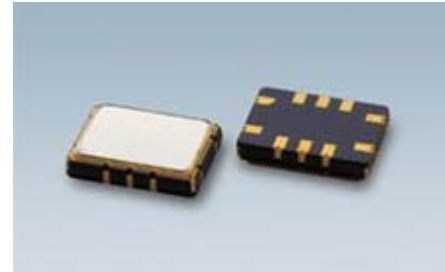


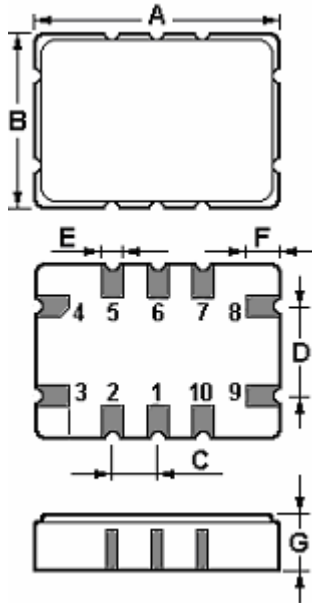
SAW BANDPASS FILTER PART NO.: ACTF2102-140-SMP03

Features

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



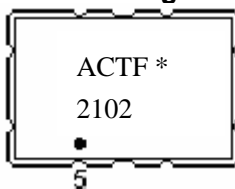
Package Dimensions



Pin	Configuration
3	input
4	input Ground
8	output
9	output Ground
1, 5, 6, 10	Ground
2, 7	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



Top View, Laser Marking

- "ACT": Manufacturer's mark "F": SAW filter
 "2102": Part number "·": Terminal 5
 "*": Lot number (The code shown below varies in a 4-year cycle)

Code	1	2	3	4	5	6	7	8	9	10	11	12
2006	N	P	Q	R	S	T	U	V	W	X	Y	Z
2007	a	b	c	d	e	f	g	h	i	j	k	m
2008	n	p	q	r	s	t	u	v	w	x	y	z
2009	A	B	C	D	E	F	G	H	J	K	L	M

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

Electrical Characteristics

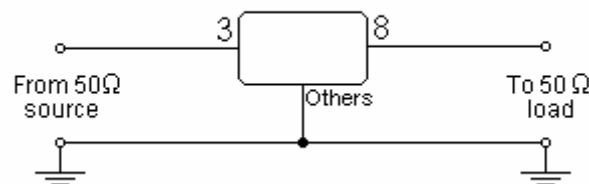
Reference temperature: $T_A = 25\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

Characteristic		Minimum	Typical	Maximum	Unit
Center Frequency	f_c	--	140.0	--	MHz
Insertion Loss (@140.00MHz)	IL	--	2.0	3.0	dB
2dB Bandwidth	BW_2	1.50	1.95	--	MHz
3dB Bandwidth	BW_3	1.65	2.20	--	MHz
20dB Bandwidth	BW_{20}	--	3.35	3.5	MHz
30dB Bandwidth	BW_{30}	--	3.55	3.75	MHz
40dB Bandwidth	BW_{40}	--	3.80	4.20	MHz
45dB Bandwidth	BW_{45}	--	5.0	10	MHz
Rejection (@140.00MHz-1.75MHz)	α	25	30		dB
Rejection (@140.00MHz+1.75MHz)	α	10	15		dB
Rejection (@140.00MHz±3.50MHz)	α	35	45		dB
Rejection (@140.00MHz±8.75MHz)	α	40	47		dB
Ultimate Rejection	α	35	40	--	dB
Group Delay (@140MHz)	τ	--	680	1000	ns

