

Datasheet of SAW Device

SAW Dual Filter

for Band1_Band3 / 2in2out Balanced / LH /1511

Murata PN: SAWFD1G84EH1F0A

Feature

> 2in2out 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.



Revision Number	Date	Description
SAWFD1G84EH1F0A_rev. A	Dec-13-2012	■ Initial Release
SAWFD1G84EH1F0A_rev. B	Sep-14-2016	■ Updated General Information
SAWFD1G84EH1F0A_rev. C	Aug-25-2017	■ Updated General Information

Operating temperature
 Storage temperature
 Input Power
 D.C. Volatage between the terminals
 -30 to +85 deg.C
 -40 to +85 deg.C
 +13 dBm 2000 h
 3V (25+/-2 deg.C)

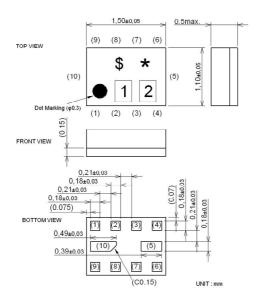
Minimum Resistance between the terminals : 10M ohm
 RoHS compliance : Yes
 ESD (ElectroStatic Discharge) sensitive device



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 : X

2 : P

Terminal Number

(1): Unbalanced port-Lch

(6)(9): Balanced port-Lch

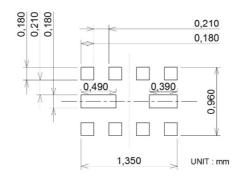
(4): Unbalanced port-Hch

(6)(9): Balanced port-Hch

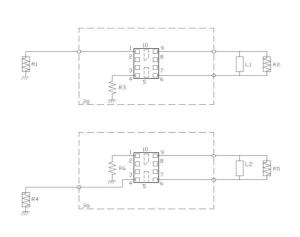
Others: GND

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

Land Pattern



Measurement Circuit (Top Thru View)



(Lch)

R1:50 ohm
R2:100 ohm
L1:5.8nH(Ideal inductor)
R3:50 ohm
R4:50 ohm
R5:100 ohm
L2:5.8nH(Ideal inductor)

(Hch)



Electrical Characteristic < Low Freq. Filter >

Electrical Characteristic > Low i												
						Characteristics						
Low			(-30 to +85 deg.C)			Unit	Note					
		•			min.	typ.*	max.	0	1.000			
Center Frequency	1				1111111	1843	max.	MHz	1			
	1805.	40	1880.	MHz		2.7	4.5	dB				
Insertion Loss	1805.	to	1880.	MHz		2.7	4.0	dB	122 to 127dog C			
		to							+23 to +27deg.C			
	1807.4	to	1877.6	MHz		2.3	3.7	dB _{INT}	Any 3.84MHz			
	1807.4	to	1877.6	MHz		2.3	2.8	dB _{INT}	+23 to +27deg.C, Any 3.84MHz			
Ripple deviation	1805.	to	1880.	MHz		1.0	3.5	dB				
	1805.	to	1880.	MHz		1.0	2.5	dB	+23 to +27deg.C			
VSWR	1805.	to	1880.	MHz		1.9	2.3					
	1805.	to	1880.	MHz		1.9	2.2		+23 to +27deg.C			
Amplitude Balance	1805.	to	1880.	MHz	-1.5	0.7	1.5	dB				
Phase Balance	1805.	to	1880.	MHz	168	185	192	deg.				
Absolute Attenuation	1.	to	100.	MHz	55	70		dB				
	100.	to	902.	MHz	50	57		dB				
	902.	to	940.	MHz	48	53		dB				
	940.	to	1300.	MHz	44	49		dB				
	1300.		1500.	MHz	33	37		dB				
	1500.	to to	1705.	MHz	33	39		dB				
	1705.		1785.	MHz	15	35		dB				
	1705.	to	1785.	MHz	28	35		dB	+23 to +27deg.C			
		to	1782.6	MHz	25	35						
	1712.4	to						dB _{INT}	Any 3.84MHz			
	1712.4	to	1782.6	MHz	30	35		dB _{INT}	+23 to +27deg.C, Any 3.84MHz			
	1920.	to	1980.	MHz	19	24		dB				
	1980.	to	1980.2	MHz	24	29		dB				
	1980.2	to	2030.	MHz	24	29		dB				
	2030.	to	2400.	MHz	28	35		dB				
	2400.	to	3000.	MHz	35	40		dB				
	3000.	to	4000.	MHz	32	39		dB				
	4000.	to	5000.	MHz	30	37		dB				
	5000.	to	6000.	MHz	30	36		dB				
	6000.	to	8000.	MHz	25	30		dB				
	8000.	to	12750.	MHz	15	27		dB				
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^{*} Typical value at 25±2deg.C



