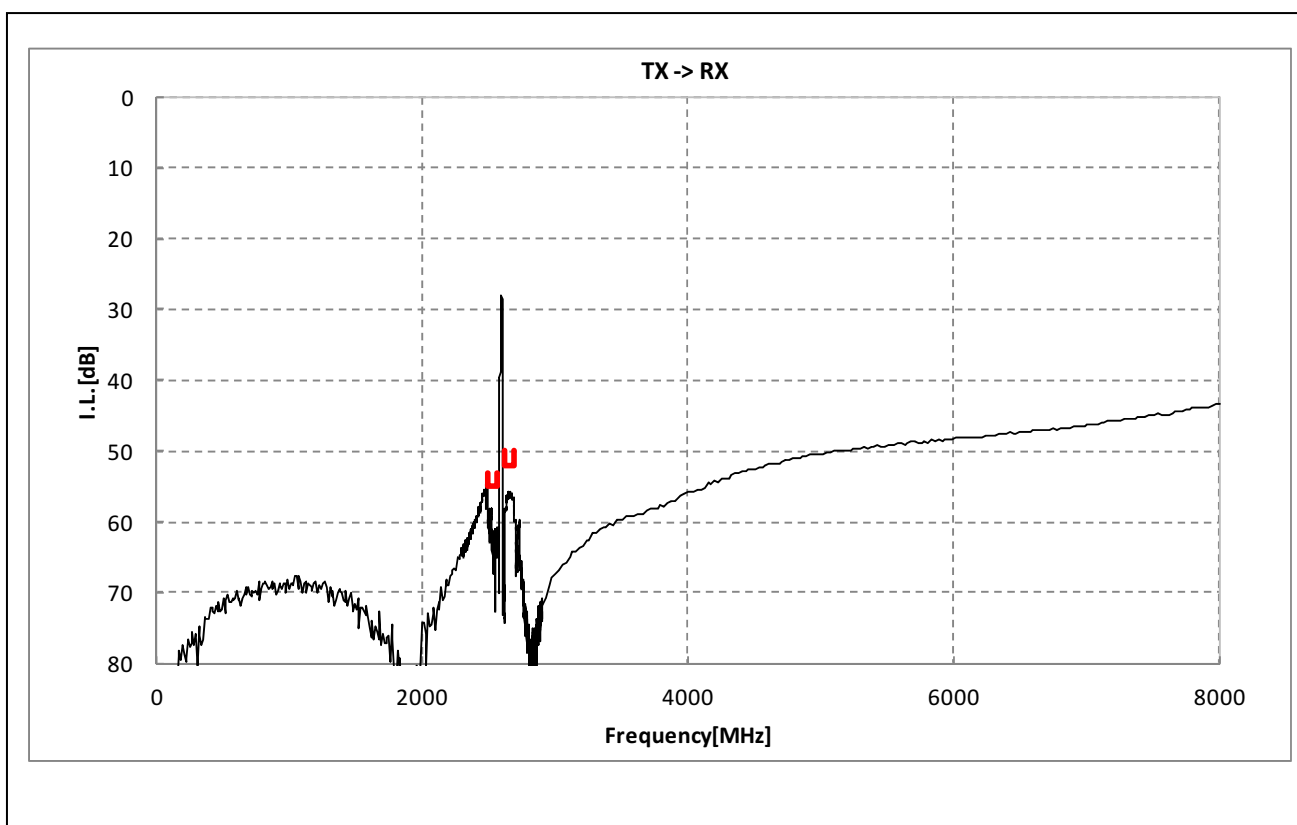
