## **SAW Filter**

# **RF2006**

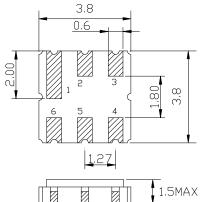
### Application

- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 4.0 MHz

#### Features

- Ceramic Package for Surface Mounted Technology (SMT)
- **RoHS** compatible
- Package size 3.80x3.80x1.50mm<sup>3</sup>
- Package Code DCC6
- Electrostatic Sensitive Device(ESD)

#### Package Dimensions (Unit: mm)





### Pin Configuration

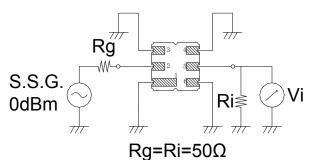
Pin No.	Description	
2	Input	
5	Output	
1,3,4,6	Case Ground	

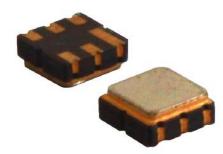
### **Marking Description**

	R	Manufacturer	
RF	F	SAW Filter	
2006	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.

Test Circuit (Bottom View)





### 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>	-55 ~ +125	°C
RF Power Dissipation	Р	15	dBm

## **Electronic Characteristics**

Test Temperature: 25℃±2℃

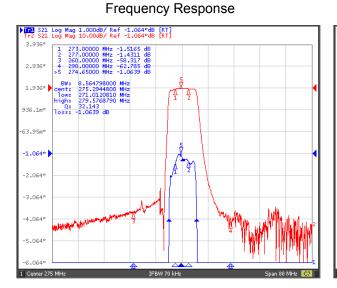
Terminating source impedance: 50Ω

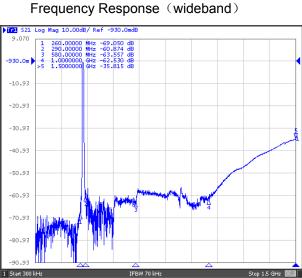
Terminating load impedance: 50Ω

Item	Minimum	Typical	Maximum	Unit	
Center Frequency	fc		275.00		MHz
Insertion Loss(min)	IL		1.1	1.5	dB
Insertion Loss 273.00 - 277.00 MHz	IL		1.6	2.5	dB
Amplitude Ripple (p-p) 273.00 - 277.00 MHz	Δa		0.8	1.0	dB
Group Delay Ripple 273.00 - 277.00 MHz	GDR		70.0	150.0	ns
3 dB Bandwidth	BW3dB	7.0	8.5		MHz
Absolute Attenuation	a				
DC - 260.00 MHz		50.0	55.0		dB
290.00 - 580.00 MHz		50.0	55.0		dB
580.00 -1000.00 MHz		50.0	55.0		dB
1000.00 -1500.00 MHz		30.0	33.0		dB
Input VSWR 273.00 - 277.00 MHz			1.7:1	2.0:1	/
Output VSWR 273.00 - 277.00 MHz			1.7:1	2.0:1	/

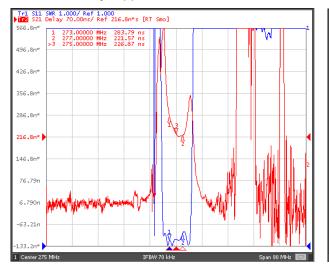
## **RF2006**

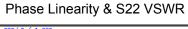
### **Frequency Characteristics**

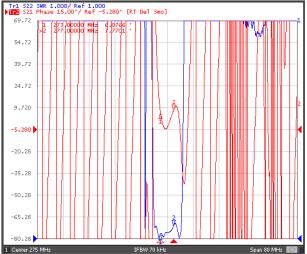




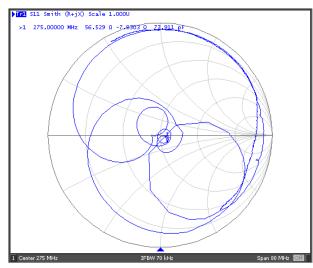
Delay Ripple & S11 VSWR



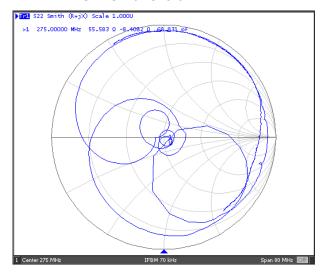




S11 Smith Chart







**REYCONNS CHINA LIMITED** 

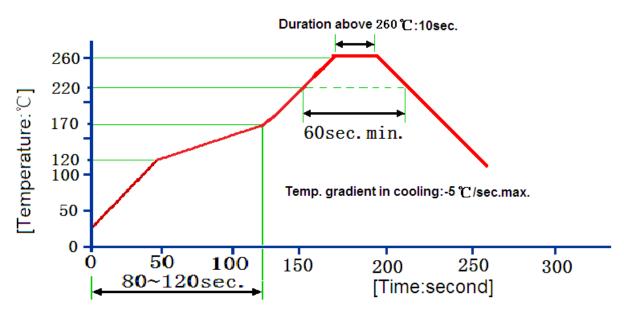
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#### Reliability (The SAW components shall remain electrical performance after tests)

No.	Test item	Test condition		
1	Temperature (1) Temperature: 85°C±2°C , Duration: 250h , Recovery time: 2h			
	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		
-		Directions: X,Y and Z Duration: 2h		
5	Drop Test	Cycle time: 10 times Height: 1.0m		
		Temperature: 245°C±5°C Duration: 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**

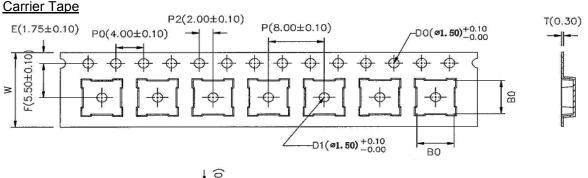


Reflow cycles:3 cycles max.

SAW Filter

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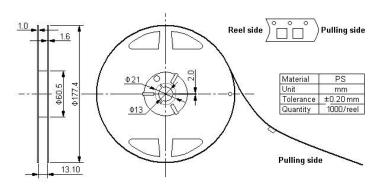
### **Packing Information**





\* 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: 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.