

Datasheet of SAW Device

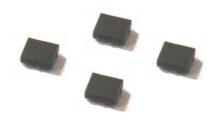
SAW Notch Filter

for GPS_ GLONASS_BEIDOU / Unbalanced / 10pin /1814

Murata PN: SADRM1G56AB0F0A

■ Feature

➤ Low Insertion Loss



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.

Revision

F

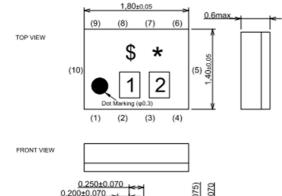
General Information

- Operating temperatu	ire	: -20 to +85deg.C							
- Storage temperature		: -40 to +85deg.C							
- Input Power	Antenna Port	: +13dBm, 50°C, 2000hours, CW tone							
	Cellular Port	: +27dBm, 50°C,5000hours							
		(for 699-1510.9MHz, 1710-2690MHz) (1)							
		+25.5dBm, 50°C,5000hours							
		(for 699-1510.9MHz, 1710-2690MHz) (2)							
		+35dBm, 50°C,5000hours, GSM duty cycle 1:8							
		(for 824-849MHz, 880-915MHz)							
		+33dBm, 50°C,5000hours, GSM duty cycle 1:8							
		(for 1710-1785MHz, 1850-1910MHz)							
		(1) applicable for W-CDMA, LTE, NR(DFT-s-OFDM)							
		(2) applicable for NR(CP-OFDM)							
- D.C. Voltage betwee	en the terminals	: 3V (25+/-2 deg.C)							
	e between the terminals	: 1M ohm							
		: Yes							
- RoHS compliance		. 162							
- ESD (ElectroStatic D	Discharge) sensitive device								

Package Dimensions & Recommended Land Pattern

unit: mm

Dimensions



 Marking: Laser Printing

* : Month code

\$: Date code

1:H

2:x

Terminal Number

(1): Unbalance Port (ANT. Port)

(9): Unbalance Port (Cellular Port)

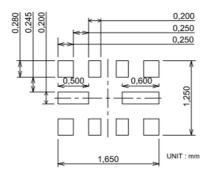
(4): Unbalance Port

(GPS/GLONASS/BEIDOU Port)

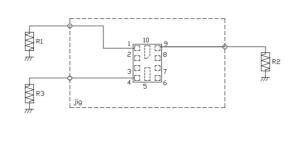
Others: GND.

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

Land Pattern



Measurement Circuit (Top Thru View)



R1:50 ohm	
R2:50 ohm	
R3:50 ohm	

ANT.→GPS/0					racteri to +85 d		Unit	Note
ANT GF 5/C	JLONASS/I	BEIDOO		min.		max.	Offic	Note
Center Frequency				1111111.	1575.4			1
Insertion Loss	1574.39 to	1576.45	MHz		1.0	1.4	dB	GPS
	1559.05 to	1563.15	MHz		1.4	2.3	dB	Beidou
	1597.55 to	1605.89			1.4	2.2	dB	GLONASS
GDT Ripple Deviation	1597.55 to	1605.89			6	17	ns	GLONASS
Ripple Deviation	1574.39 to	1576.45	MHz		0.1	0.5	dB	GPS
	1559.05 to	1563.15			0.5	1.0	dB	Beidou
VOMB	1597.55 to	1605.89	MHz		0.3	1.0	dB	GLONASS
VSWR	1574.39 to 1559.05 to	1576.45 1563.15	MHz MHz		1.5 1.2	2.0		Ant. Port Ant. Port
	1597.55 to	1605.89	MHz		1.4	2.0		Ant. Port
	1574.39 to	1576.45	MHz		1.6	2.0		GNSS Port
	1559.05 to	1563.15	MHz		1.4	2.0		GNSS Port
	1597.55 to	1605.89	MHz		1.3	2.0		GNSS Port
Absolute Attenuation	777. to	798.	MHz	27	33		dB	
	814. to	915.	MHz	27	33		dB	
	10. to	925.	MHz	27	32		dB	
	925. to	960.	MHz	27	33	ļ	dB	
	1427. to 1710. to	1463. 1785.	MHz MHz	36 31	44 36	-	dB dB	DCS-Tx
	1710. to 1786. to	1705.	MHz	31	37		dB	DCS-1X
	1850. to	1910.	MHz	33	39		dB	PCS-Tx
	1910. to	1980.	MHz	33	41		dB	1 00 1%
	2010. to	2025.	MHz	35	43		dB	B34Tx
	2305. to	2315.	MHz	35	45		dB	B30 Tx
	2401. to	2483.	MHz	35	41		dB	2.4G ISM
	2500. to	2570.	MHz	33	39		dB	B7 Tx
	5160. to	5885.	MHz	8.0	15.5		dB	5G ISM
				1				
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	 			1		1		
				 				
