

Datasheet of SAW Device

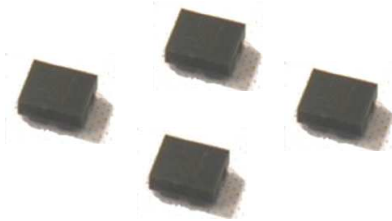
SAW Duplexer

for Band7 / Balanced / LR /1814

Murata PN: SAYEY2G53CA0F0A

■ Feature

- High WiFi Attenuation
- LTE-A



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

SAYEY2G53CA0F0A (Band7 / Balanced / LR / 1814)

Revision Number	Date	Description
SAYEY2G53CA0F0A_rev. A	Apr-23-2014	■ Initial Release
SAYEY2G53CA0F0A_rev. B	Sep-10-2014	■ Updated for MP
SAYEY2G53CA0F0A_rev. C	Sep-03-2015	■ Updated Feature
SAYEY2G53CA0F0A_rev. D	Sep-06-2016	■ Updated General Information
SAYEY2G53CA0F0A_rev. E	Feb-15-2017	■ Updated General Information

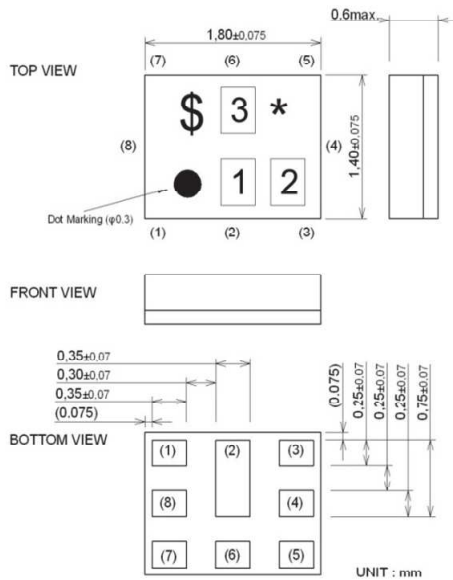
- Operating temperature : -20 to +85 deg.C
- Storage temperature : -40 to +85 deg.C
- Input Power : +29 dBm 5000 h +50 deg.C
- D.C. Volatage between the terminals : 3V (25+/-2 deg.C)
- Minimum Resistance between the terminals : 10M ohm
- RoHS compliance : Yes
- ESD (ElectroStatic Discharge) sensitive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

SAYEY2G53CA0F0A (Band7 / 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 : 5

2 : D

3 : A

Terminal Number

(6) : Ant

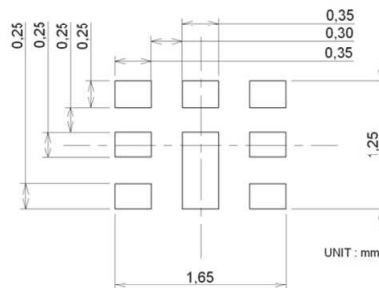
(3) : TX

(1)(8) : RX

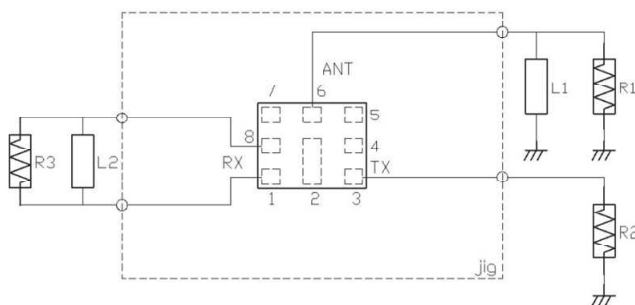
Others : GND

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

Land Pattern



Measurement Circuit (Top Thru View)



R1 : 50 ohm	L1 :2.2nH(Ideal inductor)
	:2.5nH(LQP03TN2N5)
	<Reference>
R2 : 50 ohm	
R3 : 100 ohm	L2 :10nH(Ideal inductor)

SAYEY2G53CA0F0A (Band7 / Balanced / LR / 1814)
Electrical Characteristic < TX→ANT. >

