

# **Datasheet of SAW Device**

# SAW Duplexer

for Band3 / Balanced / LR /1814

# Murata PN: SAYEY1G74CA0B0A





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					
SAYEY1G74CA0B0A_rev. A	Feb-25-2014	∎ Initial Release					
SAYEY1G74CA0B0A_rev. B	Jul-10-2014	■ Updated Specification					
SAYEY1G74CA0B0A_rev. C	Apr-27-2015	Updated Specification					
SAYEY1G74CA0B0A_rev. D	Sep-02-2015	■ Updated Feature					
SAYEY1G74CA0B0A_rev. E	Sep-08-2015	■ Updated Feature					
SAYEY1G74CA0B0A_rev. F	Aug-10-2016	■ Updated General Information					
SAYEY1G74CA0B0A_rev. G	Jul-13-2017	■ Updated General Information					

- Operating temperature

: -20 to +85 deg.C : -40 to +85 deg.C

Storage temperatureInput Power

: +29 dBm 5000 h +55 deg.C

- D.C. Volatage between the terminals

ninals : 3V (25+/-2 deg.C)

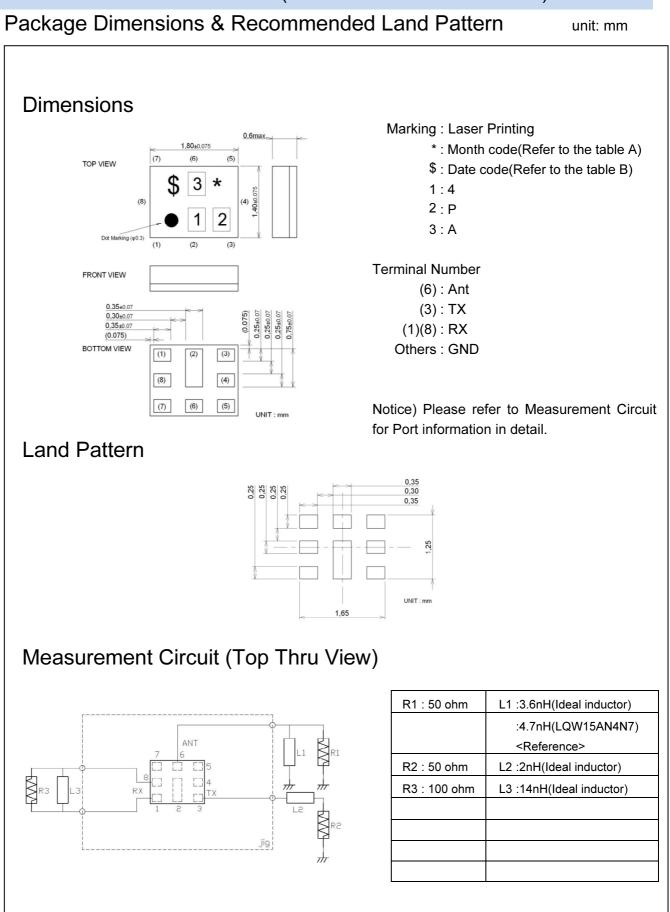
: Yes

- Minimum Resistance between the terminals : 10M ohm

- RoHS compliance

- ESD (ElectroStatic Discharge) sensitive device







# Electrical Characteristic < TX→ANT. >

Т	$X \rightarrow ANT.$		Cha (-20	aracteris to +85 de	stics eg.C)	Unit	Note		
			min.	typ.*	max.				
Center Frequency				1747.5		MHz			
Insertion Loss	1710. to 178			1.9	2.5	dB			
	1712.5 to 1782			1.7	2.4	dB <sub>INT</sub>	Any 4.5MHz		
	1710. to 178			1.9	2.3	dB	+23 to +27deg.C		
	1712.5 to 1782			1.7	2.3	dB <sub>INT</sub>	+23 to +27deg.C, Any 4.5MHz		
Ripple Deviation	1710. to 178			0.4	1.5	dB	Over any 5MHz in-band		
VSWR	1710. to 178			1.6	2.1		ANT.		
	1710. to 178			1.6	2.1		ТХ		
Absolute Attenuation		5.42 MHz		35		dB			
	1565.42 to 1573	3.37 MHz	39	44		dB	Wideband GPS, lower side-lobe		
		7.47 MHz	39	45		dB	Regular GPS, main-lobe		
		5.42 MHz	39	45		dB	Wideband GPS, upper side-lobe		
	1597.55 to 160	5.89 MHz	39	46		dB	GLONASS		
	1605.89 to 1680		5.0	10.0		dB			
	1805. to 1880		42	47		dB			
	1920. to 1980		20	39		dB			
	2110. to 217		24	38		dB			
	2400. to 2500		28	33		dB			
	2620. to 2690		24	29		dB			
	3420. to 357		20	24		dB	2fo		
	4900. to 5850		19	24		dB			
	5130. to 535		20	26		dB	3fo		
	6840. to 714		15	22		dB			
	8550. to 892	5. MHz	6.0	16.0		dB			
	10260. to 10710	). MHz	5.0	15.0		dB			
	11970. to 1249	5. MHz	3.0	13.0		dB			
			1						
			1	1					
				1					
			1	1					
			1	1					
			1	1					
				1					
			1	1	1		* Typical value at 25+2deg C		