				t				
								Typical value at 25,12dag C

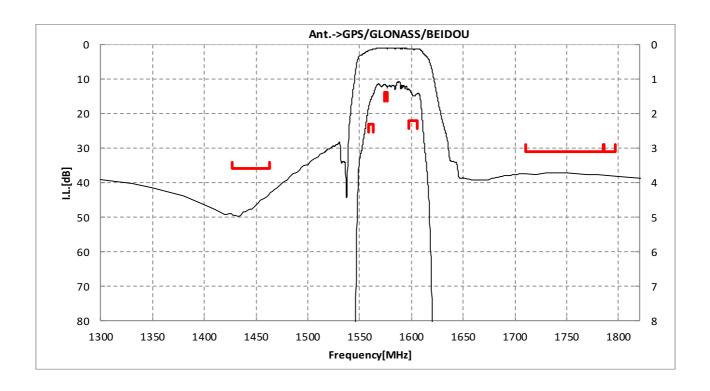
^{*} Typical value at 25±2deg.C

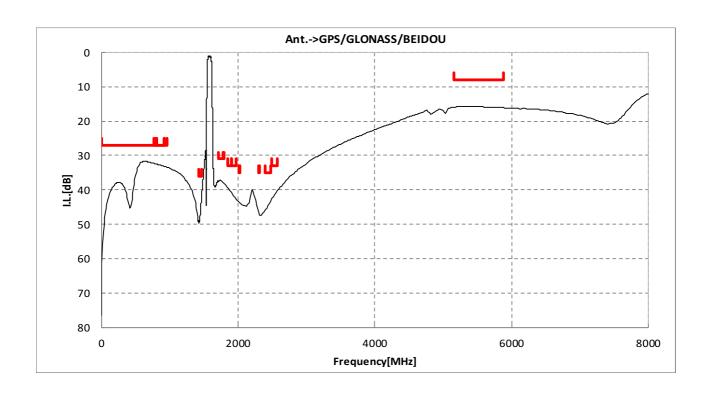
	Tacter				Characteristics				
ANT. → Cellular					(-20 1	to +85 d	eg.C)	Unit	Note
					min.	typ.*	max.		
Insertion Loss	699.	to	756.	MHz		1.0	1.8	dB	B12,13
	824.	to	960.	MHz		8.0	1.4	dB	B5,8
	1427.9	to	1510.9	MHz		0.8	1.5	dB	B11,21
	1710.	to	2200.	MHz		1.3	1.8	dB	B1,2,3,66
	2300. 2496.	to	2400.	MHz MHz		1.2 0.9	1.6 1.5	dB dB	B40
	3300.	to to	2690. 3800.	MHz		1.1	1.8	dB	B7,41 n78
	3300.	to	4200.	MHz		1.5	2.3	dB	n77
	3400.	to	3600.	MHz		1.0	1.7	dB	B42
	3600.	to	3800.	MHz		1.1	1.8	dB	B43
	4400.	to	5000.	MHz		4.1	7.0	dB	n79
VSWR	699.	to	756.	MHz		1.1	1.8		Ant. Port
	824.	to	960.	MHz		1.2	1.8		Ant. Port
	1427.9	to	1510.9	MHz		1.3	1.8		Ant. Port
	1710.	to	2200.	MHz		1.6	2.0		Ant. Port
	2300. 2496.	to	2400. 2690.	MHz MHz		1.5 1.5	1.8 1.8		Ant. Port Ant. Port
	3400.	to to	3600.	MHz		1.7	2.1		Ant. Port
	699.	to	756.	MHz		1.7	1.8		Cell Port
	824.	to	960.	MHz		1.2	1.8		Cell Port
	1427.9	to	1510.9	MHz		1.3	1.8		Cell Port
	1710.	to	2200.	MHz		1.8	2.0		Cell Port
	2300.	to	2400.	MHz		1.6	1.8		Cell Port
	2496.	to	2690.	MHz		1.5	1.8		Cell Port
	3400.	to	3600.	MHz		1.5	2.1		Cell Port
Absolute Attenuation	1574.39		1576.45	MHz	14	28		dB	GPS
	1574.39		1576.45	MHz	14	28		dB	+23 to +27deg.C
	1559.05		1563.15	MHz	3.0	8.2		dB	Beidou
	1559.05 1597.55		1563.15 1605.89	MHz MHz	3.0 7.0	8.2 12.3		dB dB	+23 to +27deg.C GLONASS
	1597.55		1605.89	MHz	7.0	12.3		dB	+23 to +27deg.C
	1007.00	10	1000.00	IVIIIZ	7.0	12.0		ub.	-23 to -27 deg.0
							 		
