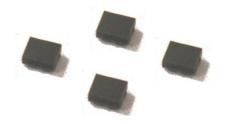


Datasheet of SAW Device

SAW Dual Filter for Band1_Band25 / 1in2out Unbalanced / LH /1511

Murata PN: SAWFD1G96AR1F0A



Note: This Murata SAW Component is Consumer grade product and applicable for Cellular phone or similar end devices.

Please also read Important Notice at the end of this document.





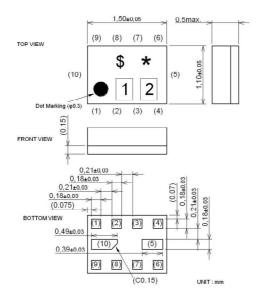
General Information

Operating temperature
 Storage temperature
 Input Power
 D.C. Volatage between the terminals
 Minimum Resistance between the terminals
 ROHS compliance
 20 to +85 deg.C
 +13 dBm 2000 h
 3V (25+/-2 deg.C)
 Minimum Resistance between the terminals
 Yes

- ESD (ElectroStatic Discharge) sensitive device



Dimensions



Marking: Laser Printing

*: Month code

\$: Date code

1:5

2:1

Terminal Number

(1): Unbalanced port-Lch/Hch

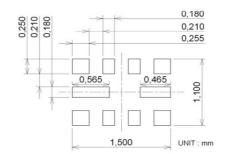
(9): Unbalanced port-Lch

(6): Unbalanced port-Hch

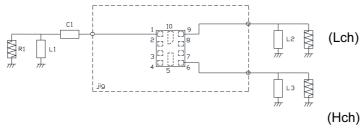
Others: GND

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

Land Pattern



Measurement Circuit (Top Thru View)



	R1 : 50 ohm	L1 :3.5nH(Ideal inductor)
		C1 :9pF(Ideal capacitor)
	R2 : 50 ohm	L2 :9nH(Ideal inductor)
	R3 : 50 ohm	L3 :20nH(Ideal inductor)
)		
	_	



Electrical Characteristic < Low Freq. Filter >

Electrical Characteristic > Low r					164	. 1 111	<u> </u>		
					Characteristics				
Low Freq. Filter						(-20 to +85 deg.C)		Unit	Note
Low Fieq. Filler			<u> </u>		Ornic	Note			
					min.		max.		
Center Frequency						1960		MHz	
Insertion Loss	1930.48	to	1989.52			2.4	3.2	dB	
	1930.48	to	1989.52	MHz		2.4	2.7	dB	+23 to +27deg.C
		to	1995.	MHz		2.5	3.5	dB	
		to	1992.5	MHz		2.2	2.8	dB _{INT}	Any 4.5MHz
Ripple Deviation		to	1995.	MHz		1.2	2.7	dB	7 (11) 1.0(11)2
VSWR	-		1995.	MHz		1.9	2.2	ub.	
		to			25	35	2.2	40	
Absolute Attenuation	1.	to	1850.	MHz	25			dB	DV TV
			80.	MHz	50	102		dB	RX - TX
		to	716.	MHz	42	49		dB	B12 TX
	814.	to	849.	MHz	40	45		dB	B26 TX
	1710.	to	1755.	MHz	37	43		dB	TX (B4)
		to	1754.52	MHz	37	43		dB	TX (B4)
		to	1835.	MHz	33	40		dB	2TX - RX
			1910.	MHz	32	36		dB	TX (B2)
		to							
	1850.48	to	1909.52	MHz	32	36		dB	TX (B2)
	1850.48		1909.52	MHz	32	35		dB	+23 to +27deg.C
	1850.	to	1915.	MHz	6.0	35.0		dB	TX (B25)
	1852.5	to	1912.5	MHz	9.0	36.0		dB _{INT}	Any 4.5MHz
		to	2080.	MHz	31	35		dB	
		to	6000.	MHz	27	30		dB	
		to	2500.	MHz	27	42		dB	ISM2.4
			5950.	MHz	27	30		dB	ISM 5G
		to				30			
		to	5985.	MHz	27			dB	3f
		to	7980.	MHz	23	29		dB	4f
		to	9975.	MHz	20	29		dB	5f
	11580.	to	11970.	MHz	15	30		dB	6f
			12750.	MHz	15	23		dB	
					<u></u>		<u></u> _		
						ļ			
						i			
	-								
						 			