\* Typical value at 25±2deg.C



# Electrical Characteristic $\langle ANT. \rightarrow RX \rangle$

				Cha	aracteris	tics					
AN	$NT. \rightarrow RX$	(			(-20 min.	to +85 d∈ typ.*	eg.C) max.	Unit	Note		
Center Frequency	<u> </u>					1842.5		MHz			
Insertion Loss	1805.	to	1880.	MHz		2.9	3.5	dB			
	1805.	to	1880.	MHz		2.9	3.3	dB	+23 to +27deg.C		
Ripple Deviation	1805.	to	1880.	MHz		0.8	1.5	dB	Over any 5 MHz in-band		
VSWR	1805.		1880.	MHz		2.0	2.3	uD	ANT.		
VSVVR	1805.	to	1880.	MHz		1.9	2.3		RX		
Amplitude Delense	1805.	to	1880.		10	-1.1	1.8		RA		
Amplitude Balance		to		MHz	-1.8						
Phase Balance	1805.	to	1880.	MHz	162	171	198	10			
Absolute Attenuation	1.	to	1710.	MHz	30	46		dB	<b>D T</b>		
			95.	MHz	50	123		dB	Rx-Tx		
	824.	to	849.	MHz	40	68		dB	B5 Tx for CA		
	832.	to	862.	MHz	40	68		dB	B20 Tx for CA		
	880.	to	915.	MHz	40	65		dB	B8 Tx for CA		
	1710.	to	1785.	MHz	46	51		dB	Тх		
	1785.	to	1790.	MHz	15	52		dB	(Rx+Tx)/2		
	1920.	to	6000.	MHz	20	39		dB			
	2400.	to	2500.	MHz	40	55		dB	ISM 2.4G		
	2500.	to	2570.	MHz	40	50		dB	B7 Tx		
	4900.	to	5950.	MHz	40	52		dB	ISM 5G		
	5415.	to	5640.	MHz	40	56		dB	3×LO		
	7220.	to	7520.	MHz	30	47		dB	4×LO		
	9025.	to		MHz	20	35		dB	5×LO		
	10830.	to	11280.	MHz	10	20		dB	6×LO		
	12635.	to	12750.	MHz	10	20		dB	7×LO		
	6000.		12750.	MHz	8.0	18.0		dB			
	0000.	10	12100.		0.0	10.0		uD			
								-			
	<b></b>										
					1	l			* Typical value at 25±2deq.C		

\* Typical value at 25±2deg.C

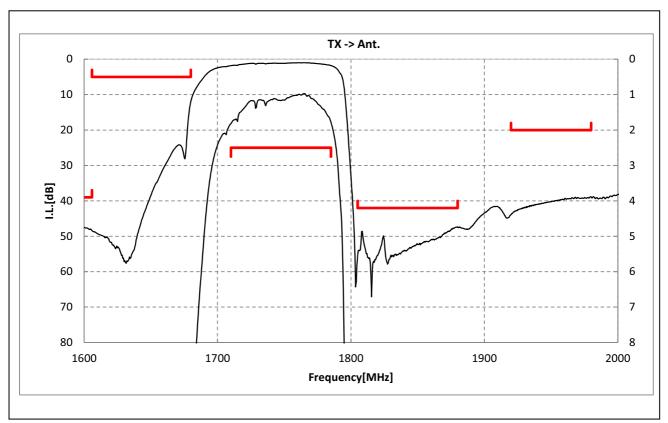


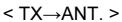
# Electrical Characteristic $< TX \rightarrow RX. >$