TX → ANT.		Characteristics (-20 to +85 deg.C)			Unit	Note
		min.	typ.*	max.		
		Center Frequency		2535		
Insertion Loss	2500. to 2570. MHz	2.3	3.0	dB		
	2500. to 2570. MHz	2.3	2.8		+23 to +27deg.C	
	2502.5 to 2567.5 MHz	2.2	2.8	dB _{INT}	Any 4.5MHz	
Ripple Deviation	2500. to 2570. MHz	0.9	2.1	dB		
	2500. to 2570. MHz	0.2	1.1	dB	Any 5MHz	
VSWR	2500. to 2570. MHz	1.6	2.0		TX	
	2500. to 2570. MHz	1.5	2.0		ANT.	
Absolute Attenuation	10. to 1565.42 MHz	30	48	dB	FM, 921-960MHz, etc	
	1559. to 1563. MHz	38	48	dB	Compass	
	1565.42 to 1573.37 MHz	38	48	dB	Wideband GPS, lower side-lobe	
	1573.37 to 1577.47 MHz	38	48	dB	Regular GPS, main-lobe	
	1577.47 to 1585.42 MHz	38	48	dB	Wideband GPS, upper side-lobe	
	1597.55 to 1605.89 MHz	38	48	dB	GLONASS	
	1605.89 to 1680. MHz	35	48	dB		
	1805. to 1880. MHz	32	48	dB	B3	
	1900. to 1920. MHz	32	49	dB	B33	
	2010. to 2050. MHz	32	50	dB	B34	
	2110. to 2170. MHz	32	54	dB	B1	
	2400. to 2473. MHz	20	44	dB		
	2401. to 2468. MHz	40	45	dB _{INT}	WLAN ch1-10 18MHz-BW	
	2451. to 2473. MHz	40	46	dB _{INT}	WLAN ch11 18MHz-BW	
	2456. to 2478. MHz	21	44	dB _{INT}	WLAN ch12 18MHz-BW	
	2461. to 2483. MHz	12	24	dB _{INT}	WLAN ch13 18MHz-BW	
	2401. to 2468. MHz	40	45	dB _{INT}	+23 to +27deg.C, WLAN ch1-10 18MHz-BW	
	2451. to 2473. MHz	40	46	dB _{INT}	+23 to +27deg.C, WLAN ch11 18MHz-BW	
	2456. to 2478. MHz	40	44	dB _{INT}	+23 to +27deg.C, WLAN ch12 18MHz-BW	
	2461. to 2483. MHz	19	24	dB _{INT}	+23 to +27deg.C, WLAN ch13 18MHz-BW	
	2590. to 2595. MHz	2.0	6.0	dB	B38	
	2595. to 2620. MHz	3.0	11.0	dB	B38	
	2620. to 2690. MHz	45	54	dB	B7	
	5000. to 5140. MHz	30	39	dB	Second harmonic	
	5150. to 5850. MHz	19	24	dB		
	7500. to 7710. MHz	14	19	dB	Third harmonic	

* Typical value at 25±2deg.C

SAYEY2G53CA0F0A (Band7 / Balanced / LR / 1814)

