

Datasheet of SAW Device

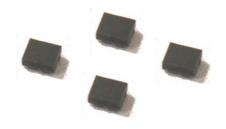
SAW Duplexer

for Band1 / Balanced / LR /1814

Murata PN: SAYEY1G95HA0F0A

Feature

- > Small size
- > 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.



Revision Number	Date	Description						
SAYEY1G95HA0F0A_rev. A	Jul-11-2013	■ Initial Release						
SAYEY1G95HA0F0A_rev. B	Sep-20-2013							
SAYEY1G95HA0F0A_rev. C	Apr-29-2014	■ Updated for MP						
SAYEY1G95HA0F0A_rev. D	Sep-02-2015	■ Updated General Information						
SAYEY1G95HA0F0A_rev. E	Sep-15-2016	■ 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)

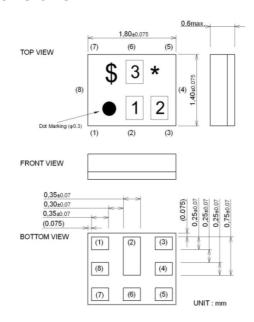
Minimum Resistance between the terminals : 10M ohmRoHS compliance : Yes



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)

1:4

2: U

3:A

Terminal Number

(6): Ant

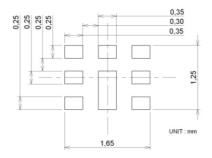
(3):TX

(1)(8): RX

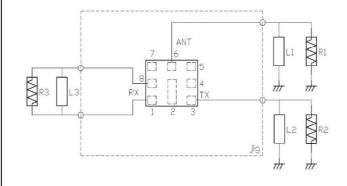
Others: GND

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

Land Pattern



Measurement Circuit (Top Thru View)



R1 : 50 ohm	L1 :2.1nH(Ideal inductor)
	:2.5nH(LQP0603TN2N5)
	<reference></reference>
R2 : 50 ohm	L2 :8nH(Ideal inductor)
R3 : 100 ohm	L3 :10nH(Ideal inductor)



Electrical Characteristic < TX→ANT. >

TX → ANT.						Characteristics (-20 to +85 deg.C)			Note
					min.	typ.*	max.		
Center Frequency						1950		MHz	
Insertion Loss	1920.	to	1980.	MHz		1.9	2.0	dB	
		to	1980.	MHz		1.9	2.0	dB	+23 to +27deg.C
		to	1977.6	MHz		1.8	1.9	dB _{INT}	Any 3.84MHz
		to	1977.6	MHz		1.8	1.9	dB _{INT}	+23 to +27deg.C, Any 3.84MHz
Ripple Deviation	1920.	to	1980.	MHz		0.6	1.2	dB	
VSWR	1920.	to	1980.	MHz		1.4	2.0		TX
		to	1980.	MHz	00	1.4	2.0	ID.	ANT.
Absolute Attenuation		to	1574.	MHz	30	40		dB	
	420. 815.	to	494. 830.	MHz MHz	44 30	63 51		dB dB	DAOTA
		to	849.	MHz	30	50		dВ	B18Tx B5Tx
	830.	to	845.	MHz	30	50		dВ	B19Tx
		to	894.	MHz	44	49		dB	DISIX
	880.	to to	915.	MHz	30	48		dB	B8Tx
	925.	to	960.	MHz	42	47		dB	BOIX
	1226.	to	1250.	MHz	37	42		dB	GPS L2
		to	1462.9	MHz	30	40		dB	B21Tx
	1475.	to	1496.	MHz	38	40		dB	B11Rx
	1496.	to	1511.	MHz	37	40		dB	B21Rx
	1559.	to	1563.	MHz	38	40		dB	Compass
		to	1573.37	MHz	38	40		dB	Wideband GPS, lower side lobe
		to	1577.46	MHz	38	40		dB	Regular GPS, main lobe
		to	1585.42	MHz	38	40		dB	Wideband GPS, upper side lobe
		to	1605.88	MHz	38	41		dB	GLONASS
		to	1805.	MHz	25	37		dB	02014100
		to	1865.	MHz	25	35		dB	
	1865.	to	1880.	MHz	10	34		dB	
	1880.	to	1895.	MHz	3.9	15.0		dB	
	2010.	to	2025.	MHz	4.7	28.0		dB	
	2010.	to	2025.	MHz	20	28		dB	+23 to +27deg.C
	2110.	to	2170.	MHz	44	49		dB	Ĭ
	2400.	to	2500.	MHz	32	36		dB	2.4GHzISM
	2620.	to	2690.	MHz	28	33		dB	
	3840.	to	3960.	MHz	23	29		dB	2f
	4900.	to	5950.	MHz	16	22		dB	3f
	4905.	to	5845.	MHz	17	22		dB	
		to	7920.	MHz	15	26		dB	4f
	9600.	to	9900.	MHz	15	25		dB	5f
	11520.	to	11880.	MHz	15	25		dB	6f
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^{*} Typical value at 25±2deg.C



