Innovator in Electronics

Datasheet of SAW Device

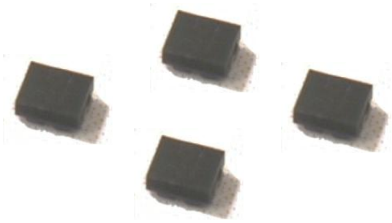
SAW Dual Filter

for B34/B39 / 1in2out Balanced /1511

Murata PN: SAWFD1G90AH0F0A

■ Feature

- Input and Output combined Type
-
-



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

SAWFD1G90AH0F0A (B34/B39 / 1in2out Balanced /1511)

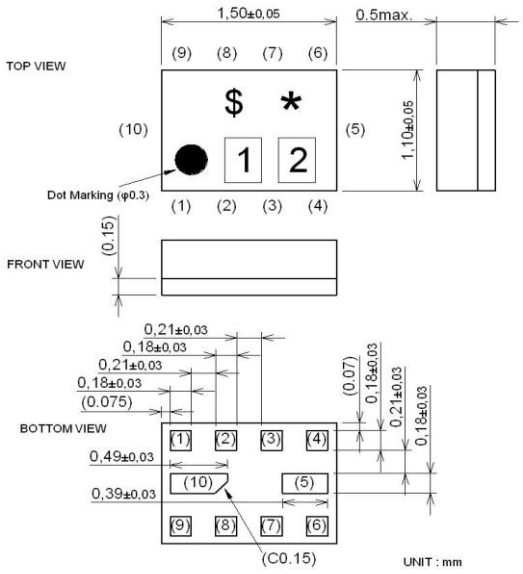
Revision No.	Date	Description
SAWFD1G90AH0F0A_rev. A	Jan-11-2013	■ Initial Release
SAWFD1G90AH0F0A_rev. B	Jul-03-2013	■ Updated Typical value

- Operating temperature : -30 to +85 deg.C
- Storage temperature : -40 to +85 deg.C
- Input Power : +13 dBm 2000 h
- D.C. Volatage between the terminals : 3V (25+/-2 deg.C)
- Minimum Resistance betweem the terminals : 10M ohm
- RoHS 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 : X

2 : 7

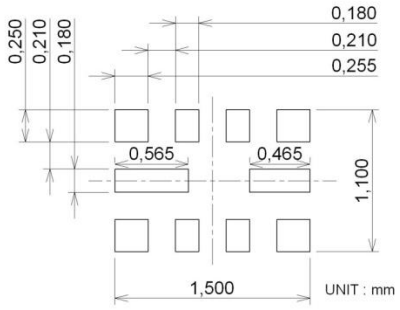
Terminal Number

(1) :Unbalance Port-Lch-Hch

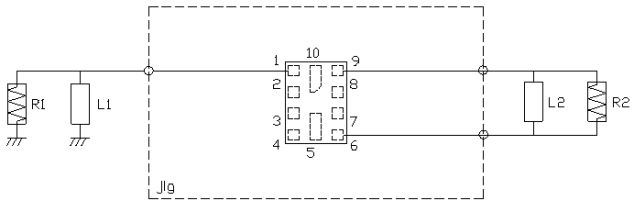
(6)(9) :Balance Port-Lch-Hch

Others : GND.

Land Pattern



Measurement Circuit (Top View)



R1 : 50 ohm L1 : 7.5 nH(Ideal inductor)

R2 : 100 ohm L2 : 6.8 nH(Ideal inductor)

SAWFD1G90AH0F0A (B34/B39 / 1in2out Balanced /1511)

Electrical Characteristic < Low Freq. Filter >

Matching Impedance (nominal)

- :Unbalance Port-Lch-Hch : 50 ohm // 7.5 nH(Ideal inductor)
- :Balance Port-Lch-Hch : 100 ohm // 6.8 nH(Ideal inductor)