Electrical Characteristic < High Freq. Filter >

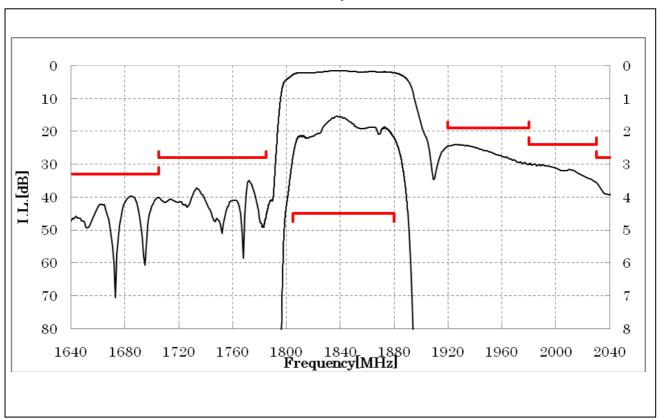
Electrical Characteristic > High									
						racteri	stics		
High			(-30	(-30 to +85 deg.C)			Note		
	1				min.	typ.*	max.	Unit	
Center Frequency						2140	11100711	MHz	
Insertion Loss	2110.	to	2170.	MHz		2.2	3.3	dB	
moortion 2000	2110.	to	2170.	MHz		2.2	2.7	dB	+23 to +27deg.C
Ripple deviation	2110.	to	2170.	MHz		0.5	1.7	dB	120 to 121 dog. 0
Trippie deviation	2110.	to	2170.	MHz		0.5	1.2	dB	+23 to +27deg.C
VSWR	2110.	to	2170.	MHz		1.8	2.3	u.b	1.20 to 1.27 deg. 0
I VOVIN	2110.	to	2170.	MHz		1.8	2.2		+23 to +27deg.C
Amplitude Balance	2110.	to	2170.	MHz	-2.2	0.8	2.2	dB	123 to 127 deg.0
Amplitude Balance	2110.	to	2170.	MHz	-2.0	0.8	2.0	dB	+23 to +27deg.C
Phase Balance	2110.	to	2170.	MHz	165	187	195	deg.	123 to 127 deg.C
Absolute Attenuation	1.		824.	MHz	50	60	133	dB dB	
Absolute Atteridation	824.	to	849.	MHz	50	60		dB	
	898.	to	925.	MHz	50	60		dB	
	1427.9	to	1462.9	MHz	42	53		dB	
		to				50			
	1710.	to	1755.	MHz	40			dB	
	1755.	to	1790.	MHz	40	49		dB	
	1920.	to	1980.	MHz	38	46		dB	
	1980.	to	2050.	MHz	10	28		dB	.00 / .07 / .0
	1980.	to	2050.	MHz	15	28		dB	+23 to +27deg.C
	2200.	to	2400.	MHz	6.0	22.0		dB	
	2200.	to	2400.	MHz	12	22		dB	+23 to +27deg.C
	2400.	to	2500.	MHz	30	45		dB	
	2500.	to	4220.	MHz	30	35		dB	
	4222.	to	4340.	MHz	32	37		dB	
	4340.	to	6000.	MHz	29	34		dB	
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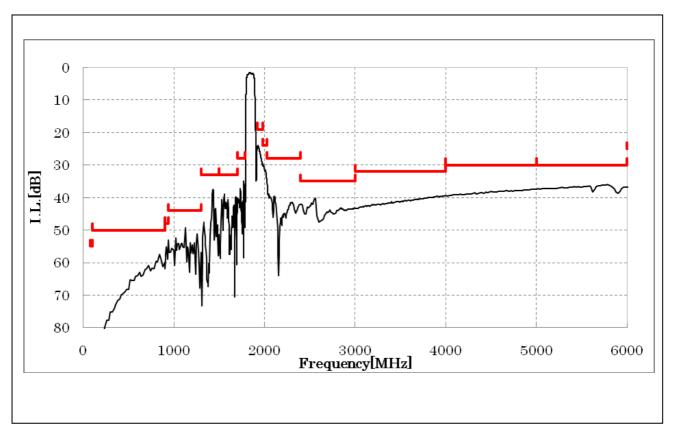
^{*} Typical value at 25±2deg.C