Electrical Characteristic < ANT.→RX >

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				Characteristics					
A	$NT. \rightarrow RX$				(-20 to +85 deg.C)		Unit	Note	
					min.	typ.*	max.		
Center Frequency	1					2140		MHz	
Insertion Loss	2110.	to	2170.	MHz		1.8	2.1	dB	
	2110.	to	2170.	MHz		1.8	2.0	dB	+23 to +27deg.C
	2112.4	to	2167.6	MHz		1.8	2.1	dB _{INT}	Any 3.84MHz
	2112.4	to	2167.6	MHz		1.8	2.0	dB _{INT}	+23 to +27deg.C, Any 3.84MHz
Ripple Deviation	2110.		2170.	MHz		0.5	1.0	dB	123 to 127deg.C, Ally 3.04WH2
VSWR	2110.	to	2170.	MHz		1.5	2.0	uБ	IRX
VSVIK	2110.	to	2170.	MHz		1.5	2.0		ANT.
Amplitudo Polonos	2110.	to	2170.	MHz	-1.0	-0.3	1.0	dB	ANI.
Amplitude Balance	2110.	to	2170.		170	174	190		
Phase Balance		to		MHz			190	deg.	
Absolute Attenuation	1.	to	1920.	MHz	27	32		dB	D. T.
	740		190.	MHz	40	124		dB	Rx-Tx
	718.	to	748.	MHz	50	83		dB	B28Tx
	814.	to	849.	MHz	40	81		dB	B26Tx
	880.	to	915.	MHz	40	76		dB	B8Tx
	1427.	to	1447.	MHz	40	49		dB	B11Tx
	1447.	to	1463.	MHz	40	49		dB	B21Tx
	1730.	to	1790.	MHz	40	45		dB	2Tx-Rx
	1710.	to	1785.	MHz	40	45		dB	B3Tx
	1920.	to	1980.	MHz	45	59		dB	Tx
	1980.	to	2015.	MHz	15	50		dB	
	2015.	to	2050.	MHz	18	29		dB	(Rx+Tx)/2
	2050.	to	2075.	MHz	3.9	9.0		dB	,
	2255.	to	6130.	MHz	28	33		dB	
	2400.	to	2500.	MHz	28	34		dB	2.4GHzISM
	2500.	to	2570.	MHz	38	43		dB	B7Tx
	4030.	to	4150.	MHz	40	52		dB	Rx+Tx
	4220.		4340.	MHz	40	51		dB	2f
	4340.	to	13025.		15	39		dB	21
		to		MHz					FOULTON
	4900.	<u>to</u>	5950.	MHz	34	48		dB	5GHzISM
	5950.	to	6130.	MHz	30	47		dB	Rx+2Tx
	6130.	to	6330.	MHz	30	47		dB	
	6330.	to	6510.	MHz	30	45		dB	3f
	8440.	to	8680.	MHz	20	41		dB	4f
	10550.	to	10850.	MHz	20	41		dB	5f
	12660.	to	13020.	MHz	15	41		dB	6f
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						<u> </u>			
					<u> </u>				* Transical region of OF (Odes) O