Electrical Characteristic < TX→RX. >

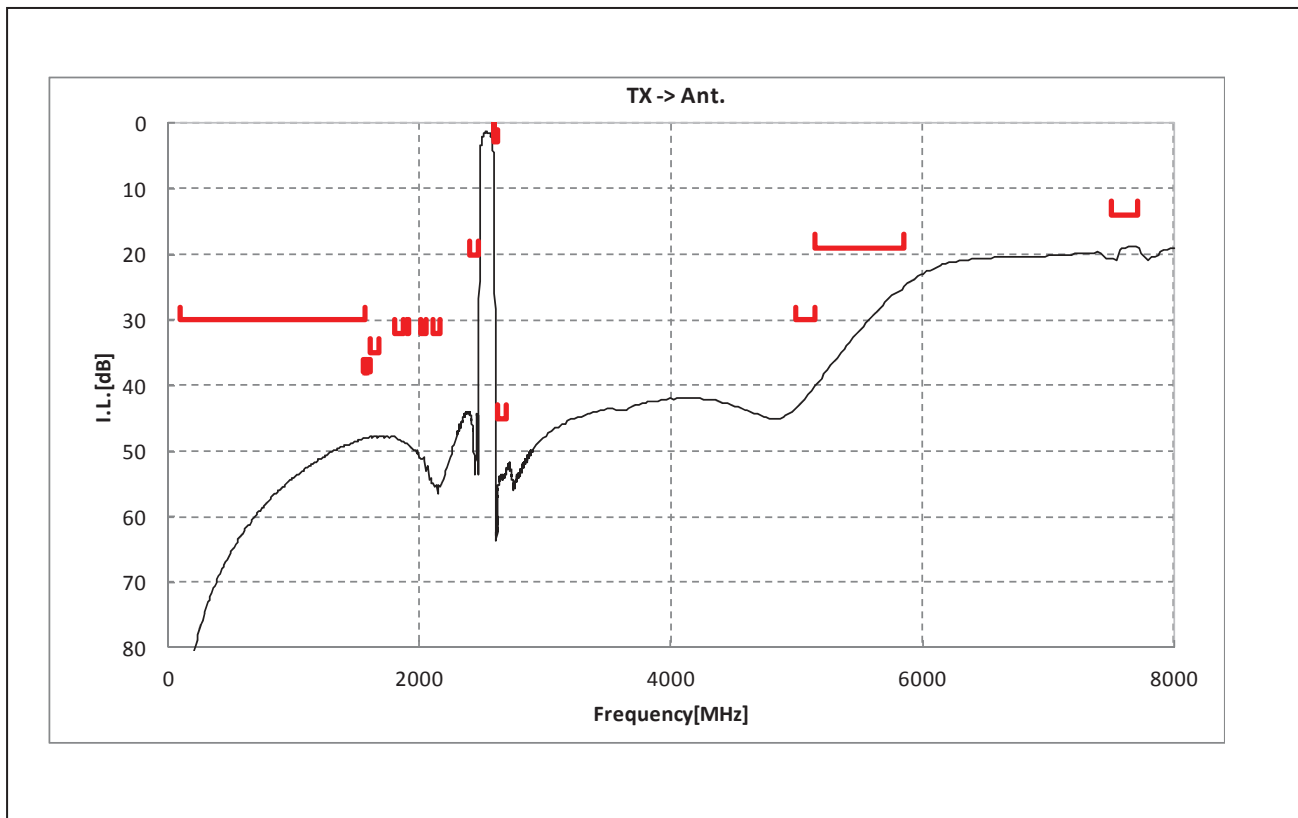
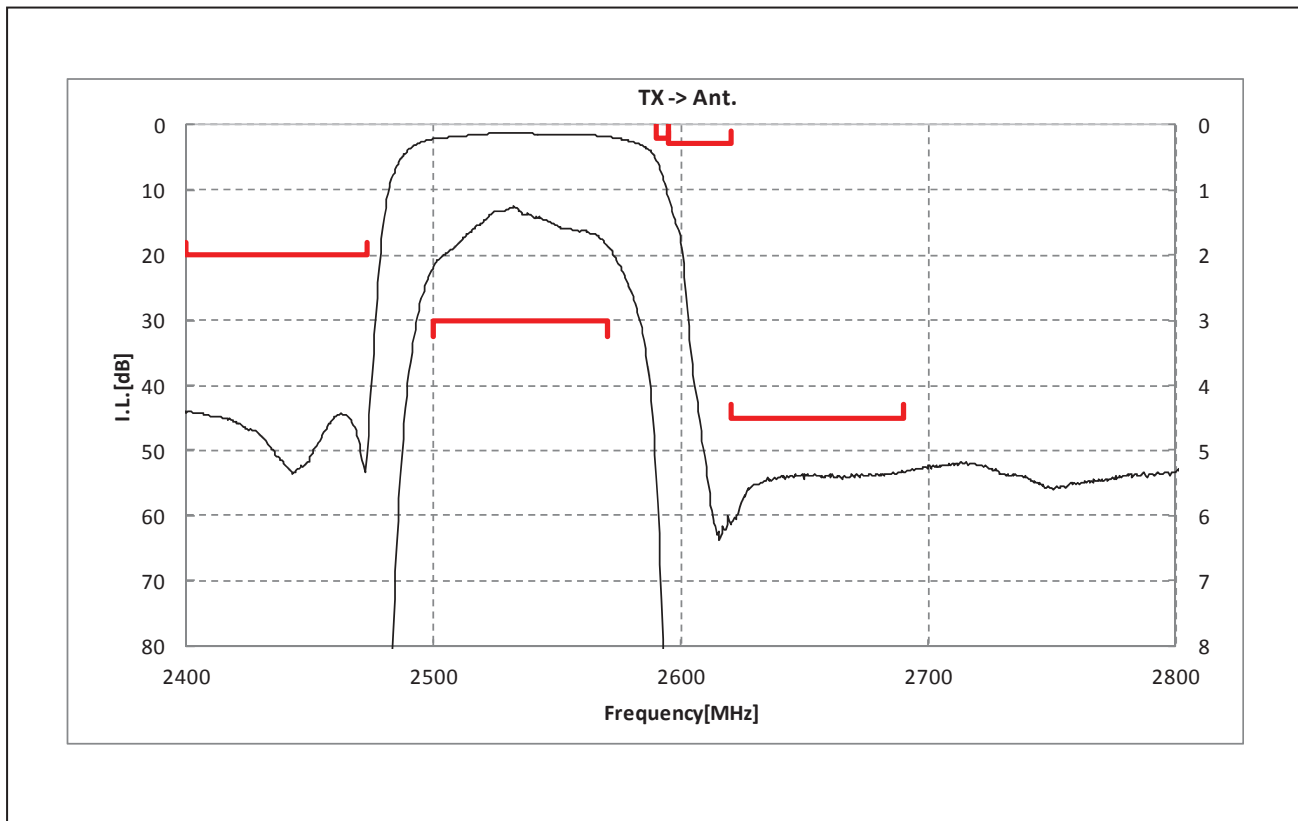
TX → RX	Characteristics (-20 to +85 deg.C)			Unit	Note				
	min.	typ.*	max.						
	Isolation								
Differential Mode	2500.	to	2570.	MHz	53	56			
	2620.	to	2690.	MHz	53	57			
	2500.	to	2570.	MHz	53	56			+23 to +27deg.C
	2620.	to	2690.	MHz	53	57			+23 to +27deg.C
Common Mode	2500.	to	2570.	MHz	45	48			

