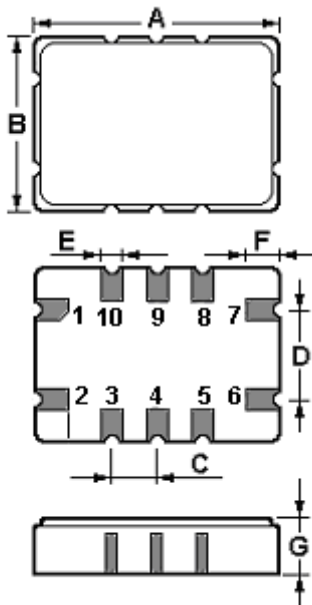


SAW BANDPASS FILTER PART NO.: ACTF2159-169.48125-0705

Features

- Bandpass filter for base station
- Ceramic Package for **Surface Mounted Technology (SMT)**
- Lead-free Production and **RoHS** Compliance

Package Dimensions



Pin		Configuration	
1		Input Ground	
2		Input	
6		Output Ground	
7		Output	
3,5,8,10		Ground	
4,9		Case Ground	
Sign	Data (unit: mm)	Sign	Data (unit: mm)
A	7.0	E	0.6
B	5.0	F	1.0
C	1.27	G	1.5
D	2.54		

Marking: Laser Marking

Maximum Ratings

Rating		Value	Unit
Source Power	P	15	dBm
DC Voltage	V_{DC}	0	V
Operating Temperature Range	T_A	-40 ~ +85	°C
Storage Temperature Range	T_{stg}	-40 ~ +85	°C

In keeping with our ongoing policy of product evolution and improvement, the above specification is subject to change without notice.

ISO9001: 2000 Registered

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<http://www.actcrystals.com>

Electrical Characteristics

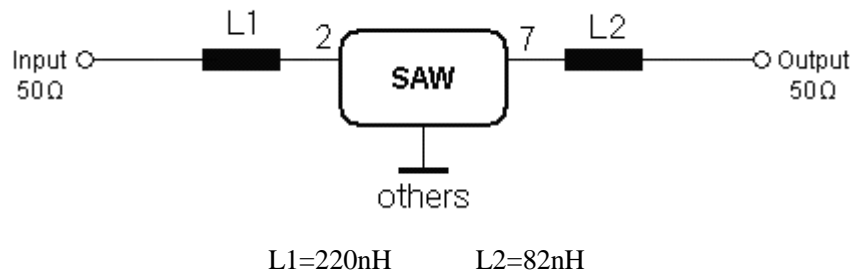
Reference temperature: $T_A = 25\text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

Characteristic	Min.	Typ.	Max.	Unit
Center frequency f_c	—	169.48125	—	MHz
Insertion attenuation @ 169.48125 MHz IL	—	3.0	4.0	dB
Pass bandwidth $\pm_{rel} \text{ d } 1\text{ dB}$ BW_1 $\pm_{rel} \text{ d } 3\text{ dB}$ BW_3	80 100	100 120	—	kHz
Passband ripple (p-p) $f_c \pm 30\text{ kHz}$ " \pm		0.3	1.0	dB
Relative attenuation	@ $f_c + 2.0\text{ MHz}$	40	45	dB
	@ $f_c + 5.0\text{ MHz}$	40	45	
Temperature Stability	Turnover Temperature T_0 +15	+25	+35	
	Frequency Temperature Coefficient FTC		0.032	ppm/ $^\circ\text{C}^2$
Frequency Aging Absolute Value during the First Year $ fA $	± 10		ppm/yr	
DC Insulation Resistance between Any Two Pins	1.0		$\text{M}\Omega$	

 **RoHS Compliant**

 **Electrostatic Sensitive Device**

Test Matching Network



The LC value may change due to PCB Layout!