1					<u> </u>	L			
						1			
	1								1

^{*} Typical value at 25±2deg.C



Electrical Characteristic < High Freq. Filter >

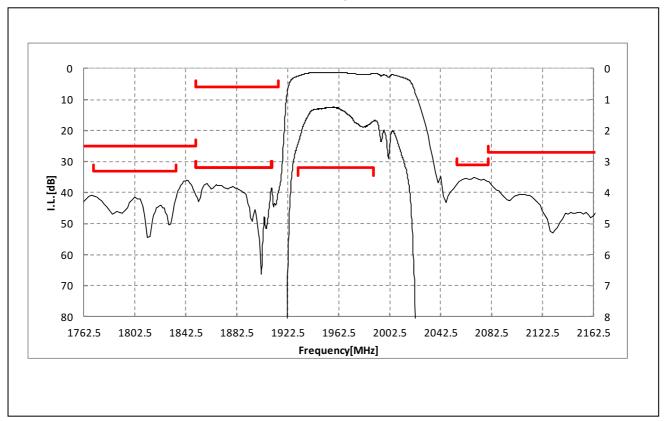
Electrical Chai	iaciensii	<u> </u>	ugu						
3				Characteristics					
High		(-20	to +85 deg.C)		Unit	Note			
High Freq. Filter				min.		typ.*	max.		
	1			1111111.		IIIax.	NAL I		
Center Frequency	0440 :	0470			2140	0.5	MHz		
Insertion Loss	2110. to	2170.	MHz		2.0	2.5	dB		
	2110. to	2170.	MHz		2.0	2.3	dB	+23 to +27deg.C	
	2110.48 to	2169.52	MHz		2.0	2.4	dB		
	2110.48 to	2169.52	MHz		2.0	2.2	dB	+23 to +27deg.C	
Ripple Deviation	2110. to	2170.	MHz		0.6	1.2	dB		
VSWR	2110. to	2170.	MHz		1.5	2.0			
Absolute Attenuation	10. to	1920.	MHz	25	31		dB		
		190.	MHz	50	79		dB	RX-TX (B1)	
		400.	MHz	50	63		dB	RX -TX (B4)	
	699. to	716.	MHz	42	51		dB	B12 TX	
	777. to	787.	MHz	42	48		dB	B13 TX	
		830.	MHz	42	48		dB	B13 1X	
		849.	MHz	40	47		dB	DOC TV	
				40				B26 TX	
	824. to	849.	MHz		47		dB	IDO TV	
	880. to	915.	MHz	40	46		dB	B8 TX	
	898. to	925.	MHz	40	45		dB		
	1710. to	1755.	MHz	35	40		dB	TX (B4)	
	1710.48 to	1754.52	MHz	35	40		dB	TX (B4)	
	1730. to	1920.	MHz	35	40		dB	2TX- RX	
	1850. to	1910.	MHz	40	47		dB	TX (B2)	
	1850.48 to	1909.52	MHz	40	47		dB	TX (B2)	
	1920. to	1980.	MHz	35	39		dB	TX (B1)	
	1920.48 to	1979.52	MHz	35	39		dB	TX (B1)	
	2015. to	2075.	MHz	10	15		dB	(RX + TX)/2	
	2185. to	6130.	MHz	1.8	3.0		dB	1000	
	2400. to	2500.	MHz	36	40		dB	ISM2.4	
		4150.	MHz	45	50		dB	RX + TX	
		4340.		45	49		dB		
			MHz					2f	
	4340. to	13025.	MHz	15	25		dB	1014.50	
	4900. to	5950.	MHz	37	41		dB	ISM 5G	
	5950. to	6130.	MHz	37	40		dB	RX+2TX	
	6330. to	6510.	MHz	35	38		dB	3f	
	8440. to	8680.	MHz	23	37		dB	4f	
	10550. to	10850.	MHz	23	34		dB	5f	
	12660. to	13020.	MHz	15	28		dB	6f	
1									
1									
1				-					
1									
1									
1									
	<u> </u>			l	l		<u> </u>	* Typical yalua at 2512dag C	