Low Freq. Filter					Characteristics (-30 to +85 deg.C)			Unit	Note
					min.	typ.	max.		
Center Frequency						1900		MHz	
Insertion Loss	1880.	to	1920.	MHz		2.2	2.7	dB	
	1880.	to	1920.	MHz		2.2	2.6	dB	+23 to +27deg.C
Ripple Deviation	1880.	to	1920.	MHz		0.4	1.2	dB	
	1880.	to	1920.	MHz		0.4	1.0	dB	+23 to +27deg.C
VSWR	1880.	to	1920.	MHz		1.4	2.0		
Amplitude Balance	1880.	to	1920.	MHz	-4.0	3.4	4.0	dB	
Phase Balance	1880.	to	1920.	MHz	202	197	158	deg.	
Absolute Attenuation	10.	to	1395.	MHz	30	38		dB	
	1395.	to	1435.	MHz	30	37		dB	
	1435.	to	1805.	MHz	20	28		dB	
	1805.	to	1840.	MHz	20	31		dB	
	1840.	to	1850.	MHz	13	23		dB	
	1840.	to	1850.	MHz	15	23		dB	+23 to +27deg.C
	2000.	to	2135.	MHz	1.5	2.5		dB	
	2135.	to	2175.	MHz	30	39		dB	
	2175.	to	3500.	MHz	25	33		dB	
	3500.	to	6000.	MHz	25	33		dB	

* Typical value at 25±2deg.C

SAWFD1G90AH0F0A (B34/B39 / 1in2out Balanced /1511)

Electrical Characteristic < High Freq. Filter >

Matching Impedance (nominal)

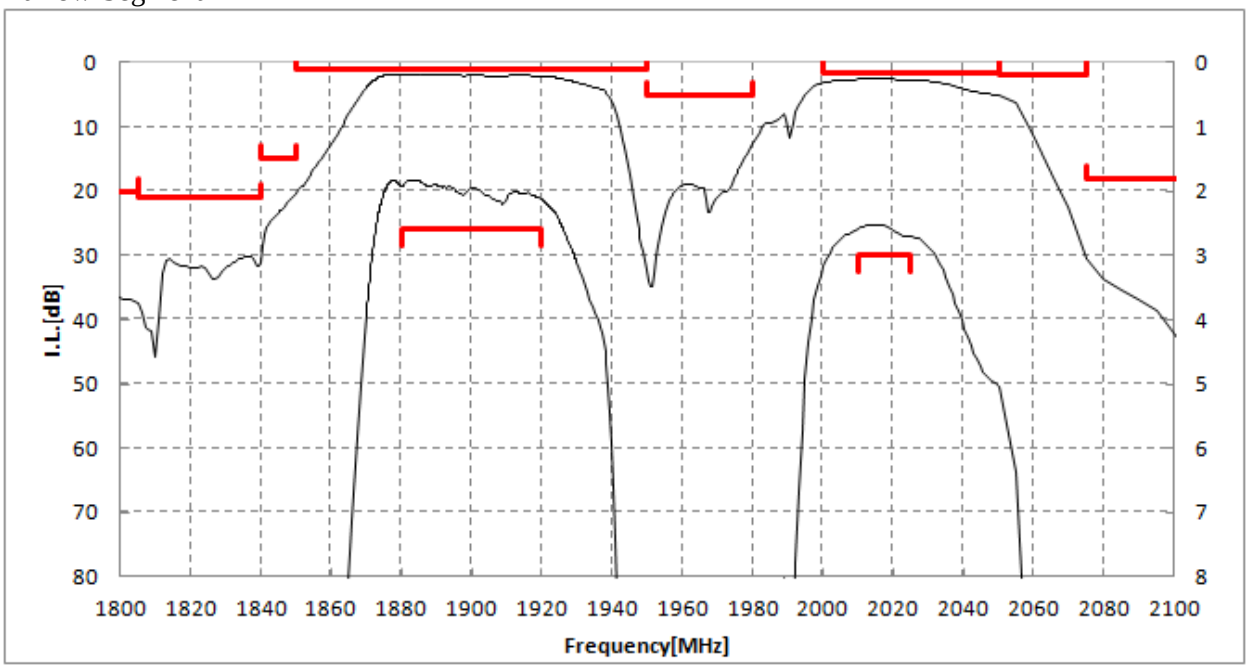
- :Unbalance Port-Lch-Hch : 50 ohm // 7.5 nH(Ideal inductor)
- :Balance Port-Lch-Hch : 100 ohm // 6.8 nH(Ideal inductor)