 RoHS Compliant

 Electrostatic Sensitive Device

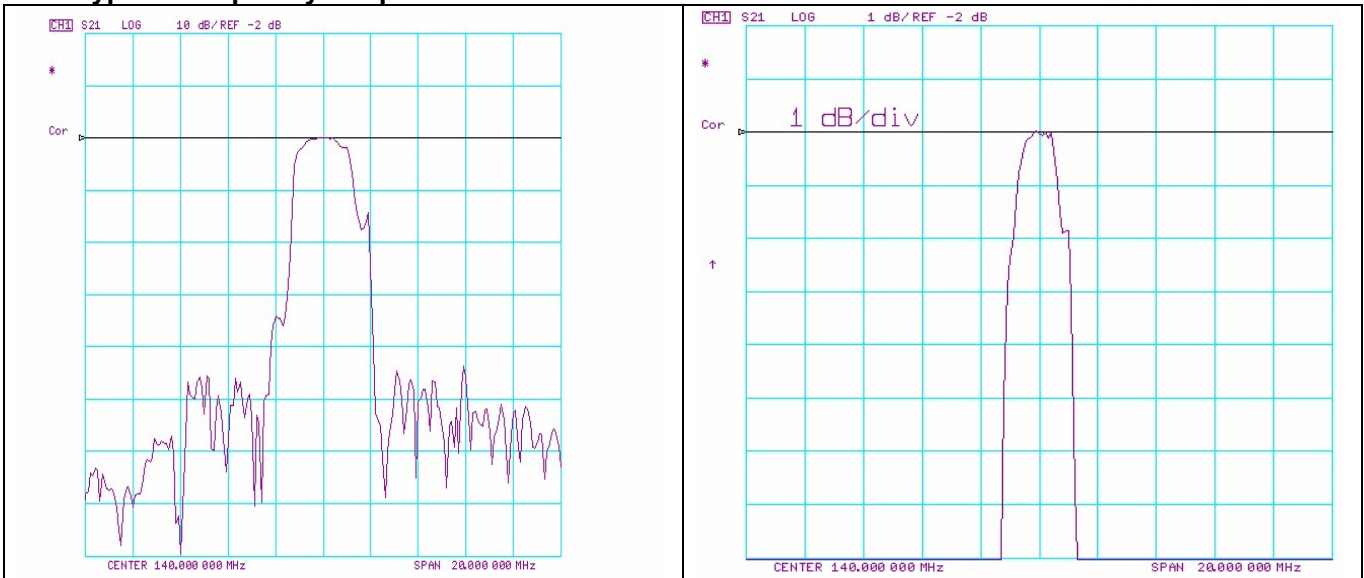
Test Matching Network



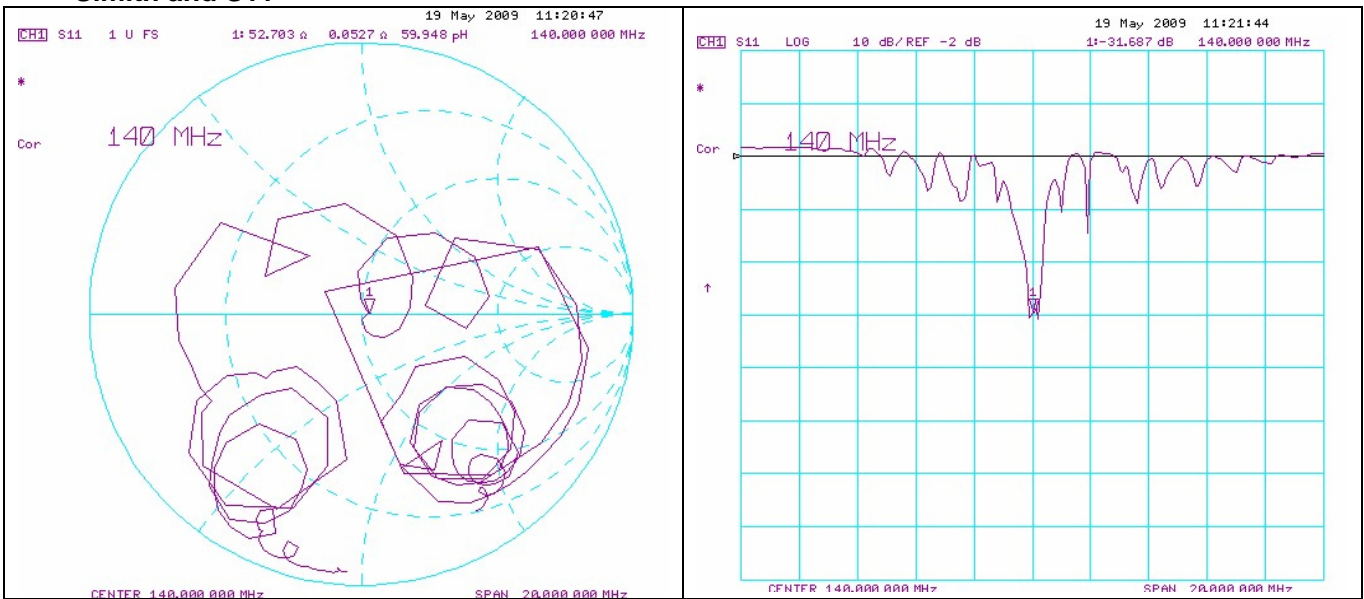
Iss1 C1u, Date 13-7-2011

In line with our ongoing policy of product evolution and improvement, the above specification may subject to change without notice.
 For quotations or further information please contact us at: The Busines Centre, Molly Millars Lane, Wokingham, Berkshire RG41 2EY, UK.

■ Typical Frequency Response



■ Smith and S11



Stability Characteristics

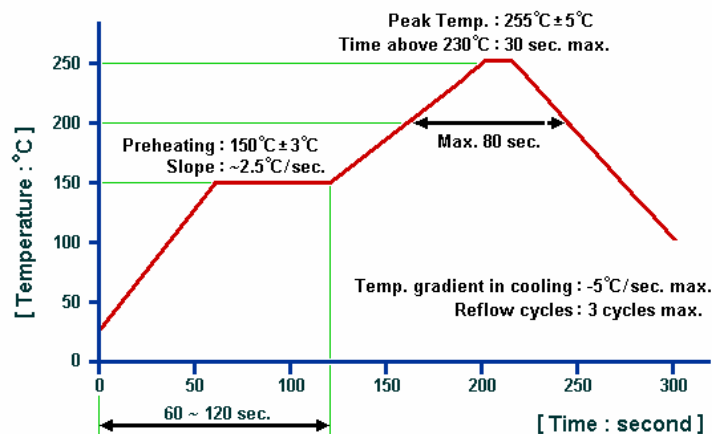
	Test item	Condition of test
1	Mechanical shock	(a) Drops: 3 times on concrete floor (b) Height: 1.0 m
2	Vibration resistance	(a) Frequency of vibration: 10~55Hz (c) Directions: X,Y and Z (b) Amplitude: 1.5 mm (d) Duration: 2 hours
3	Moisture resistance	(a) Condition: 40°C, 90~95% R.H. (c) Wait 4 hours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

Requirements: The SAW filter shall remain within the electrical specifications after tests.

Remarks

- SAW devices should not be used in any type of fluid such as water, oil, organic solvent, etc.
- Be certain not to apply voltage exceeding the rated voltage of components.
- Do not operate outside the recommended operating temperature range of components.
- Sudden change of temperature shall be avoided, deterioration of the characteristics can occur.
- Be careful of soldering temperature and duration of components when soldering.
- Do not place soldering iron on the body of components.
- Be careful not to subject the terminals or leads of components to excessive force.
- SAW devices are electrostatic sensitive. Please avoid static voltage during operation and storage.
- Ultrasonic cleaning shall be avoided. Ultrasonic vibration may cause destruction of components.

Recommended Soldering Profile



1. The specifications of this device are subject to change or obsolescence without notice.
2. Typically, equipment utilizing this device requires emissions testing and government approval, which is the responsibility of the equipment manufacturer.
3. 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.

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