* Typical value at 25±2deg.C

SAYEY2G53CA0F0A (Band7 / Balanced / LR / 1814)

Electrical Characteristic

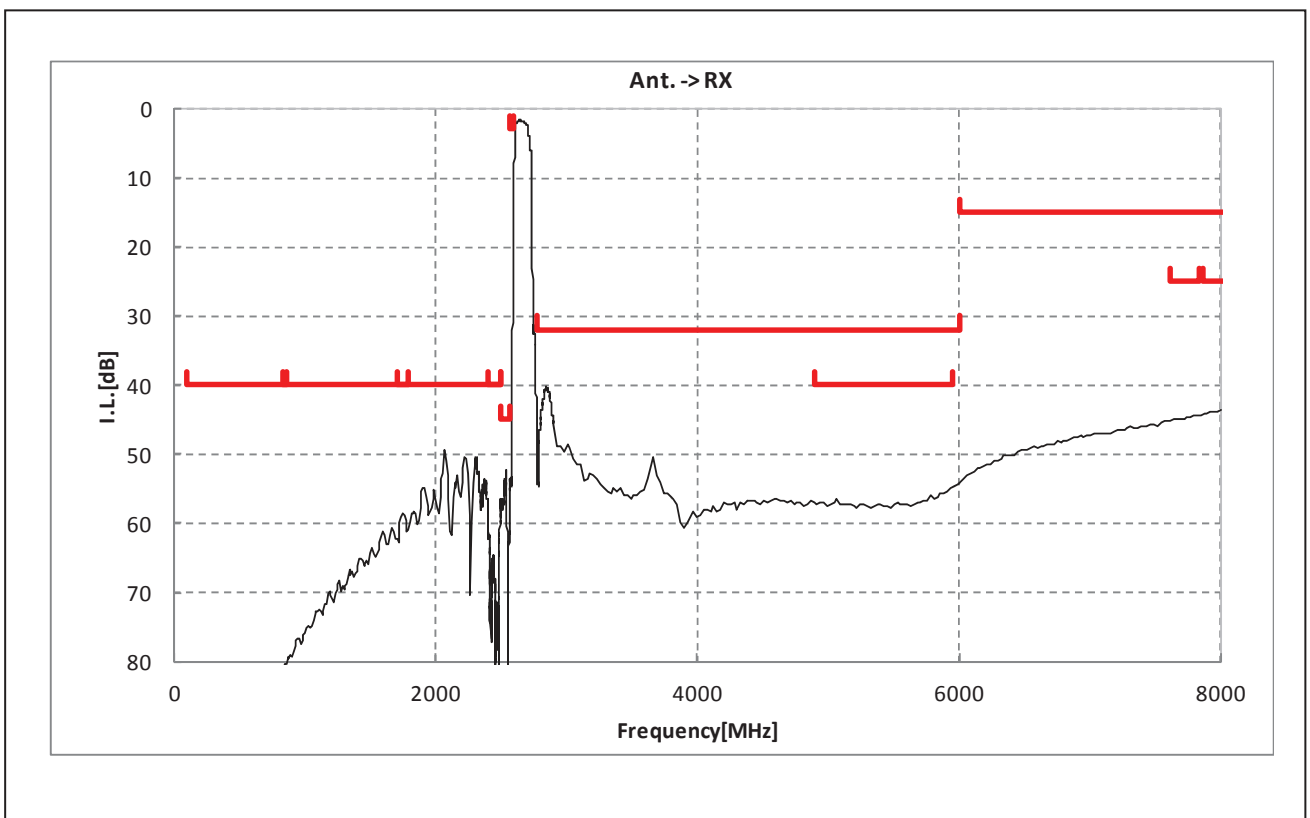
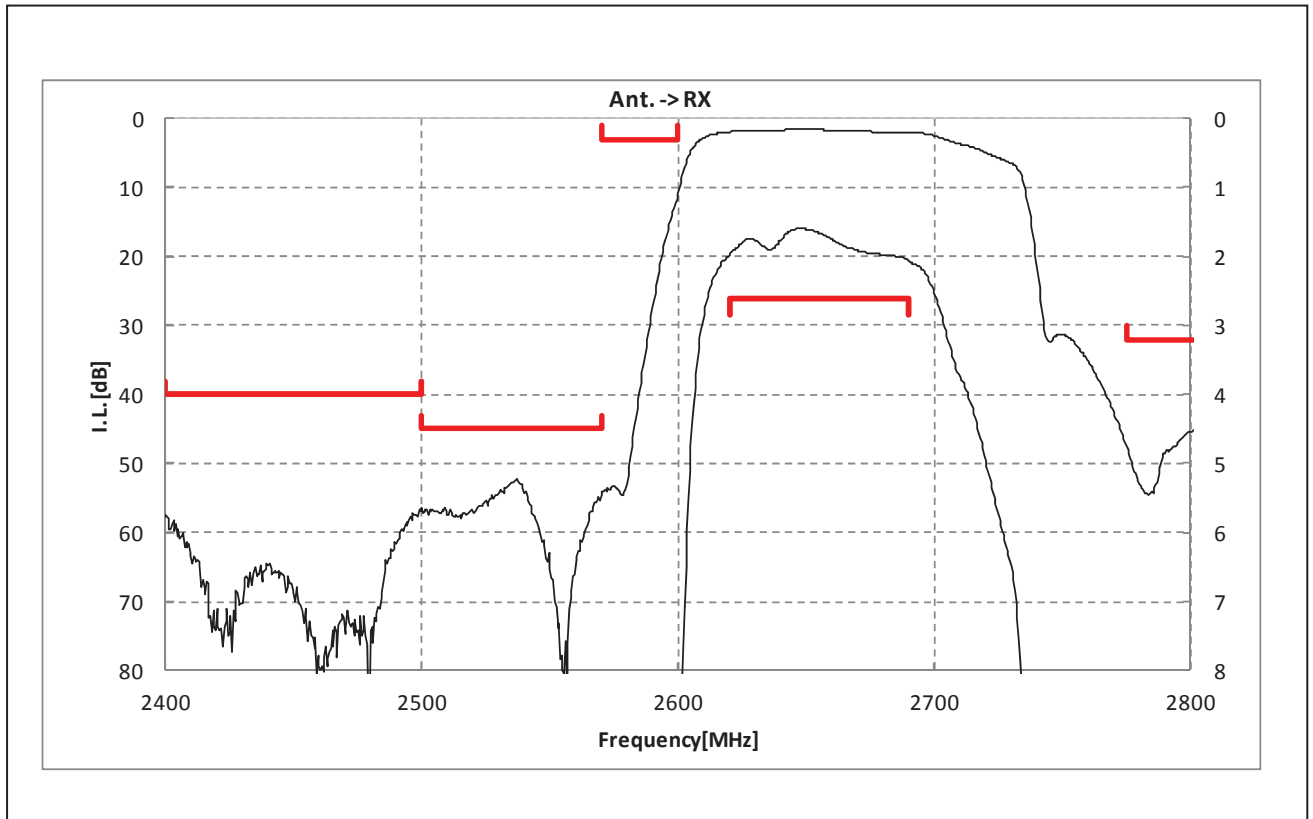
< TX→ANT. >



SAYEY2G53CA0F0A (Band7 / Balanced / LR / 1814)