^{*} Typical value at 25±2deg.C



Electrical Characteristic < TX→RX. >

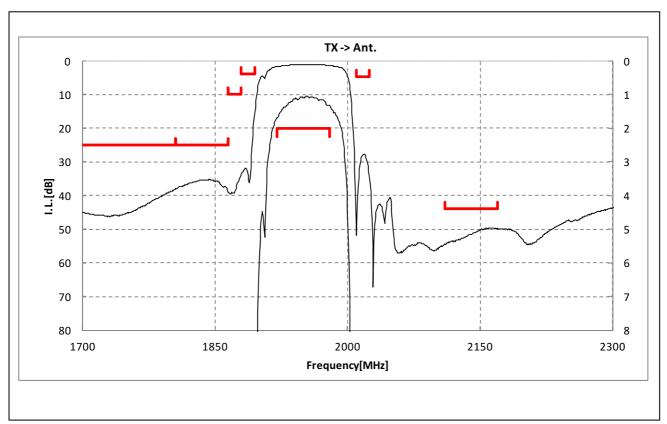
			Cha		stics	Unit			
	$TX \rightarrow RX$				Characteristics (-20 to +85 deg.C) min. typ.* max.			Note	
Isolation	<u> </u>			min.	ιyρ.	max.			
Differential Mode	1574. to 1920. to 1922.4 to	1577. 1980. 1977.6	MHz MHz MHz	40 55 55	70 58 58		dB dB dB _{INT}	Any 3.84MHz	
	2110. to 2112.4 to 3830. to	2170. 2167.6 3970.	MHz MHz MHz	52 52 30	59 60 58		dB dB _{INT}	Any 3.84MHz	
Common Mode	5750. to	5950. 1980.	MHz MHz	30 48	56 51		dB dB		
Sommon med	1922.4 to	1977.6	MHz	48	51		dB _{INT}	Any 3.84MHz	
								* T	

