SAW Filter

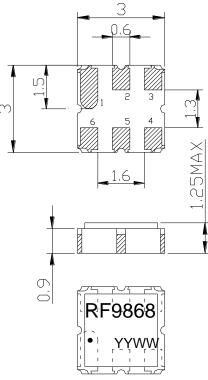
Application

- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 2.0 MHz

Features

- Ceramic Package for Surface Mounted Technology (SMT)
- RoHS compatible
- Package size 3.00x3.00x1.25mm³
- Package Code DCC6C
- Electrostatic Sensitive Device(ESD)

Package Dimensions (Unit: mm)



Test Circuit (Bottom View)

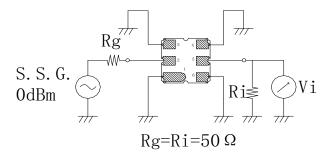
Pin Configuration

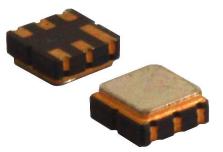
Pin No.	Description		
2	Input		
5	Output		
1,3,4,6	Case Ground		

Marking Description

55	R	Manufacturer	
RF	F	SAW Filter	
9868	Part Number		
•	Pin 1		
YYWW	Year Code & Week Code		

*Fig: If the products produced in 06th week of 2015, The year code & week code is 1506.





Performance

Maximum Rating

Item		Value	Unit
DC Voltage	V _{DC}	3	V
Operation Temperature	т	-40 ~ +85	°C
Storage Temperature	T _{stg}	-55 ~ +125	°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

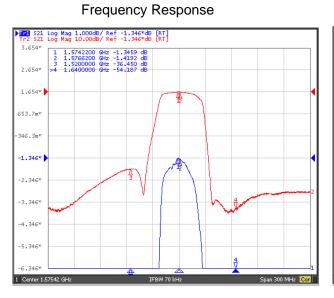
Item	Minimum	Typical	Maximum	Unit	
Center Frequency	fc		1575.42		MHz
Insertion Loss 1574.42 – 1576.62MHz	IL		1.3	1.8	dB
Amplitude Ripple (p-p) 1574.42 – 1576.62MHz	∆a		0.1	1.0	dB
Absolute Attenuation	a				
DC - 1450.00 MHz		40.0	44.0		dB
1450.00 - 1520.00 MHz		30.0	34.0		dB
1640.00 - 1710.00 MHz		35.0	43.0		dB
1710.00 - 1750.00 MHz		35.0	43.0		dB
1750.00 - 1910.00 MHz		42.0	44.0		dB
1910.00 - 2000.00 MHz		40.0	45.0		dB
Input VSWR 1574.42 – 1576.62MHz			1.5:1	2.0:1	/
Output VSWR 1574.42 – 1576.62MHz			1.5:1	2.0:1	/



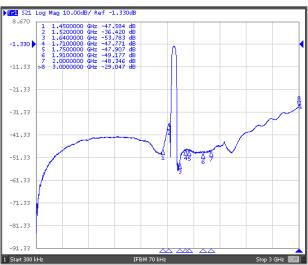
SAW Filter



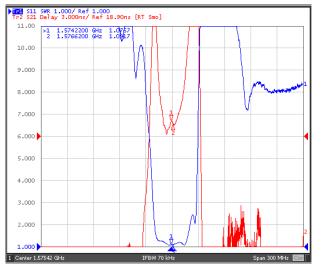
Frequency Characteristics



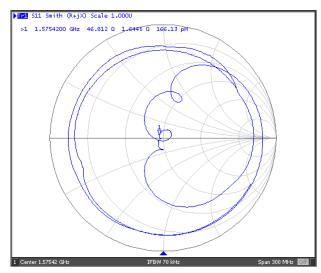
Frequency Response (wideband)



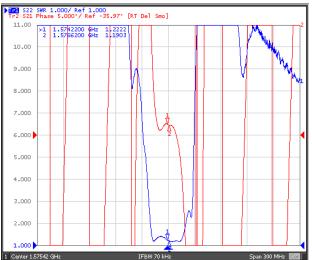
Delay Ripple & S11 VSWR



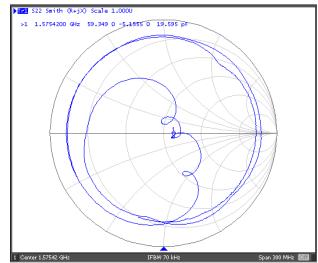




Phase Linearity & S22 VSWR



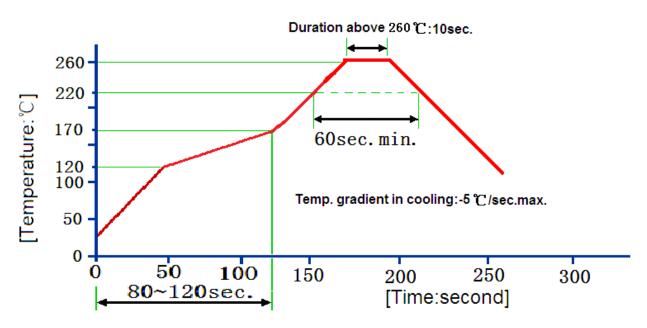
S22 Smith Chart

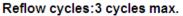


Reliability (The SAW components shall remain electrical performance after tests)

No.	Test item	Test condition	
1	Temperature	(1) Temperature: 85℃±2℃, Duration: 250h, Recovery time: 2h±0.5h	
	Storage	(2) Temperature: –55 $^\circ\!\mathrm{C}\pm\!3^\circ\!\mathrm{C}$, 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		
-		Directions: X,Y and Z Duration: 2h	
5	Drop Test	Cycle time: 10 times Height: 1.0m	
		Temperature: 245°C ±5°CDuration: 3.0s5.0s	
6 Solder Ability Test		Depth: DIP2/3 , SMD1/5	
		(1)Thickness of PCB:1mm , Solder condition: 260 $^\circ\!\!\mathbb{C}\pm\!\!5^\circ\!\!\mathbb{C}$, Duration: 10±1s	
7	Resistance to Soldering Heat	(2)Temperature of Soldering Iron: 350 $^\circ\!\mathrm{C}\pm10^\circ\!\mathrm{C}$, Duration: 3~4s ,	
		Recovery time : $2 \pm 0.5h$	

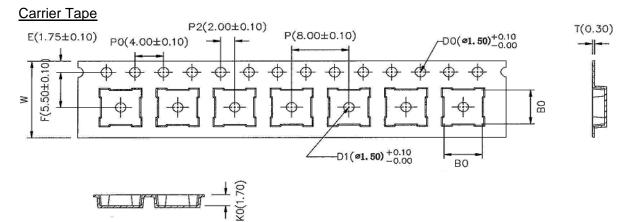
Recommended Reflow Soldering Diagram





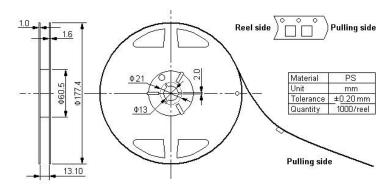
SAW Filter

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.