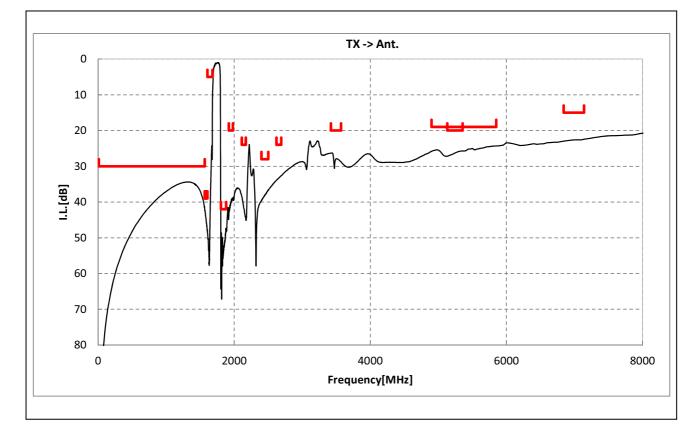
	$TX \rightarrow RX$		( -20	to +85 d	eg.C)	Unit	Note		
			min.	typ.*	max.				
Isolation	-								
Differential Mode	1710. to 17	785. MHz	53	56		dB			
		782.5 MHz	53	56		dB <sub>INT</sub>	Any 4.5MHz		
		380. MHz	50	53		dB			
	1807.5 to 18	377.5 MHz	50	53		dB <sub>INT</sub>	Any 4.5MHz		
		785. MHz	53	56		dB	+23 to +27deg.C		
		782.5 MHz	53	56		dB <sub>INT</sub>	+23 to +27deg.C, Any 4.5MHz		
		380. MHz	50	53		dB	+23 to +27deg.C		
Common Mode		877.5 MHz 785. MHz	50 48	53 51		dB <sub>INT</sub> dB	+23 to +27deg.C, Any 4.5MHz		
		782.5 MHz	48	51			Any 4.5MHz		
		785. MHz	48	51		dB	+23 to +27deg.C		
		782.5 MHz	48	51		dB <sub>INT</sub>	+23 to +27deg.C, Any 4.5MHz		