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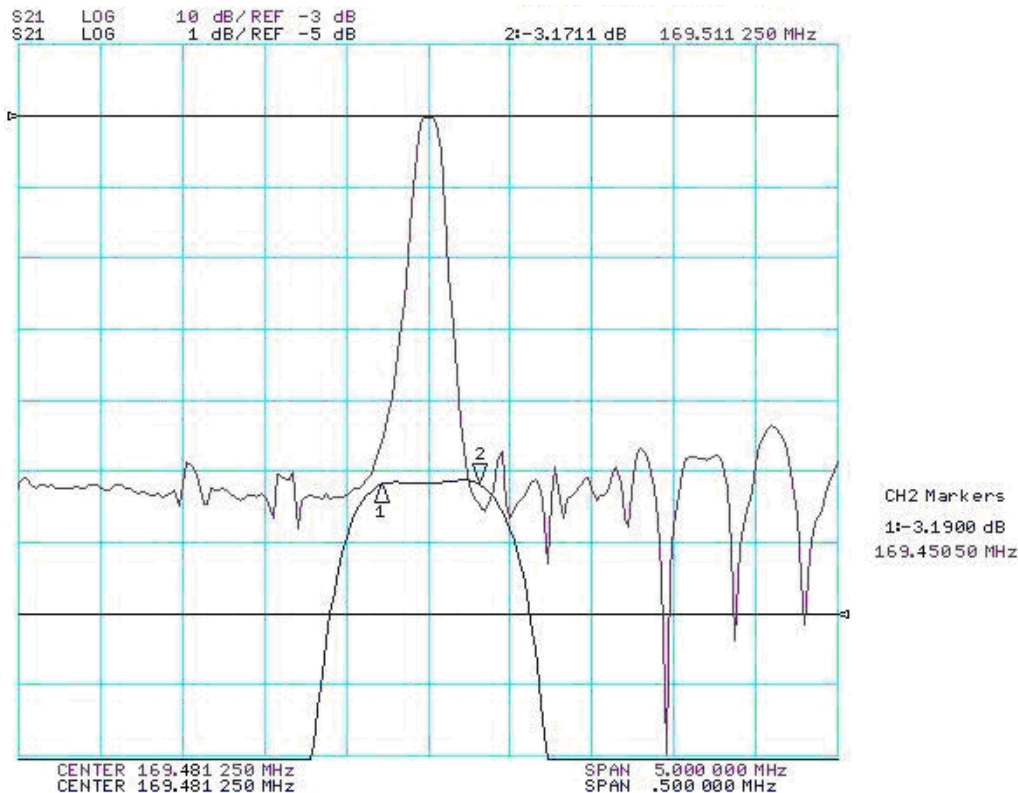
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Typical Frequency Response



Environmental Characteristic

	Test item	Condition of test	Requirements
1	Mechanical shock	(a) Drops: 3 times on concrete floor (b) Height: 1.0m	The SAW filter shall remain within the electrical specifications after tests.
2	Vibration resistance	(a) Frequency of vibration: 10~55Hz (b) Amplitude: 1.5mm (c) Directions: X,Y and Z (d) Duration: 2 hours	
3	Moisture resistance	(a) Condition: 40°C, 90~95% R.H. (b) Duration: 96 hours (c) Wait 4 hours before measurement	
4	Climatic sequence	(a) +70°C for 16 hours (b) +55°C for 24 hours, 90~95% R.H. (c) -25°C for 2 hours (d) +40°C for 24 hours, 90~95% R.H. (e) Wait 4 hours before measurement	
5	High Temperature Exposure	(a) Temperature: 70°C (b) Duration: 250 hours (c) Wait 4 hours before measurement	
6	Thermal impact	(a) +70°C for 30 minutes ⇒ -25°C for 30 minutes repeated 3 times (b) Wait 4 hours before measurement	

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Remarks

8-1 Static voltage

Static voltage between signal load & ground may cause deterioration & destruction of the SAW filter. Please avoid static voltage.

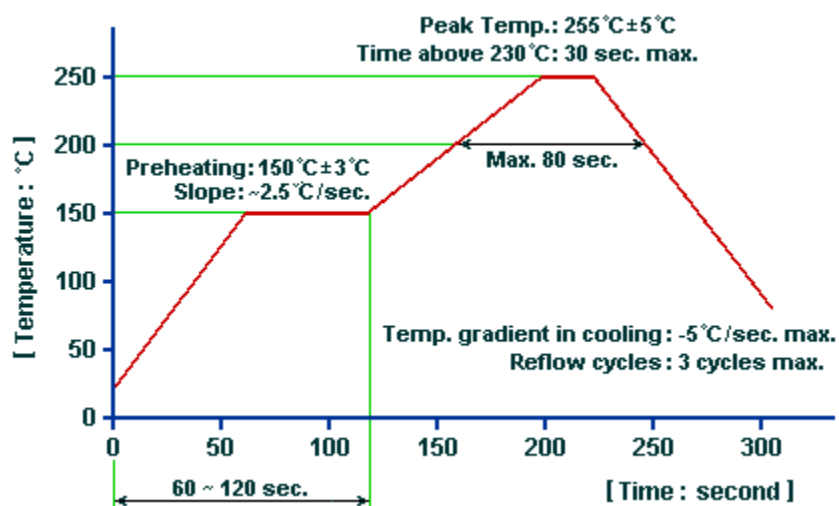
8-2 Ultrasonic cleaning

Ultrasonic vibration may cause deterioration & destruction of the SAW filter. Please avoid ultrasonic cleaning.

8-3 Soldering

Only terminals of the SAW filter may be soldered. Please avoid soldering other parts of the SAW filter.

Soldering Profile



- Our liability is only assumed for the Surface Acoustic Wave (SAW) component(s) per se, not for applications, processes and circuits implemented within components or assemblies.
- For questions on technology, prices and delivery, please contact our sales offices or e-mail info@actcrystals.com.

 **RoHS Compliant**

 **Electrostatic Sensitive Device**

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