

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.	:	SF8118
Pages	:	6
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Prepared by:	
Checked by:	
Approved by:	

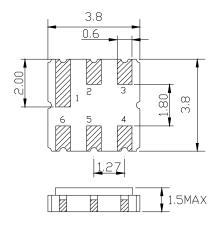
Application

- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 26 MHz

Features

- Ceramic Package for Surface Mounted Technology (SMT)
- RoHS compatible
- Package size 3.80x3.80x1.50mm³
- Package Code DCC6
- Electrostatic Sensitive Device(ESD)

Package Dimensions (Unit: mm)





Pin Configuration

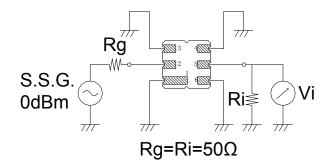
Pin No.	Description	
2	Input	
5	Output	
1,3,4,6	Ground	

Marking Description

S	Trademark		
F	SAW Filter		
8118	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



Please read notes at the end of this document.

Performance

Maximum Rating

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

Electronic Characteristics

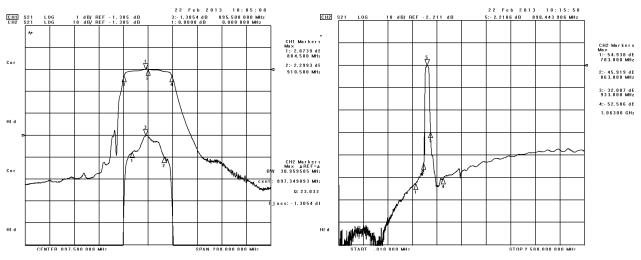
Test Temperature: $25^{\circ}C \pm 2^{\circ}C$

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

Item	Minimum	Typical	Maximum	Unit	
Center Frequency	fc	896.50	897.50	898.50	MHz
Insertion Loss 884.50-910.50MHz	IL		2.2	3.0	dB
Amplitude Ripple (p-p) 884.50-910.50MHz	Δa		0.9	1.0	dB
3dB Bandwidth	BW3dB	37.0	38.5		MHz
Group Delay Ripple 884.50-910.50MHz	GDR		40.0	80.0	ns
Absolute Attenuation	а				
DC -783.00 MHz		50.0	51.0		dB
783.00-863.00MHz		40.0	41.0		dB
933.00-1063.00 MHz		30.0	31.0		dB
1063.00-2000.00 MHz		35.0	37.0		dB
Input VSWR 884.50-910.50MHz			1.7:1	2.0:1	/
Output VSWR 884.50-910.50MHz			1.8:1	2.0:1	/

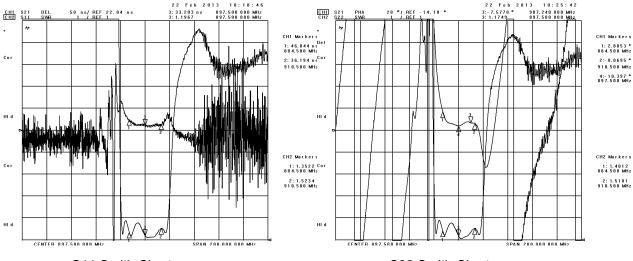
Frequency Characteristics

Frequency Response Frequency Response (wideband)



Delay Ripple & S11 VSWR

Phase Linearity & S22 VSWR



S11 Smith Chart

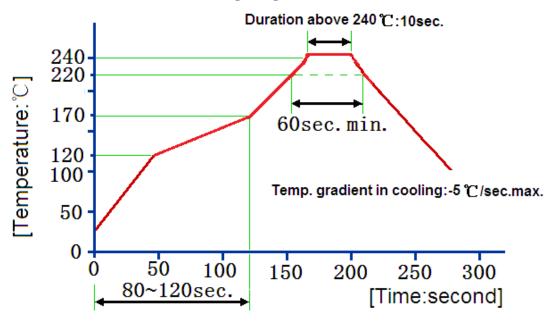
S22 Smith Chart 2.2 Feb 2.013 10:26:55 1:54.797 <u>8.5703 1</u>.55198 nH 897.500 000 MHz CH1 S11 1 U FS CH1 S22 Cor CENTER 897.500 000 MHz SPAN 200.000 000 MHz CENTER 897.500 000 MHz

SPAN 200.000 000 MHz

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

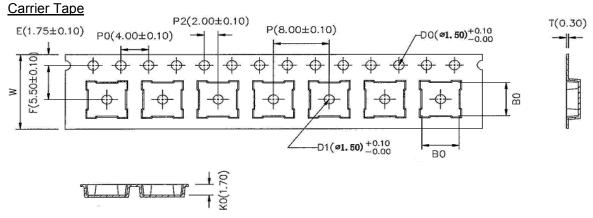
No.	Test item	Test condition		
4	Temperature	(1) Temperature: 85℃±2℃, Duration: 250h, Recovery time: 2h±0.5h		
1	Storage	(2) Temperature: –55℃±3℃ , Duration: 250h ,Recovery time: 2h±0.5h		
2	Humidity Test	Conditions: 60℃±2℃, 90~95% RH Duration: 250h		
3 Thermal Shock		Heat cycle conditions: TA=-55℃±3℃, TB=85℃±2℃, t1=t2=30min, Switch		
		time: ≤3min, Cycle time: 100 times, Recovery time: 2h±0.5h.		
4	Vibration Fatigue	Frequency of vibration: 10~55Hz Amplitude:1.5mm		
4	Vibration ratigue	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



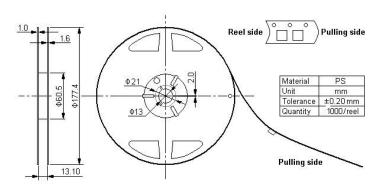
Reflow cycles:3 cycles max.

Packing Information



* B0: 5.35 for QCC8C; 4.15 for DCC6/QCC8B; 3.35 for DCC6C/QCC8D

Reel Dimensions



Outer Packing

Туре	Quantity	Dimension	Description	Weight
Internal box	1000	190×188×42	carton box 2 reel / internal box	0.18
External box	10000	235×205×210	5 boxes / external box	1.80

Unit: mm Unit: kg

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.