Electrical Characteristic

< Low Freq. Filter >

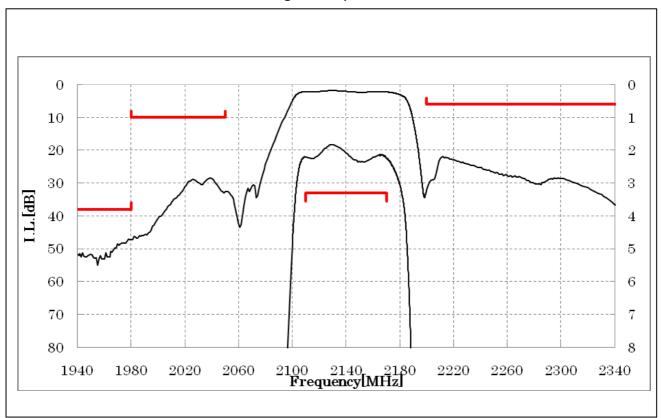


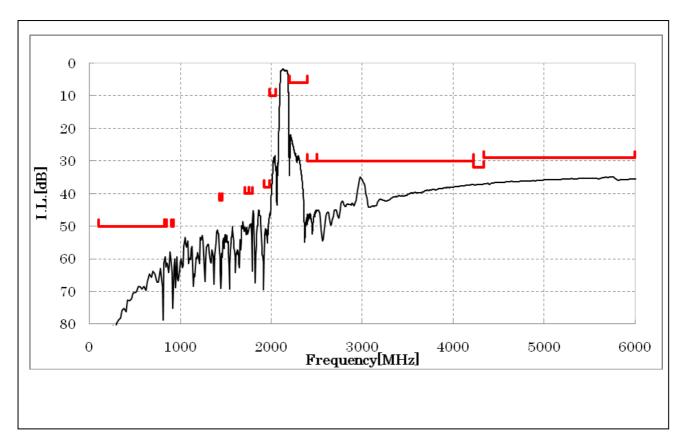




Electrical Characteristic

< High Freq. Filter >

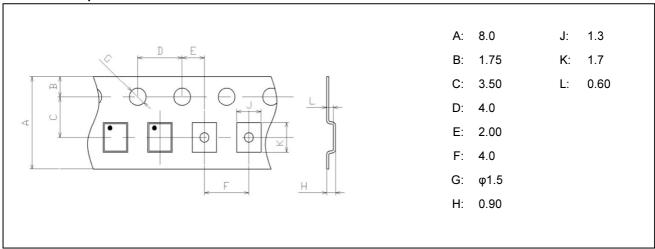




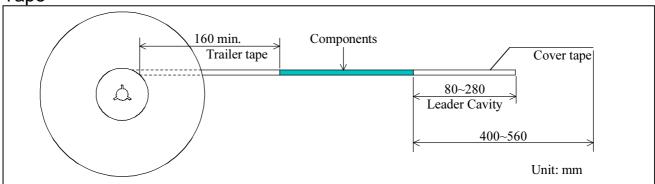


Dimensions of Tape & Reel unit: mm

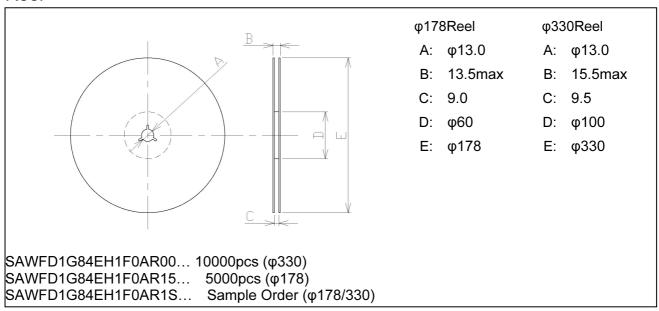
Carrier Tape



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	O	D	Е	F	G	Н	٦	К	١	М
2014	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2018 2022	N	Р	Q	R	S	Т	U	V	W	Х	Υ	Z
2015	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2019 2023	а	ь	10	d	е	f	gg	h	j	k	Q	m
2016	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2020 2024	n	P	G	r	4	t	э	Ú	3	æ	y	3

Table B: Date Code

code	W	Х	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	O	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.

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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.

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