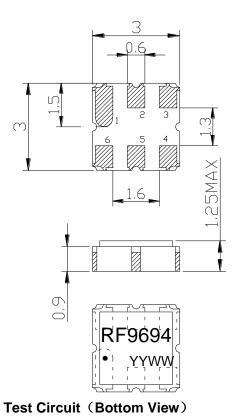
### Application

- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 30.0MHz

## Features

- Ceramic Package for Surface Mounted Technology (SMT)
- **RoHS** compatible
- Package size 3.00x3.00x1.25mm<sup>3</sup>
- Package Code DCC6C
- Electrostatic Sensitive Device(ESD)

## Package Dimensions (Unit: mm)



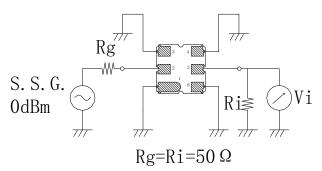
# Pin Configuration

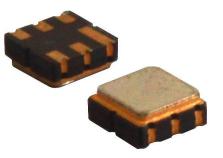
Pin No.	Description		
2	Input		
5	Output		
1,3,4,6	Case Ground		

## **Marking Description**

DE	R	Manufacturer	
RF	F	SAW Filter	
9694	Part Number		
•	Pin 1		
YYWW	Year Code & Week Code		

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





# Performance

## **Maximum Rating**

Item	Value	Unit	
DC Voltage	V <sub>DC</sub>	3	V
Operation Temperature	т	-40 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-45 ~ +85	°C
RF Power Dissipation	Р	10	dBm

## **Electronic Characteristics**

Test Temperature: 25℃±2℃

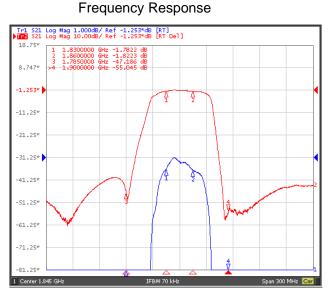
Terminating source impedance:  $50\Omega$ 

Terminating load impedance:  $50\Omega$ 

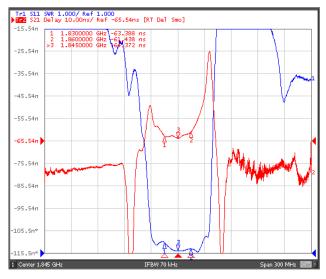
Item	Minimum	Typical	Maximum	Unit	
Center Frequency	fc		1845.00		MHz
Insertion Loss(min)	IL		1.5	2.0	dB
Insertion Loss 1830.00 - 1860.00 MHz	IL		1.9	3.0	dB
Amplitude Ripple (p-p) 1830.00 - 1860.00 MHz	∆a		0.6	1.0	dB
Group Delay Ripple 1830.00 - 1860.00 MHz	GDR		10.0	30.0	ns
Absolute Attenuation	а				
DC - 1735.00 MHz		35.0	38.0		dB
1735.00 - 1785.00 MHz		35.0	38.0		dB
1940.00 - 1970.00 MHz		40.0	45.0		dB
2130.00 - 2160.00 MHz		40.0	45.0		dB
Input VSWR 1830.00 - 1860.00 MHz			1.5:1	2.0:1	/
Output VSWR 1830.00 - 1860.00 MHz			1.5:1	2.0:1	/



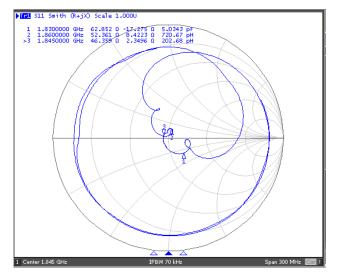
## **Frequency Characteristics**



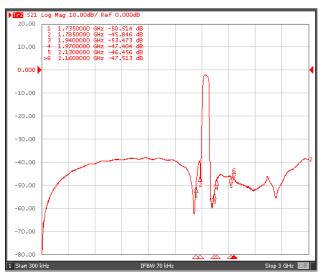
Delay Ripple & S11 VSWR



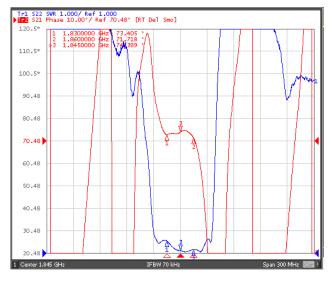




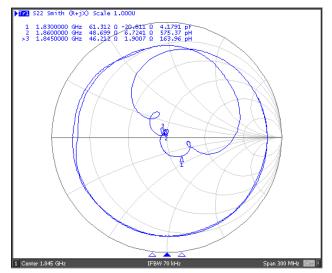




Phase Linearity & S22 VSWR



S22 Smith Chart

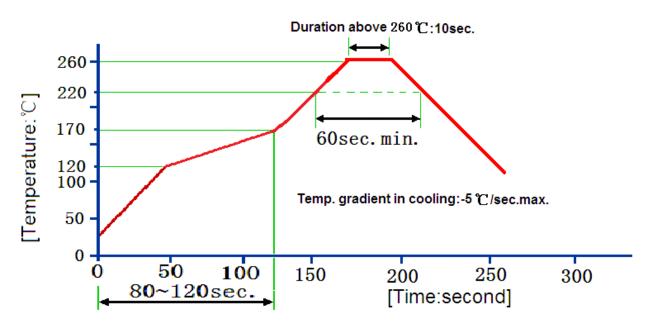




## Reliability (The SAW components shall remain electrical performance after tests)

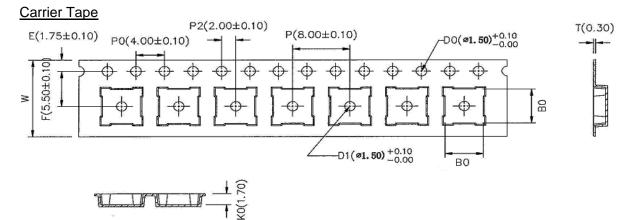
No.	Test item	Test condition		
1	Temperature	(1) Temperature: $85^{\circ}C \pm 2^{\circ}C$ , Duration: 250h, Recovery time: 2h±0.5h		
	Storage	(2) Temperature: –55 $^\circ\!\mathrm{C}\pm\!3^\circ\!\mathrm{C}$ , Duration: 250h ,Recovery time: 2h±0.5h		
2	Humidity Test	Conditions: 60℃±2℃ , 90~95% RH Duration: 250h		
3	Thermal Shock	Heat cycle conditions: TA=-55℃±3℃, TB=85℃±2℃, t1=t2=30min, Switch		
5 Memai Shock		time: ≤3min, Cycle time: 100 times, Recovery time: 2h±0.5h.		
4	4 Vibration Fatigue	Frequency of vibration: 10~55Hz Amplitude:1.5mm		
· · ·	vibration r auguo	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 $^\circ\!\mathrm{C}\pm5^\circ\!\mathrm{C}$ , 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 ± 0.5h		

# **Recommended Reflow Soldering Diagram**



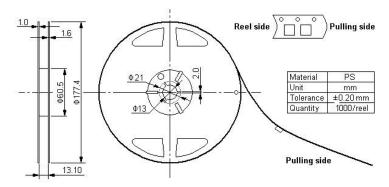
Reflow cycles:3 cycles max.

# **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.