### **Electrical Characteristic**

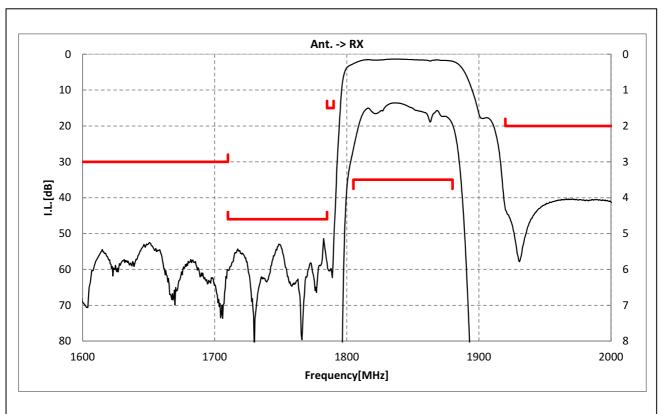


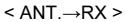


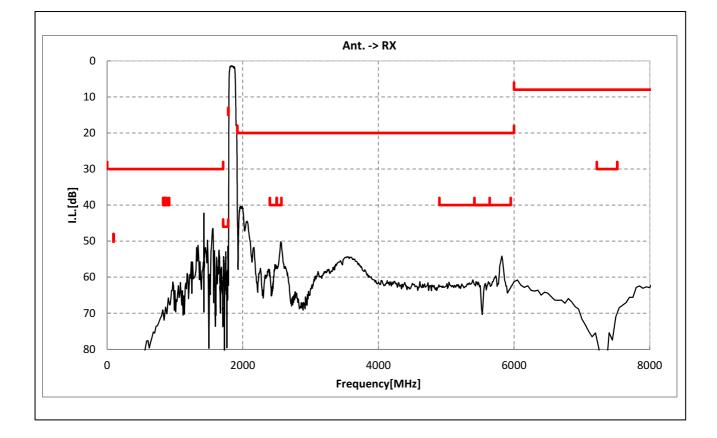




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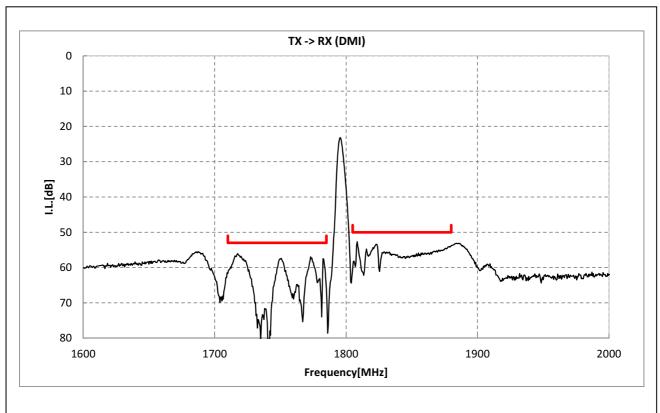


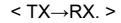


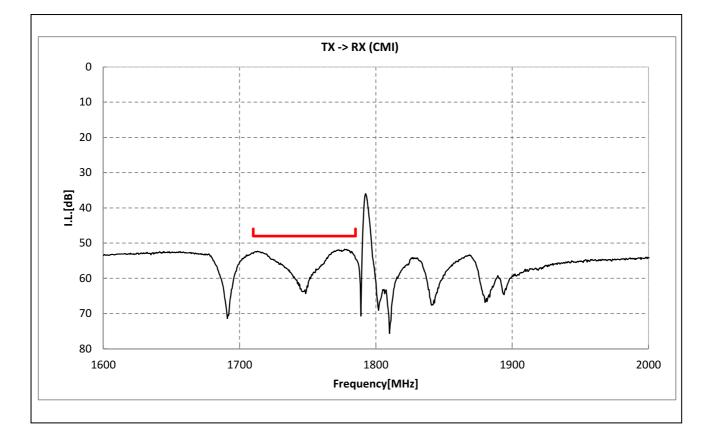




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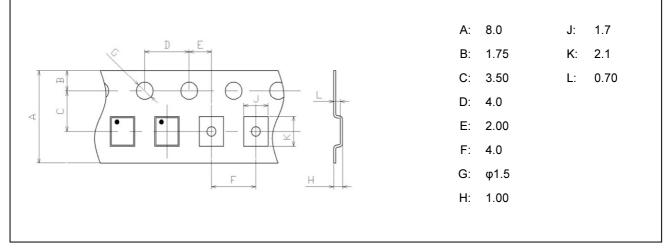




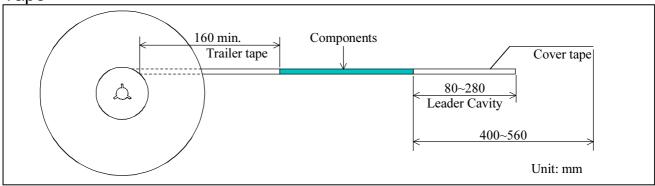


Dimensions of Tape & Reel unit: mm

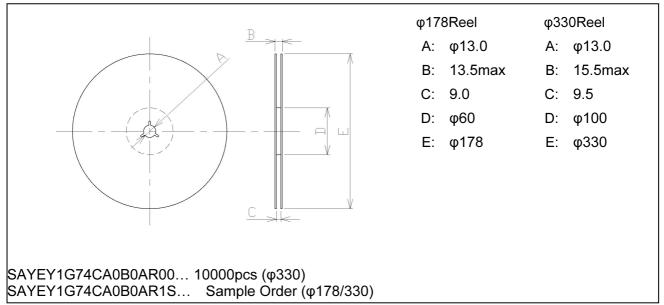
#### Carrier Tape



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	к	L	м
2014	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2018 2022	N	Р	Q	R	S	Т	U	V	¥	х	Y	Z
2015	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2019 2023	а	b	īc	d	е	f	g	h	j	r.	l	m
2016	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2020 2024	n	P	q	r	4	t	u	U	3	¥	y	8

#### Table B: Date Code

date	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
code	А	В	С	D	E	F	G	Η	J	К	
date	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	
code	L	М	Ν	Р	Q	R	S	Т	U	V	
date	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31st
code	W	Х	Y	Z	а	b	ō	d	е	f	g

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- Undersea equipment.
- Power plant control equipment Medical equipment.
- Transportation equipment (vehicles, trains, ships, elevator, etc.).
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- 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 serge voltage.

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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.

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