

SAW Filter Specification



SPEC NO.: SFS-147M

# **SPECIFICATION**

TO:STE1074 Model Name: SAW FILTER **PART NO: SSF475W02F11** CUSTOMER PART NO.:

# STRONG ELECTRONICS&TECHNOLOGY LIMITED

Tel:86-755-84528985 Fax: 86-755-84528986 Email:info@strongelectronics.net www.sawfilter.cn

Strong Electronics&Technology Limited



# 1. Package Dimension

(F11)

Unit: mm





NO.	Function	
1	Input	
4	Output	
2,3	Ground	

## 2. Marking

SSF475W02

1. Black Ink Marking

- 2. S: Manufacture's log
- 3. 475: Center frequency
- 4. W02: Model code



e.g.: "H6 " means August of 2006



## 3. Performance

#### 3.1 Maximum Rating

Item	Value	
Operation Temperature Range	-40℃ to +80℃	
Storage Temperature Range	-40℃ to +85℃	
DC Permissive Voltage	10V DC max.	
Maximum Input Power	0 dBm	

3.2 Electronic Characteristics

Test Temperature: 22 +/- 2

Terminating source impedance: 50Ω

Terminating load impedance: 50Ω

Item	Frequency (MHz)	Specification
Center Frequency ( fo )	475.0	
Passband Width	fo±3.0	
Insertion Loss	Passband	4.5 dB max.
Ripple Deviation	Passband	2.0 dB max.
Stop Band Suppression		
	fo-100 ~ fo-40.8	55 dB min.
	fo+40.8 ~ fo+100	55 dB min.
Terminating Impedance		50 Ω / 0pF

#### 3. 3.3 Test Circuit



S11 Smith Chart

S22 Smith Chart



## 4. Reliability

4.1 Resistance to Soldering heat:

4.1.1 The components shall remain within the electrical specifications after it soldered on the 1mm-thickness PCB board and dipped in the solder at  $260 \pm 5$  for  $10\pm 1$  seconds.

4.1.2 The components shall remain within the electrical specifications after it soldered by electric iron, solder at 350  $\pm$ 10 for 3~4 seconds, recovery time : 2h±0.5h.

#### 4.2 Thermal Shock:

The components shall remain within the electrical specifications after being kept at the condition of heat cycle conditions: TA=-40  $\pm 3$ , TB=85  $\pm 2$ , t1=t2=30min, switch time≤3min & cycle time : 100 times, recovery time : 2h±0.5h.

#### 4.3 The Temperature Storage:

4.3.1 High Temperature Storage: The components shall remain within the electrical specifications after being kept at the 85  $\pm$ 2 for 500 hours, recovery time : 2h±0.5h.

4.3.2 Low Temperature Storage: The components shall remain within the electrical specifications after being kept at the  $-40 \pm 3$  for 500 hours, recovery time :  $2h\pm 0.5h$ .

#### 4.4 Humidity test:

The components shall remain within the electrical specifications after being kept at the condition of ambient temperature 60  $\pm 2$ , and 90~95% RH for 500 hours.

## 4.5 Drop test:

The components shall remain within the electrical specifications after random free drops 10 times from height of 1.0 meter onto concrete floor, and the specimens shall meet the electrical specifications in table 5, external visual inspection.

## 4.6 Solderability test:

at the condition of temperature 245  $^\circ\!C$  ±5  $^\circ\!C$  Depth: DIP 2/3 , SMD 1/5, time: 3.0s-5.0s, 80% or more of the immersed surface shall be covered with solder and well-proportioned.

## 4.7 Vibration Fatigue:

The components shall remain within the electrical specifications after loaded vibration at 10~55Hz, amplitude 1.5mm, X, Y, Z, direction, for 2 hours.

## 4.8Terminal strength:

The force  $10\pm1$  seconds of 19.6N is applied to each terminal, and  $45^{\circ}$  in the same direction 2 times with 2N bending force (Exception: SMD)

## 4.9 Mechanical Shock:

The components shall remain within the electrical specifications after 1000 shocks, acceleration 392  $\mbox{m/s}^2$ , duration 6ms.



Note: 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.

#### 5. Remarks

5.1 Static voltage

Static voltage between signal load & ground may cause deterioration & destruction of the component. Please avoid static voltage.

#### 5.2 Ultrasonic cleaning

Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning.

#### 5.3 Soldering

Only leads of component may be soldered. Please avoid soldering another part of component.