

Datasheet of SAW Device

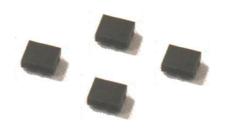
SAW Dual Filter

for Band03_Band66 / 1in2out Unbalanced / LH /1511

Murata PN: SAWFD1G84AA2F0A

Feature

- Low Insertion Loss
- > For CA



Note: Murata SAW Component is applicable for Cellular /Cordless phone (Terminal) relevant market only.

Please also read caution at the end of this document.





General Information

Operating temperature
 Storage temperature
 Input Power
 D.C. Volatage between the terminals
 Minimum Resistance between the terminals
 1-20 to +85 deg.C
 +13 dBm 5000 h
 3V (25+/-2 deg.C)
 Minimum Resistance between the terminals
 10M ohm

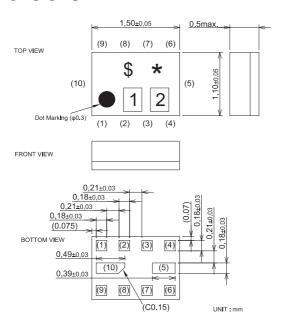
RoHS compliance : YesESD (ElectroStatic Discharge) sensitive device



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:G 2:r

Terminal Number

(1): Unbalanced port-Lch/Hch

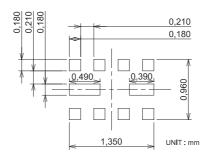
(9): Unbalanced port-Lch

(6): Unbalanced port-Hch

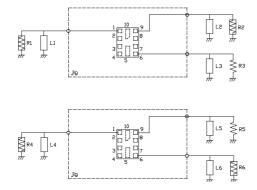
Others: GND

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

Land Pattern



Measurement Circuit (Top Thru View)



(Lch)

R1:50 ohm	L1 :2.5nH(Ideal inductor)
R2:50 ohm	L2 :10nH(Ideal inductor)
R3 : 50 ohm	L3 :7.3nH(Ideal inductor)
R4:50 ohm	L4 :2.5nH(Ideal inductor)
R5 : 50 ohm	L5 :10nH(Ideal inductor)
R6:50 ohm	L6:7.3nH(Ideal inductor)

(Hch)



Electrical Characteristic < Low Freq. Filter >

Electrical Characteristic < Low i									
						racteri	stics		
Low	er			(-20 to +85 deg.C)		Unit	Note		
		min.	typ.*		Ornic	14010			
0					1111111.		max.	N 41 1	
Center Frequency	1005		1000			1843	0.7	MHz	
Insertion Loss	1805.	to	1880.	MHz		1.8	2.7	dB	
	1805.	to	1880.	MHz		1.8	2.3	dB	+23 to +27deg.C
	1807.5	to	1877.5	MHz		1.7	2.6	dB _{INT}	Any 4.5MHz
Ripple Deviation	1805.	to	1880.	MHz		0.3	1.3	dB	Any 5MHz
VŚWR	1805.	to	1880.	MHz		1.5	2.0		
Absolute Attenuation	1.	to	1710.	MHz	25	33		dB	
			95.	MHz	50	104		dB	Rx-Tx
	824.	to	849.	MHz	40	49		dB	B5Tx
	832.	to	862.	MHz	40	49		dB	B20Tx
	880.	to	915.	MHz	40	47		dB	B8Tx
	1615.	to	1690.	MHz	28	34		dB	2Tx-Rx
	1710.		1785.	MHz	36	41		dB	Tx
	1710.	to	1785.	MHz	36	41		dB	+23 to +27deg.C
		to				42			+23 t0 +27deg.C
	1712.5	to	1782.5	MHz	36			dB _{INT}	Any 4.5MHz
	1785.	<u>to</u>	1790.	MHz	4.0	33.0		dB	(Rx+Tx)/2
	1920.	to	1980.	MHz	36	41		dB	B1Tx
	1920.	to	6000.	MHz	25	35		dB	
	2400.	to	2500.	MHz	33	38		dB	2.4GHz ISM
	2500.	to	2570.	MHz	30	35		dB	B7Tx
	3515.	to	3610.	MHz	38	44		dB	Rx+Tx
	3610.	to	3760.	MHz	37	42		dB	2f
	3760.	to	13025.	MHz	8.0	18.0		dB	
	4900.	to	5950.	MHz	30	35		dB	5GHz ISM
	5225.	to	5415.	MHz	30	36		dB	Rx+2Tx
	5415.	to	5640.	MHz	30	35		dB	3f
	7220.	to	7520.	MHz	24	32		dB	4f
	9025.	to	9400.	MHz	20	31		dB	5f
	10830.		11280.	MHz	15	26		dB	6f
	12635.	to	12750.	MHz	8.0	18.0		dB	7f
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^{*} Typical value at 25±2deg.C