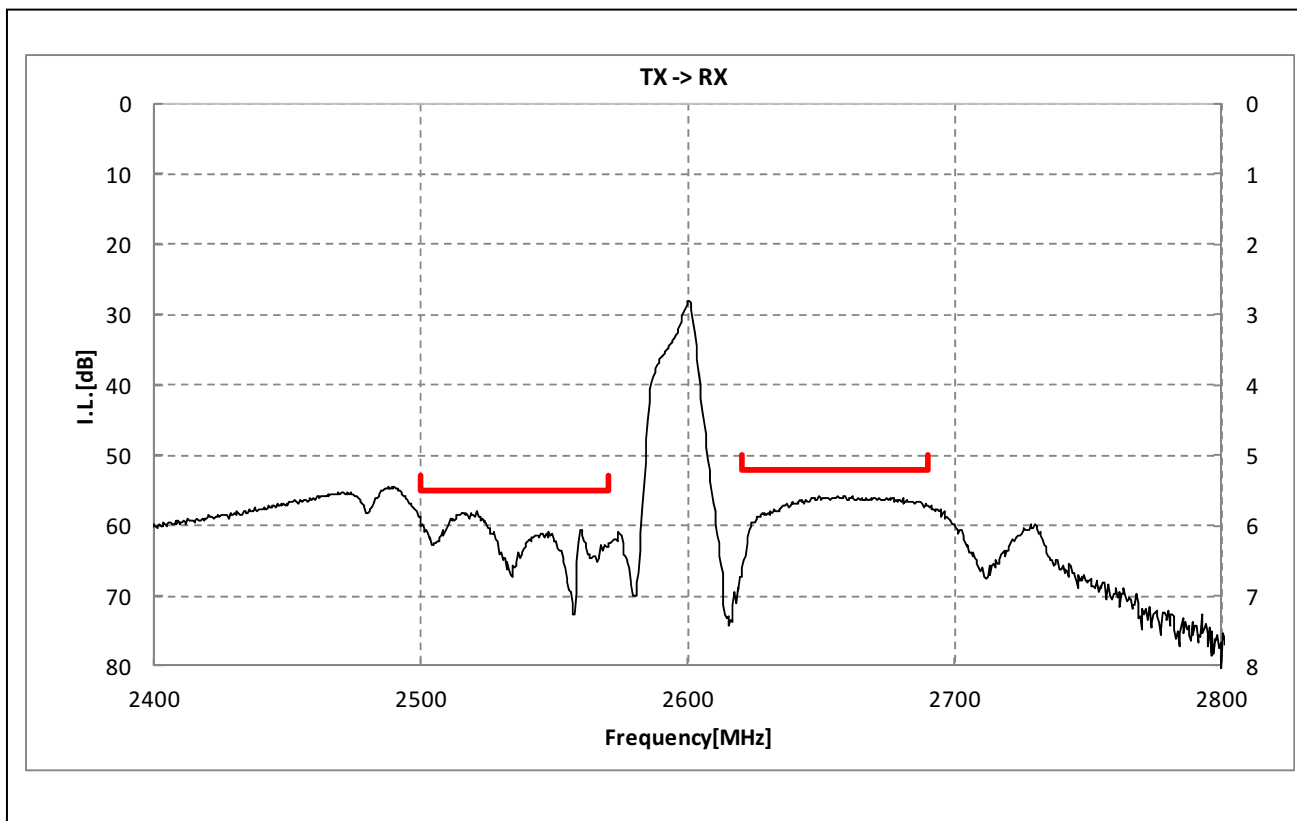
< ANT. → RX >