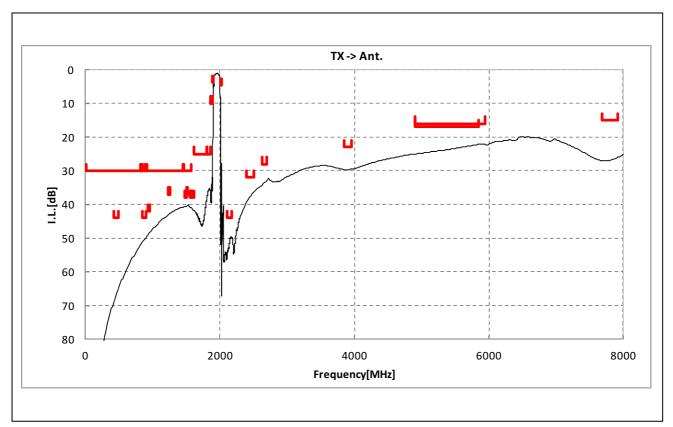
^{*} Typical value at 25±2deg.C



Electrical Characteristic

< TX→ANT. >

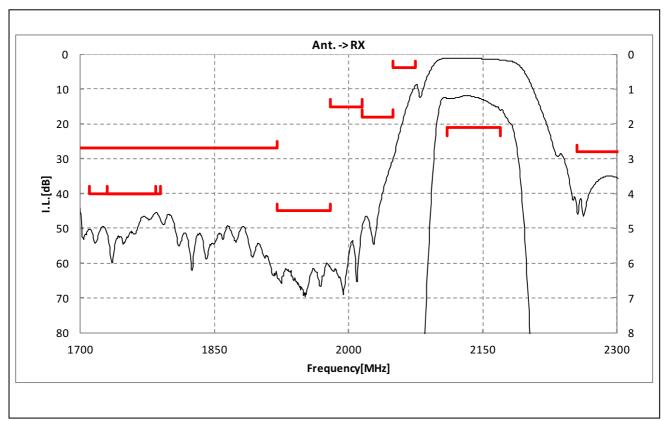


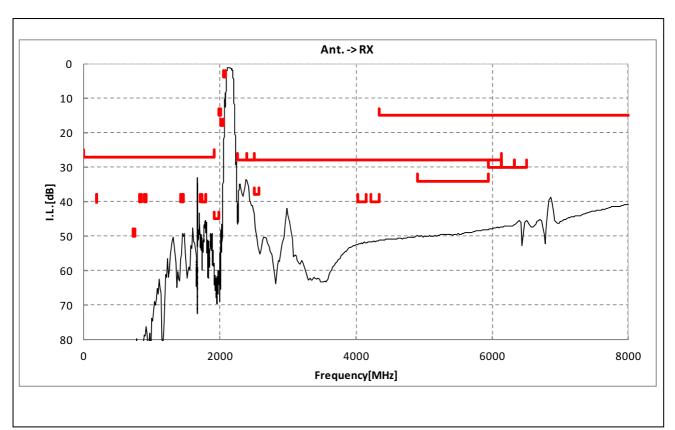




Electrical Characteristic

< ANT.→RX >

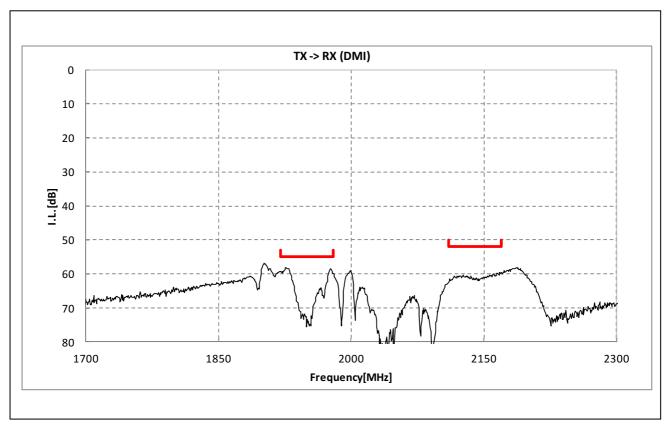


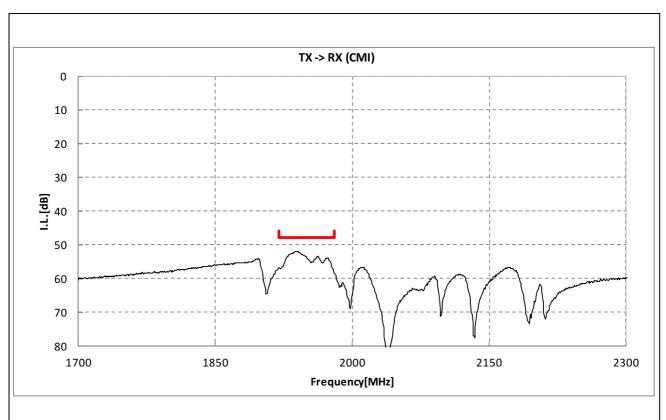




Electrical Characteristic

< TX→RX. >

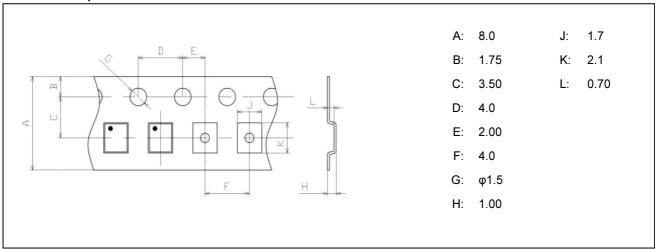




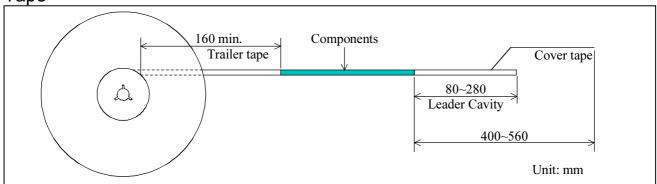


Dimensions of Tape & Reel unit: mm

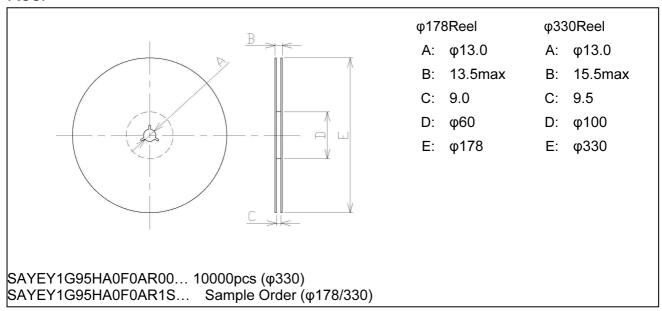
Carrier Tape



Tape



Reel





Marking Code

Table A: Month Code

2013	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2017 2021	Α	В	С	D	E	F	G	Н	J	K	Ĺ	М
2014	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2018 2022	N	Р	Q	R	S	Ť	U	V	W	Х	Υ	Z
2015	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2019 2023	а	b	10	d	е	f	g	h	j	k	Q	m
2016	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2020 2024	n	P	8	r	d	t	3	U	ω	æ	y	8

Table B: Date Code

code	W	Χ	Υ	Z	а	b	c	d	е	f	g
date	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31st
code	L	М	N	Р	Q	R	S	Т	U	V	
date	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	
code	Α	В	С	D	Е	F	G	Н	J	K	
date	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	

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- 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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