Electrical Characteristic < High Freq. Filter >

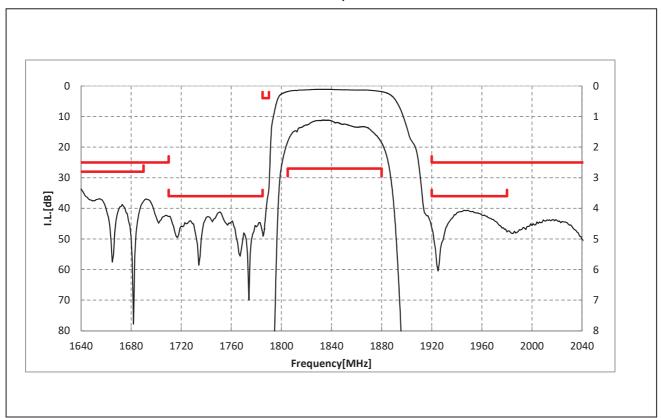
Electrical Una	racten	Su	· <	nigii				>	
						racteri	stics		
High			(-20 to +85 deg.C)			Unit	Note		
19.					min.	typ.*	max.		
Center Frequency	T				1111111	2155	παλ.	MHz	<u> </u>
Insertion Loss	2110.	to	2200.	MHz		1.8	2.5	dB	IB66
Insertion Loss	2110.	to	2200.	MHz		1.8	2.3	dB	B66 +23 to +27deg.C
	2112.5	to	2197.5	MHz		1.7	2.4	dB _{INT}	Any 4.5MHz, B66
	2110.	to	2170.	MHz		1.8	2.5	dB _{INT}	B1
		to						_	1
Disale Desisting	2112.5	to	2167.5	MHz		1.7	2.4	dB _{INT}	Any 4.5MHz, B1
Ripple Deviation	2110.	to	2200.	MHz		0.3	1.6	dB	B66
	2110.	to	2170.	MHz		0.3	1.6	dB	B1
VSWR	2110.	to	2200.	MHz		1.4	2.0		B66
	2110.	to	2170.	MHz		1.4	2.0		B1
Absolute Attenuation	10.	to	699.	MHz	40	59		dB	
			190.	MHz	50	93		dB	RX-TX (B1)
			420.	MHz	50	72		dB	RX -TX (B66)
	699.	to	716.	MHz	40	59		dB	B12 TX
	777.	to	787.	MHz	40	55		dB	B13 TX
	814.	to	849.	MHz	40	54		dB	B26 TX
	880.	to	915.	MHz	40	52		dB	B8 TX
	1710.	to	1780.	MHz	35	40		dB	B66 TX
	1712.5	to	1777.5	MHz	36	43		dB _{INT}	Any 4.5MHz, B66 TX
	1310.	to	1360.	MHz	38	43		dB	2TX- RX (B66)
	1730.	to	1790.	MHz	34	40		dB	2TX- RX (B1)
	1850.	to	1915.	MHz	35	40		dB	B25 TX
	1852.5	to	1912.5	MHz	35	40		dB _{INT}	Any 4.5MHz, B25 TX
	1850.	to	1910.	MHz	35	40		dB	B2 TX
	1852.5		1907.5	MHz	35	40		dB _{INT}	Any 4.5MHz, B2 TX
	1920.	to	1980.	MHz	40	44		dB	B1 TX
	1920.	to	1977.5	MHz	40	44		dB _{INT}	Any 4.5MHz, B1 TX
		to	1990.		35	43		dB _{INT}	
	1910.	to		MHz					(RX + TX)/2 (B66)
	2015.	to	2090.	MHz	1.0	4.0		dB	(RX + TX)/2 (B1)
	2400.	to	2500.	MHz	29	35		dB	2.4GHz ISM
	3820.	to	3980.	MHz	35	41		dB	RX + TX (B66)
	4030.	to	4150.	MHz	35	40		dB	RX + TX (B1)
	4220.	to	4400.	MHz	34	39		dB	2f
	4900.	to	5950.	MHz	32	37		dB	5GHz ISM
	5530.	to	5760.	MHz	32	37		dB	RX +2TX (B66)
	5950.	to	6130.	MHz	31	37		dB	RX +2TX (B1)
	6330.	to	6600.	MHz	30	36		dB	3f
	8440.	to	8800.	MHz	20	31		dB	4f
	10550.	to	11000.	MHz	18	28		dB	5f
	12660.	to	13200.	MHz	13	24		dB	6f
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L	1				<u> </u>			<u> </u>	* Typical value at 25±2dea C