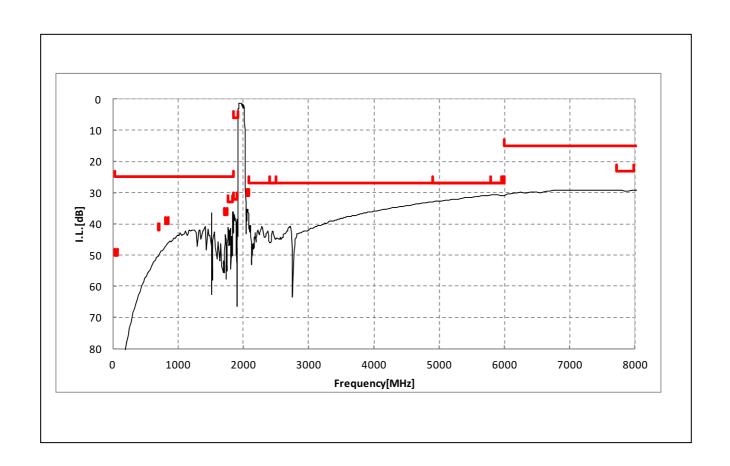
^{*} Typical value at 25±2deg.C



Electrical Characteristic

< Low Freq. Filter >

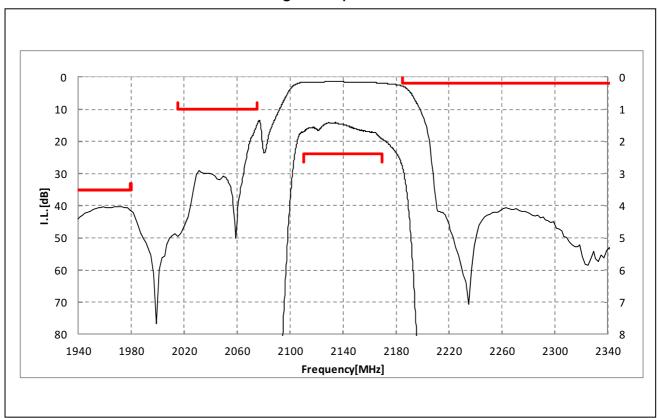


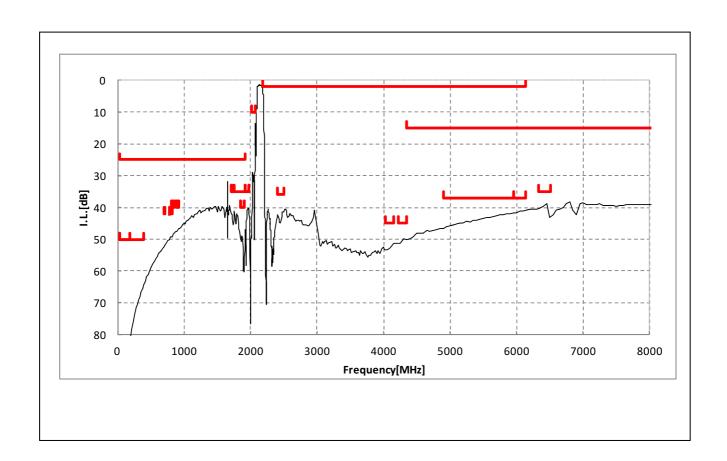




Electrical Characteristic

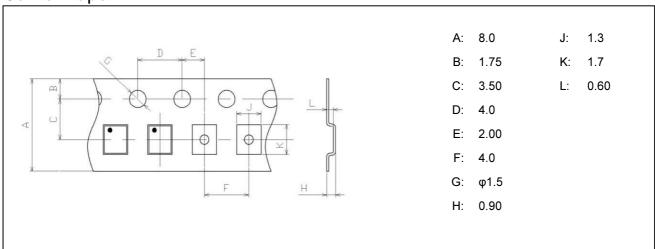
< High Freq. Filter >



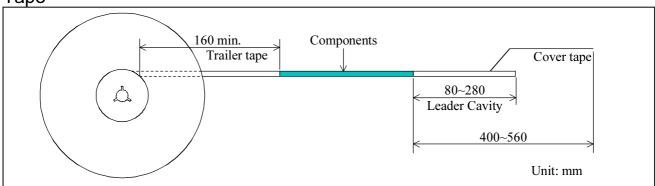


Dimensions of Tape & Reel unit: mm

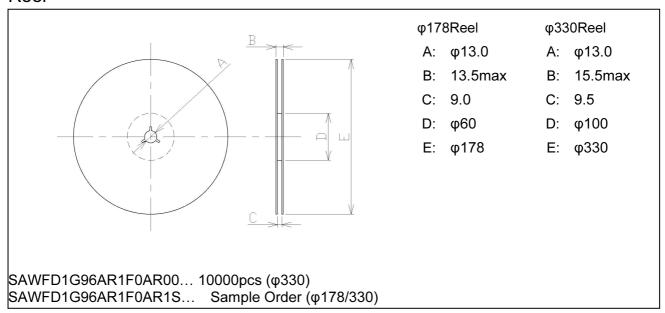
Carrier Tape



Tape



Reel





SAWFD1G96AR1F0A (Band1_Band25 / 1in2out Unbalanced / LH / 1511) 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 specified in the front page of this product specifications (the "Product" or "Products") 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 Product 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 for any application which requires especially high reliability or accuracy in order to prevent defect which incurs high possibility of damage to the third party's life, body or property such as the applications listed below as item (a) to (j) (the "Prohibited Application"). You acknowledge and agree that, if you use our Products in the Prohibited Applications, we will not be responsible for any damage caused by such use.

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 THE PROHIBITED APPLICATIONS.

- (a) Aircraft equipment.
- (b) Aerospace equipment
- (c) Undersea equipment.
- (d) Power plant control equipment
- (e) Medical equipment.
- (f) Transportation equipment (vehicles, automotive, trains, ships, etc.).
- (g)Traffic signal equipment.
- (h)Disaster prevention / crime prevention equipment.
- (i) Burning / explosion control equipment
- (j) Application of similar complexity and/ or reliability requirements to the applications listed in the above.

For the avoidance of doubt, the Product is not automotive grade, and will not support such requests for automotive as below, also not support other specific requests for automotive.

- AEC-Q200
- PPAP
- IATF16949, VDA6.3
- Zero Defect program
- Long product life cycle
- Automotive 8D failure analysis and report



Important Notice (2/2)

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.

If you can't agree the above contents, you should inquire our sales.