									Typical value at 25 L2dag C

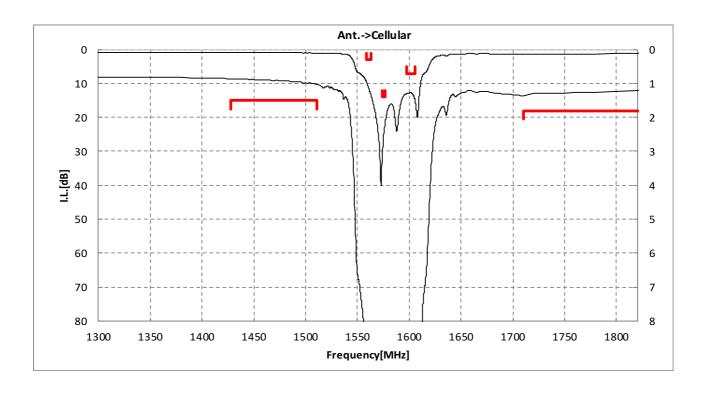
^{*} Typical value at 25±2deg.C

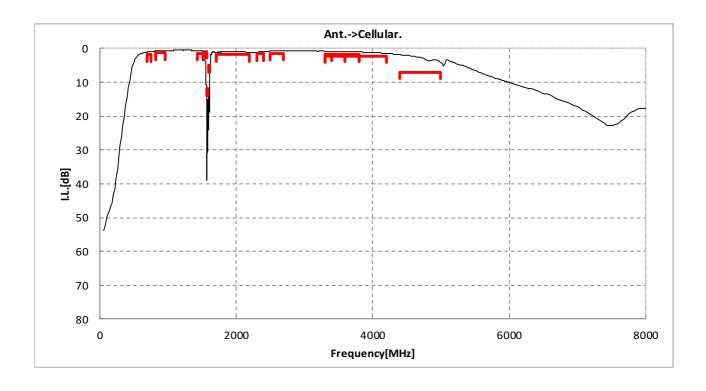
GPS/GLONASS/BEIDOU <> Cellular					Characteristics (-20 to +85 deg.C)			Unit	Note
					min.	typ.*	max.		
solation	1574.39		1576.45	MHz	14	29		dB	GPS
	1559.05		1563.15		4.0	9.5		dB	Beidou
	1597.55		1605.89		7.0	12.6		dB	GLONASS
	699.	to	777.	MHz	27	32		dB	
	777.	to	787.	MHz	28	33		dB	
	787.	to	960.	MHz	28	33		dB	
	1427.9	to	1462.9	MHz	34	39		dB	
	1710.	to	1990.	MHz	33	38		dB	
	2110. 2400.	to	2170. 2690.	MHz MHz	37 32	43 37		dB dB	
	3400.	to to	3600.	MHz	20	26	-	dВ	
	3400.	10	3000.	IVII IZ	20	20		UD	
							-		
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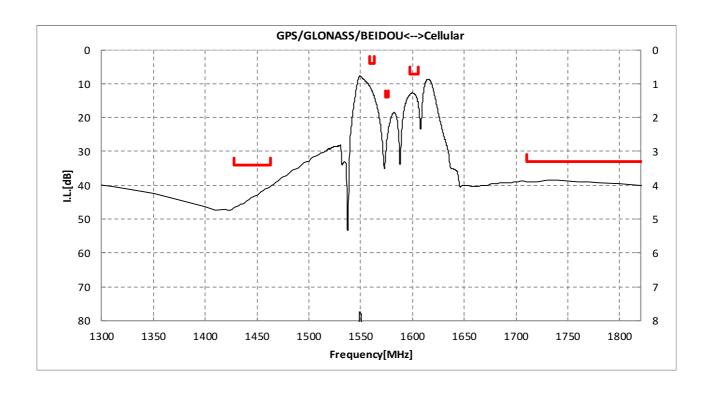
^{*} Typical value at 25±2deg.C