SAYEY2G53BA0F0A (Band7 / Unbalanced / LR / 1814)

Electrical Characteristic

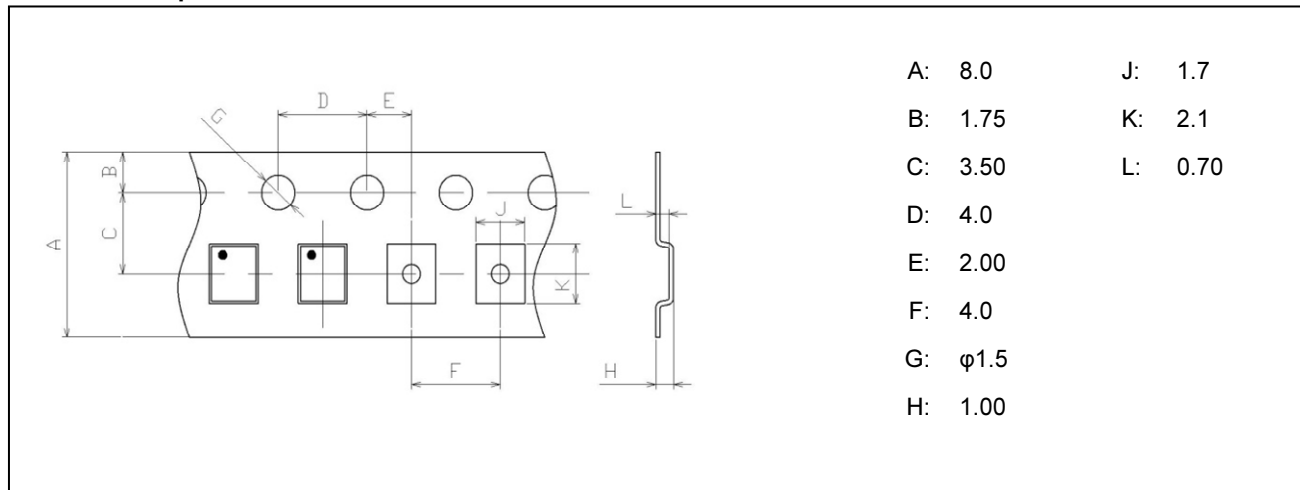
< TX→RX. >



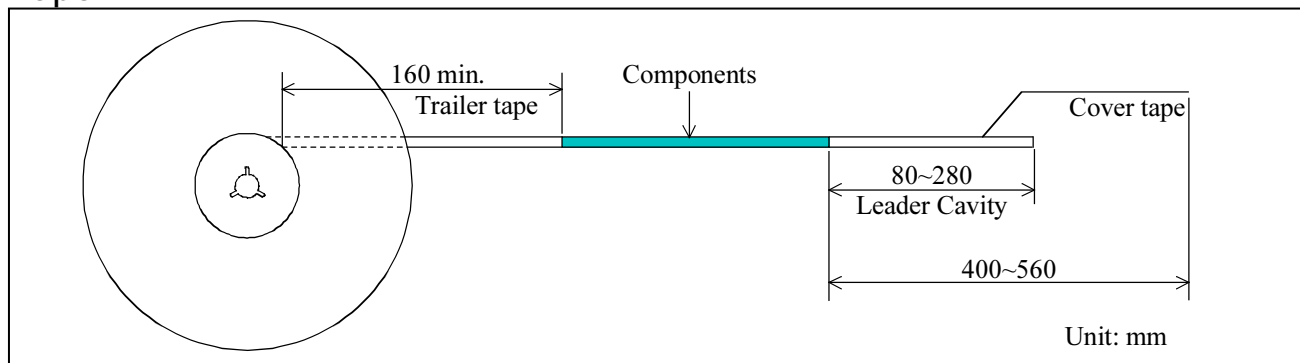
SAYEY2G53BA0F0A (Band7 / Unbalanced / LR / 1814)

Dimensions of Tape & Reel unit: mm

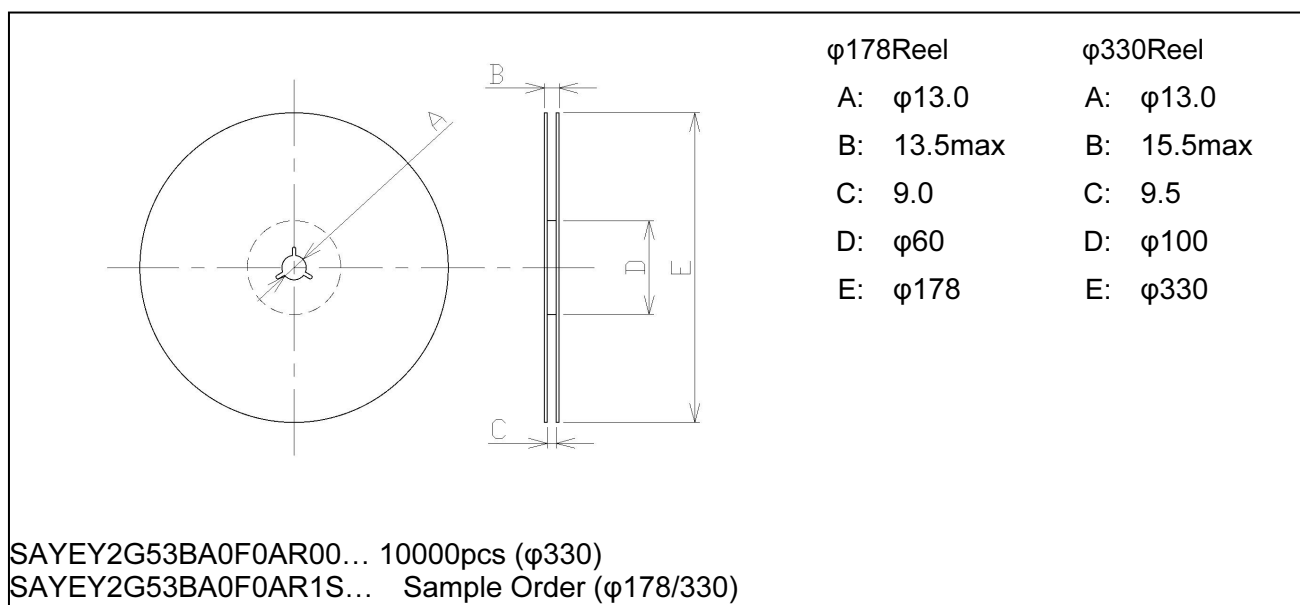
Carrier Tape



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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- 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.

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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 surge voltage.

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