Electrical Characteristic

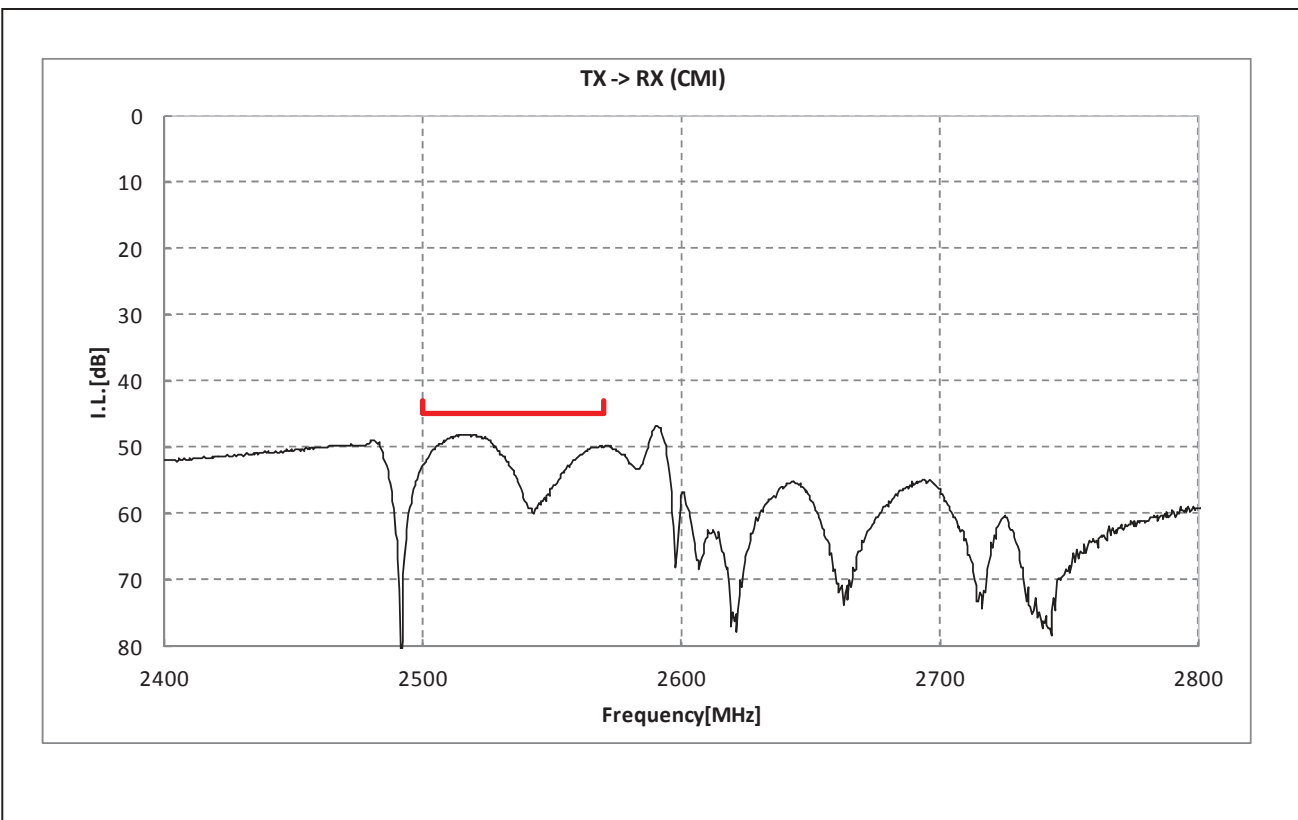
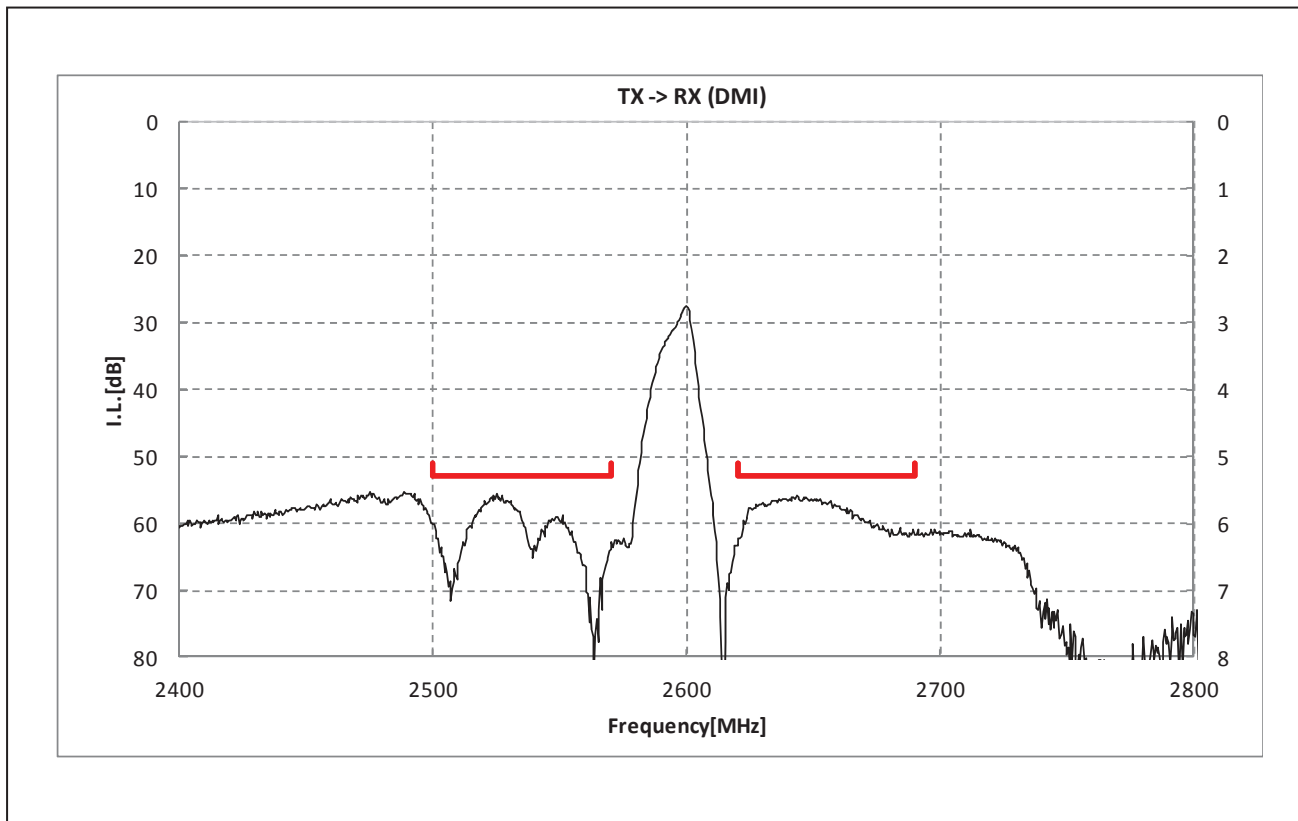
< ANT.→RX >