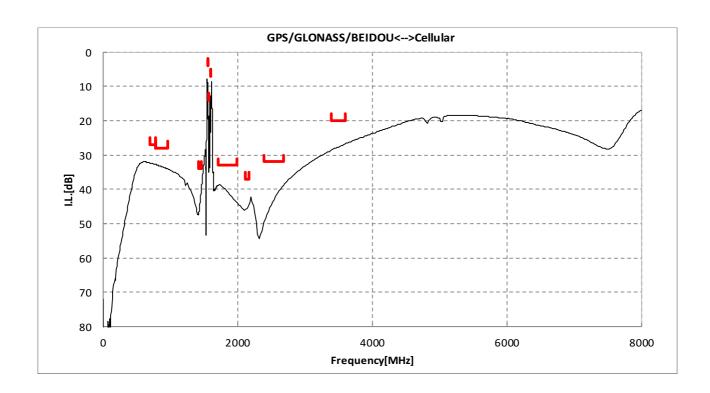








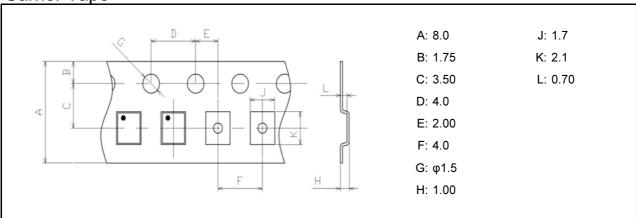




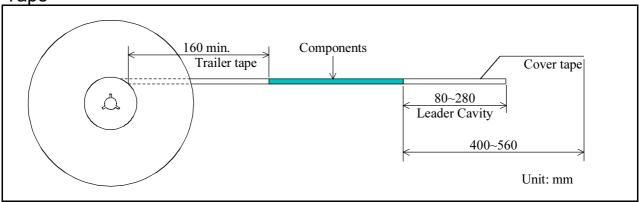
SADRM1G56AB0F0A (GPS_GLONASS_BEIDOU / Unbalanced / 10pin / 1814)

Dimensions of Tape & Reel unit: mm

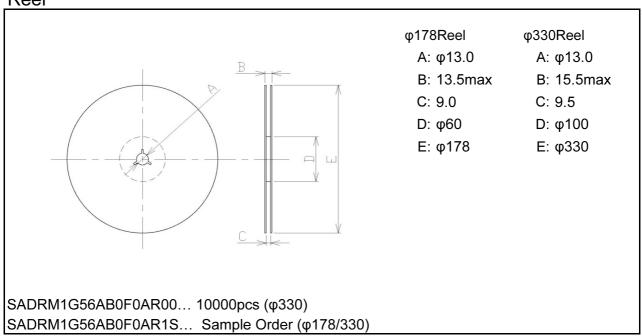
Carrier Tape







Reel



Important Notice (1/2)

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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

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Please do not use the Product in molding condition.

The 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.

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