High Freq. Filter						Characteristics (-30 to +85 deg.C)			Unit	Note
						min.	typ.	max.		
Center Frequency							2017.5		MHz	
Insertion Loss	2010.	to	2025.	MHz			2.7	3.1	dB	
	2010.	to	2025.	MHz			2.7	3.0	dB	+23 to +27deg.C
Ripple Deviation	2010.	to	2025.	MHz			0.2	1.3	dB	
	2010.	to	2025.	MHz			0.2	1.0	dB	+23 to +27deg.C
VSWR	2010.	to	2025.	MHz			1.3	2.0		
Amplitude Balance	2010.	to	2025.	MHz		-1.0	0.2	1.0	dB	
Phase Balance	2010.	to	2025.	MHz		165	189	195	deg.	
Absolute Attenuation	10.	to	1805.	MHz		20	28		dB	
	1805.	to	1850.	MHz		15	23		dB	
	1850.	to	1950.	MHz		1	2		dB	
	1950.	to	1980.	MHz		3	15		dB	
	1950.	to	1980.	MHz		5	15		dB	+23 to +27deg.C
	2050.	to	2075.	MHz		2	5		dB	
	2075.	to	2100.	MHz		15	29		dB	
	2110.	to	3500.	MHz		25	33		dB	
	3500.	to	4060.	MHz		28	34		dB	
	4060.	to	5000.	MHz		27	34		dB	
	5000.	to	5500.	MHz		26	34		dB	
	5500.	to	6000.	MHz		25	33		dB	