SAYEY2G53CA0F0A (Band7 / Balanced / LR / 1814)

Electrical Characteristic

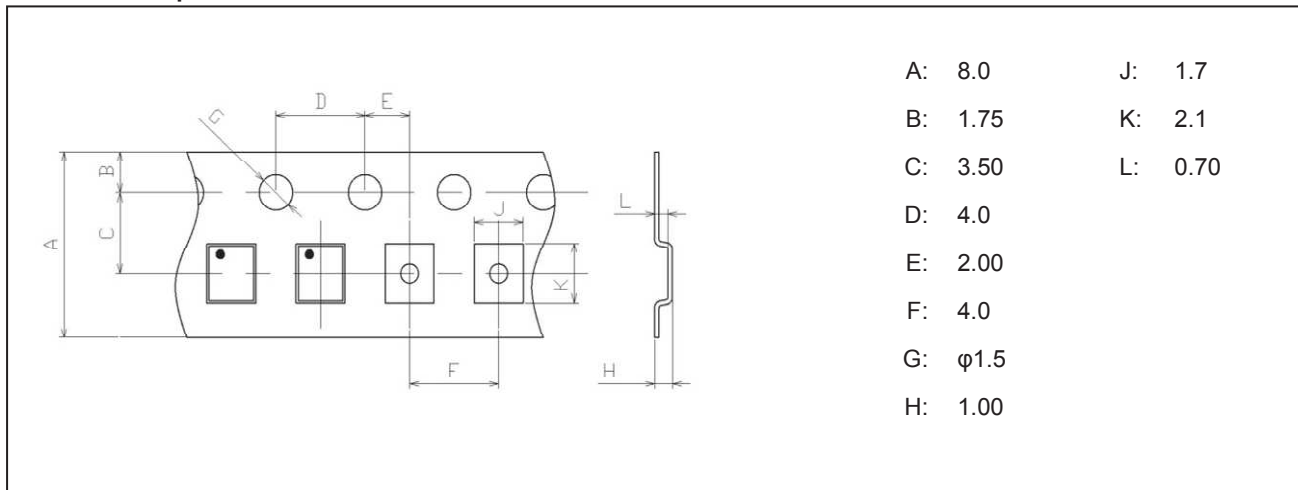
< TX→RX. >



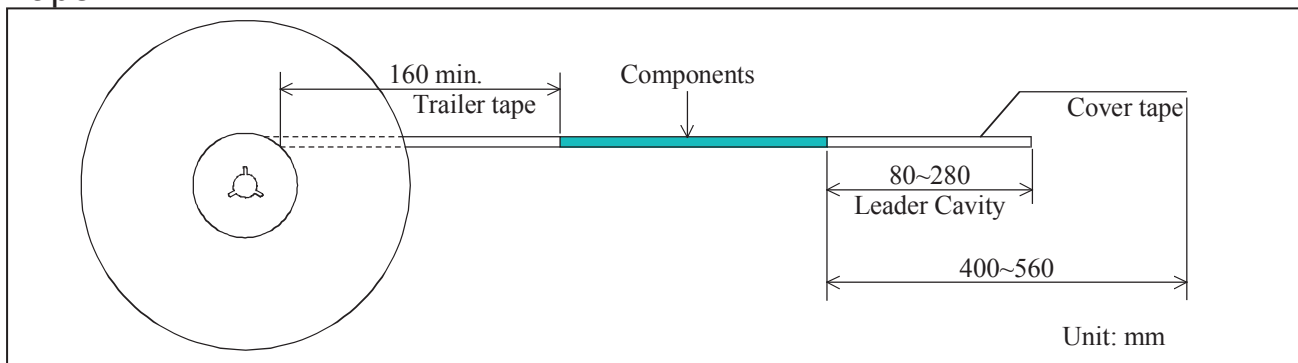
SAYEY2G53CA0F0A (Band7 / Balanced / LR / 1814)

Dimensions of Tape & Reel unit: mm

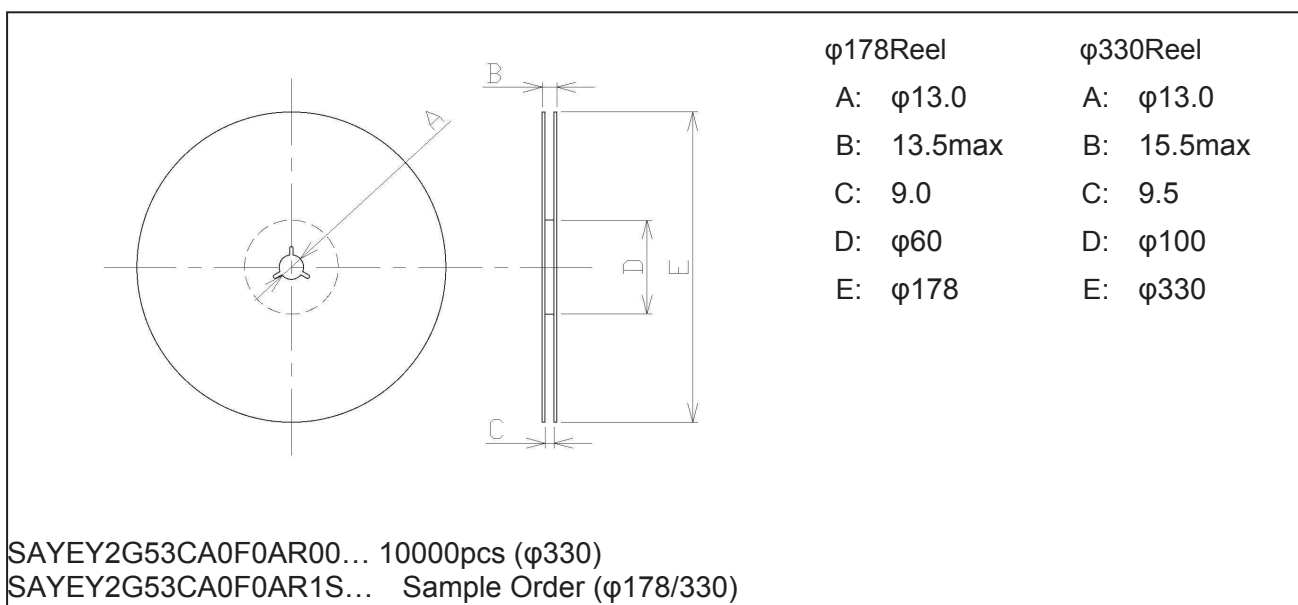
Carrier Tape



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

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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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