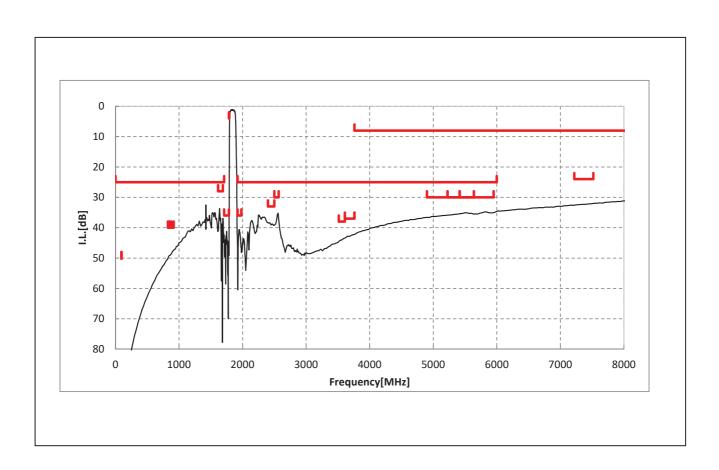
^{*} Typical value at 25±2deg.C



Electrical Characteristic

< Low Freq. Filter >

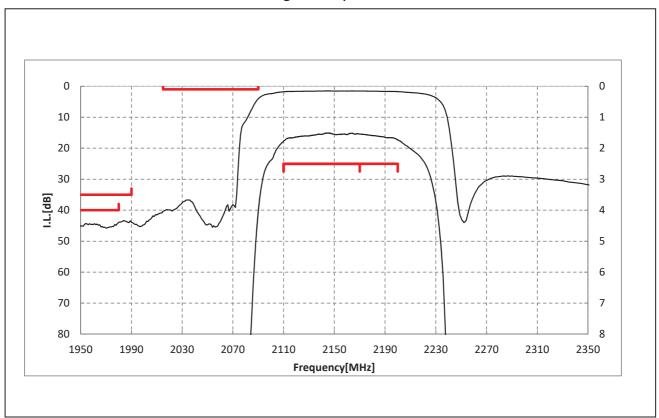


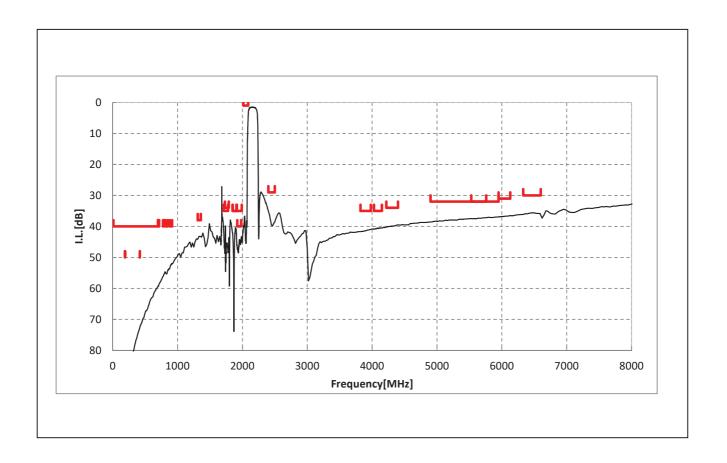




Electrical Characteristic

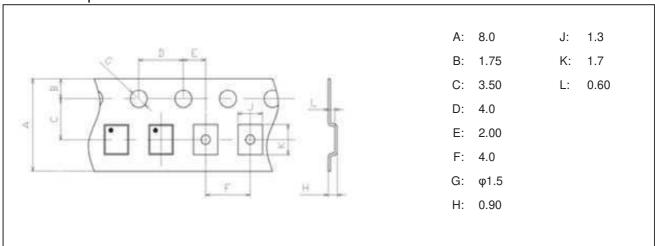
< High Freq. Filter >



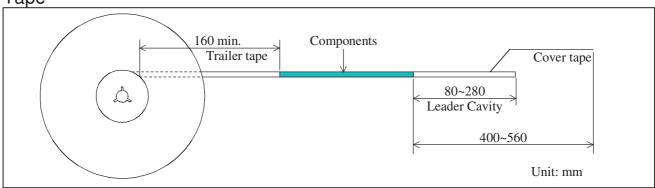


Dimensions of Tape & Reel unit: mm

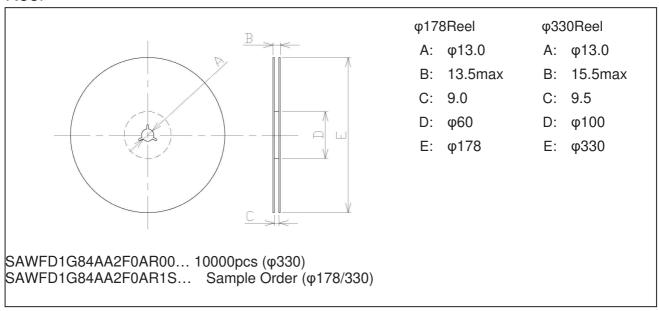
Carrier Tape



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	Ĺ	M
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	ē	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	4	t	u	U	ω	æ	y	8

Table B: Date Code

date code	21st W	22nd X	23rd	24th	25th a	26th b	27th c	28th	29th e	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	

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 serge 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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>>Murata(村田)