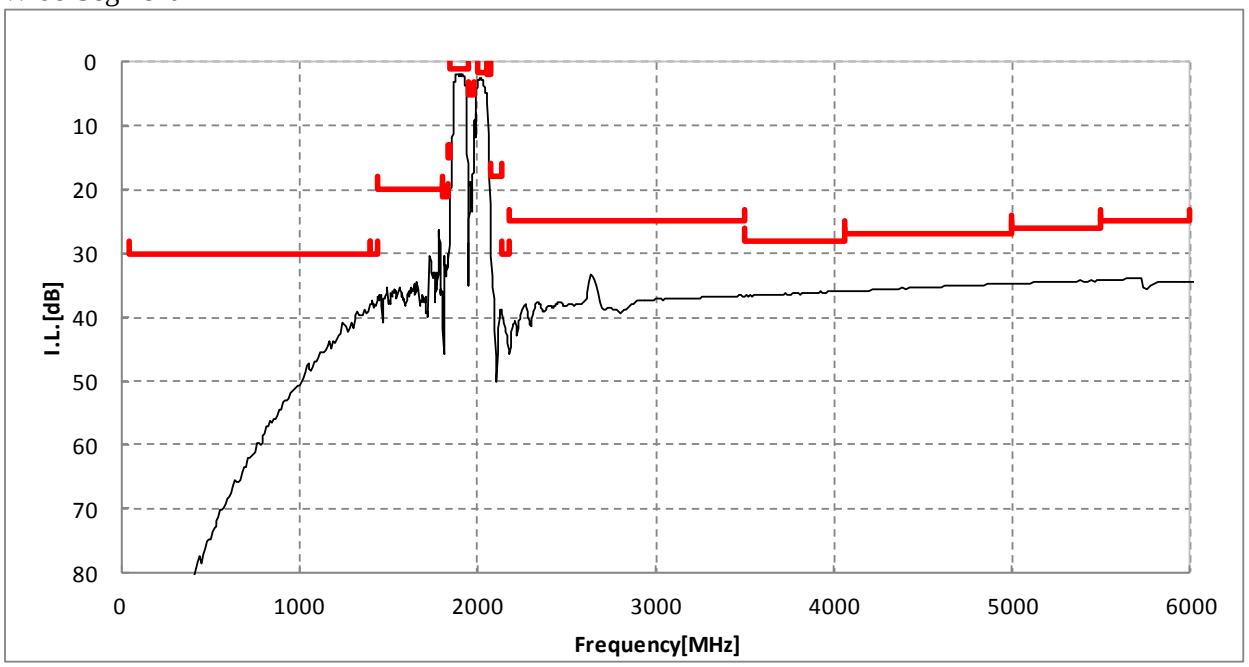
* Typical value at 25±2deg.C

Electrical Characteristic

Narrow-Segment

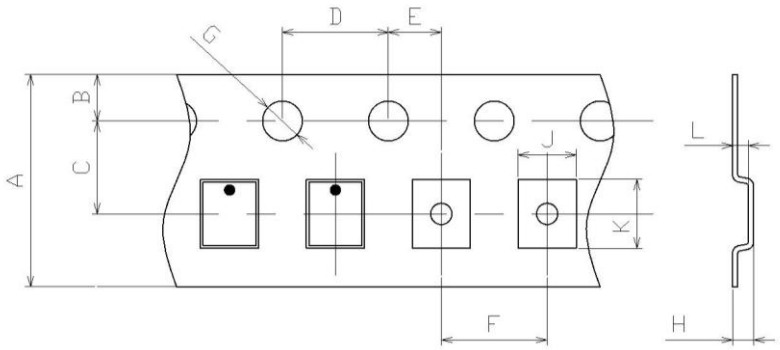


Wide-Segment



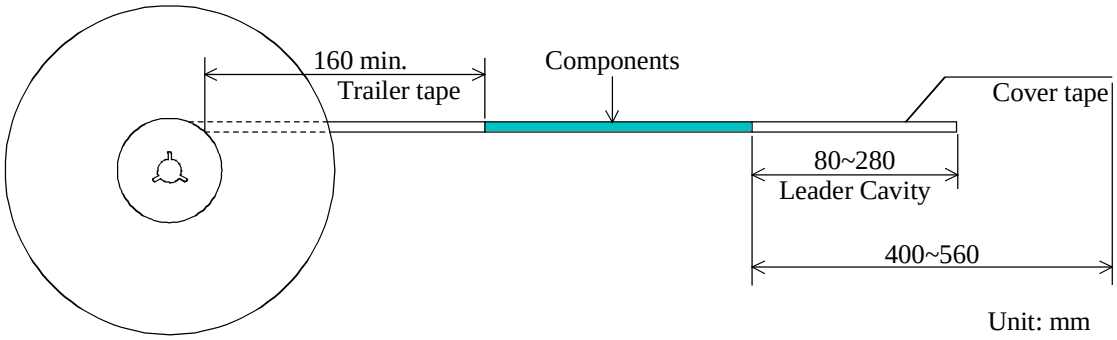
Dimensions of Tape & Reel unit: mm

Carrier Tape



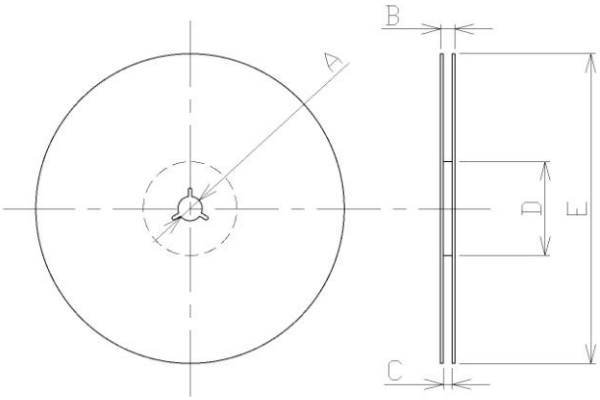
A:	8.0	J:	1.3
B:	1.75	K:	1.7
C:	3.50	L:	0.60
D:	4.0		
E:	2.00		
F:	4.0		
G:	φ1.5		
H:	0.90		

Tape



Unit: mm

Reel



φ178Reel		φ330Reel	
A:	φ13.0	A:	φ13.0
B:	13.5max	B:	15.5max
C:	9.0	C:	9.5
D:	φ60	D:	φ100
E:	φ178	E:	φ330

SAWFD1G90AH0F0AR00… 10000pcs (φ330)
SAWFD1G90AH0F0AR15… 5000pcs (φ178)
SAWFD1G90AH0F0AR1S… sample Order (φ178)

Marking Code

Table A: Month Code

2009 2013 2017	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	A	B	C	D	E	F	G	H	J	K	L	M
2010 2014 2018	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	N	P	Q	R	S	T	U	V	W	X	Y	Z
2011 2015 2019	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	a	b	c̄	d	e	f	g	h	j	k	l	m
2012 2016 2020	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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・deviation or lapse in function of engineering sample,

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