

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.	:	SF8135
Pages	:	6
Date	:	2015/1/29
Revision	:	1.0



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SF8135

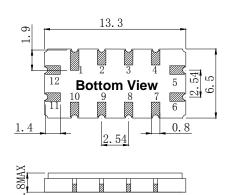
Application

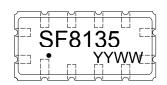
- High-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Passband 10.5 MHz
- Low Shape factor

Features

- Ceramic Package for Surface Mounted Technology (SMT)
- RoHS compatible
- Package size 13.30x6.50x1.80mm³
- Package Code QCC12
- Electrostatic Sensitive Device(ESD)

Package Dimensions (Unit: mm)





Test Circuit(Bottom View)

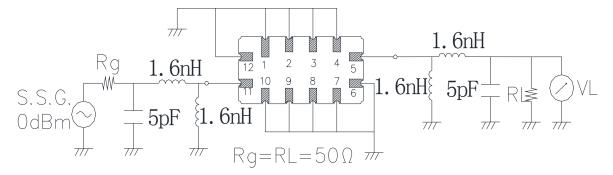
Pin Configuration

Pin No.	Description
11	Input
5	Output
1,2,3,4,6,7,8,9,10,12	Ground

Marking Description

S	Trademark		
F	SAW Filter		
8135	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.



Please read notes at the end of this document.

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2015/1/23

Performance

Maximum Rating

Item		Value	Unit
DC Voltage	V_{DC}	3	V
Operation Temperature	Т	-25 ~ +85	$^{\circ}$
Storage Temperature	T _{stg}	-45 ~ +105	$^{\circ}$
RF Power Dissipation	Р	10	dBm

Electronic Characteristics

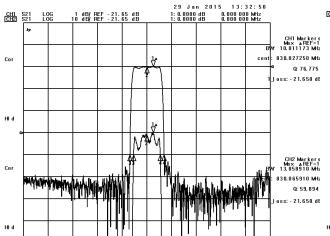
Test Temperature: $25^{\circ}C \pm 2^{\circ}C$

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

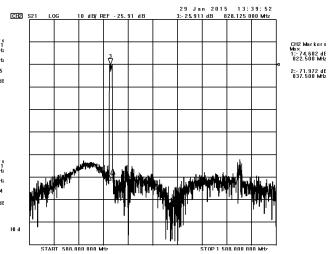
Item			Minimum	Typical	Maximum	Unit
Center Frequency		fc		830.0		MHz
Insertion Loss(min)		IL		21.7	26.5	dB
Amplitude Ripple (p-p)	825.00-835.00MHz	△a		0.8	1.3	dB
1 dB Bandwidth		BW _{1dB}	10.5	10.8		MHz
3 dB Bandwidth		BW3dB	11.3	11.4		MHz
40 dB Bandwidth		BW _{40dB}		13.9	14.2	MHz
Absolute Delay		AD		1.22		us
Group Delay Ripple	825.00-835.00MHz	GDR		80.0	110.0	ns
Absolute Attenuation		а				
	822.50MHz		40.0	46.0		dB
	837.50MHz		40.0	45.0		dB

Frequency Characteristics

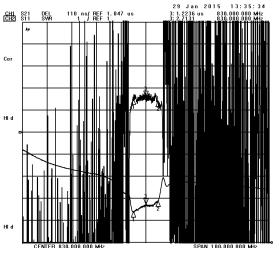
Frequency Response



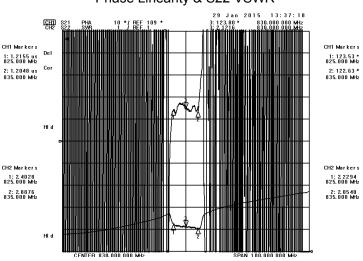
Frequency Response (wideband)



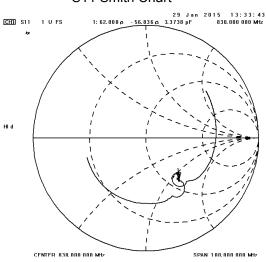
Delay Ripple & S11 VSWR



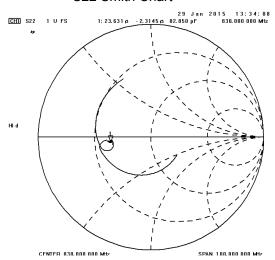
Phase Linearity & S22 VSWR



S11 Smith Chart



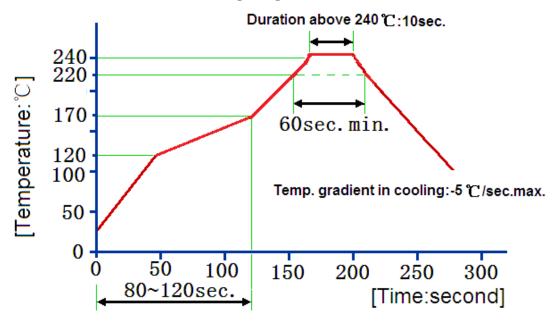
S22 Smith Chart



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		
1	Storage	(2) Temperature: –55°C±3°C , Duration: 250h ,Recovery time: 2h±0.5h		
2	Humidity Test	Conditions: 60℃±2℃ , 90~95% RH		
3	Thormal Chook	Heat cycle conditions: TA=-55°C±3°C, TB=85°C±2°C, t1=t2=30min, Switch		
3	Thermal Shock	time: ≤3min, Cycle time: 100 times, Recovery time: 2h±0.5h.		
1	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°C±10°C , Duration: 3~4s ,			
		Recovery time: 2 ± 0.5h		

Recommended Reflow Soldering Diagram



Reflow cycles:3 cycles max.

830.00MHz SAW Filter SF8135 10.50 MHz 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.