

APPROVAL SHEET

Approval Specification	Customer's Approval Certificate
TO:	Please return this copy as a certification of your approval
Part No.:	Checked & Approved by:
Customer's Part No.:	Date:

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Part No.	:	SF0142
Pages	:	6
Date	:	2013/5/22
Revision	:	1.0



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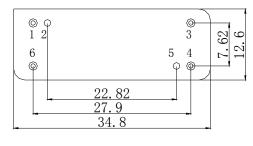
Application

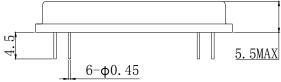
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 220 KHz

Features

- RoHS compatible
- Package size 34.8x12.6x5.50mm³
- Package Code DIP3512J
- Electrostatic Sensitive Device(ESD)

Package Dimensions (Unit: mm)









Pin Configuration

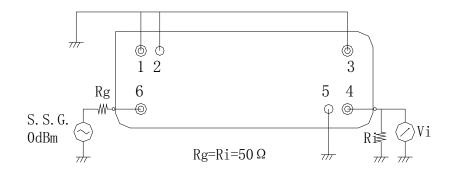
Pin No.	Description		
6	Input		
4	Output		
1,2,3,5	Ground		

Marking Description

S	Trademark	
F	SAW Filter	
0142	Part Number	
•	Pin 1	
YYWW	Year Code & Week Code	

*Fig: If the products produced in 06th week of 2012, The year code & week code is 1206.

Test Circuit



Performance

Maximum Rating

Item		Value	Unit
DC Voltage	V _{DC}	3	V
Operation Temperature	Т	-40 ~ +85	$^{\circ}$
Storage Temperature	T _{stg}	-55 ~ +125	${\mathbb C}$
RF Power Dissipation	Р	10	dBm

Electronic Characteristics

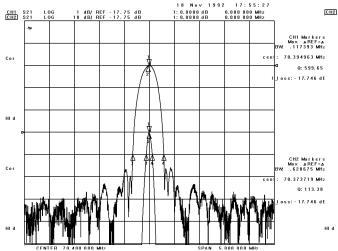
Test Temperature: $25^{\circ}C \pm 2^{\circ}C$

Terminating source impedance: 50Ω Terminating load impedance: 50Ω

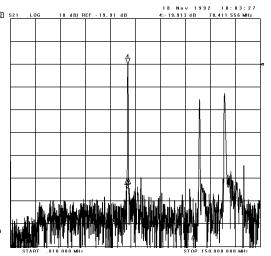
Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc	70.385	70.4	70.415	MHz
Insertion Loss(min)	IL		17.8	20.0	dB
Amplitude Ripple (p-p)	Δa		0.3	0.5	dB
3 dB Bandwidth	BW3dB	220.0	221.0		KHz
40 dB Bandwidth	BW _{40dB}		621.0	630.0	KHz
Group Delay Ripple 70.29-70.51MHz	GDR		0.9	1.0	us
Absolute Delay 70.40MHz			4.4	4.5	us
Absolute Attenuation	а				
5.00 -69.80 MHz		50.0	55.0		dB
71.00-100.00MHz		45.0	49.0		dB

Frequency Characteristics

Frequency Response



Frequency Response (wideband)

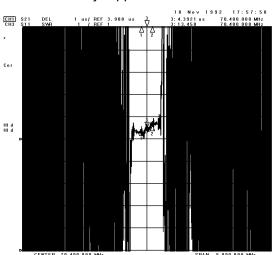


CH2 Markers Ma× 1:-70.094 dB 69.9000 MHz

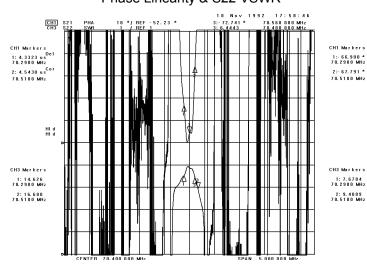
2:- 69.850 dE 70.8000 MHz

3:- 95. 031 dB 110.000 MHz

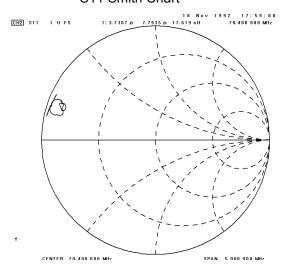
Delay Ripple & S11 VSWR



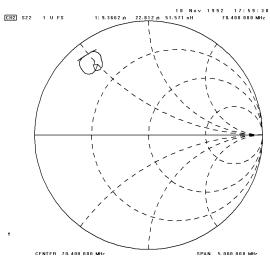
Phase Linearity & S22 VSWR



S11 Smith Chart



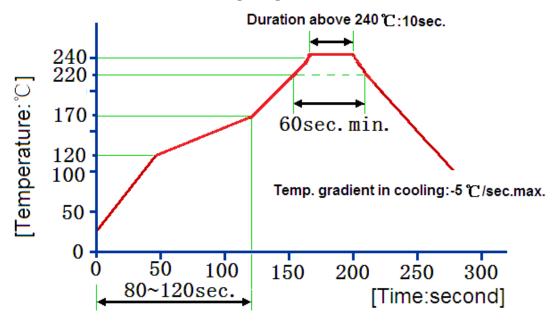
S22 Smith Chart



Reliability (The SAW components shall remain electrical performance after tests)

No.	Test item	Test condition		
1	Temperature	(1) Temperature: 85℃±2℃,Duration: 250h,Recovery time: 2h±0.5h		
I	Storage	(2) Temperature: –55℃±3℃, Duration: 250h, Recovery time: 2h±0.5h		
2	Humidity Test	Conditions: 60℃±2℃, 90~95% RH Duration: 250h		
3	Thermal Shock	Heat cycle conditions: TA=-55℃±3℃, TB=85℃±2℃, t1=t2=30min, Switch		
3	Thermal Shock	time: ≤3min, Cycle time: 100 times, Recovery time: 2h±0.5h.		
4	4 Vibration Fatigue	Frequency of vibration: 10~55Hz Amplitude:1.5mm		
		Directions: X,Y and Z Duration: 2h		
5	Drop Test	Cycle time: 10 times Height: 1.0m		
		Temperature: 245 ℃ ±5 ℃ Duration: 3.0s5.0s		
6	Solder Ability Test	Depth: DIP2/3 , SMD1/5		
		(1)Thickness of PCB:1mm , Solder condition: 260 ℃±5 ℃ , Duration: 10±1s		
7	Resistance to Soldering Heat	(2)Temperature of Soldering Iron: 350℃±10℃, Duration: 3~4s,		
		Recovery time: 2 ± 0.5h		

Recommended Reflow Soldering Diagram



Reflow cycles:3 cycles max.

70.40MHz SAW Filter SF0142 220 KHz Bandwidth

Notes

- 1. As a result of the particularity of inner structure of SAW products, it easy to be breakdown by electrostatic, so we should pay attention to **ESD protect** in the test.
- 2. **Static voltage** between signal load and ground may cause deterioration and destruction of the component. Please avoid static voltage.
- 3. **Ultrasonic cleaning** may cause deterioration and destruction of the component. Please avoid ultrasonic cleaning.
- 4. Only leads of component may be soldered. Please avoid soldering another part of component.
- 5. There is a close relationship between the device's performance and **matching network**. The specifications of this device are based on the test circuit shown above. L and C values may change depending on board layout. Values shown are intended as a guide only.

Please read notes at the end of this document.