



SPEC NO.: SFS-109M

SPECIFICATION

TO:STE1105

Model Name: SAW FILTER

PART NO: SSF353W01S3838

CUSTOMER PART NO.:

STRONG ELECTRONICS&TECHNOLOGY LIMITED

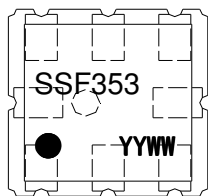
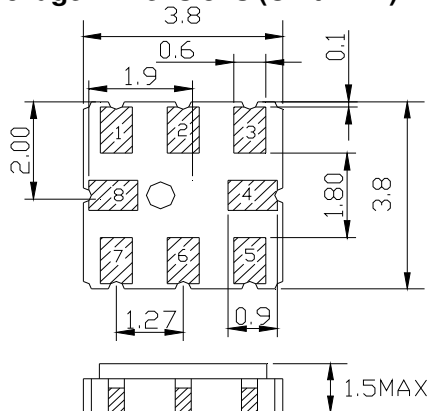
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Email:info@strongelectronics.net

www.strongelectronics.net

1.

Package Dimensions (Unit: mm)



Pin Configuration

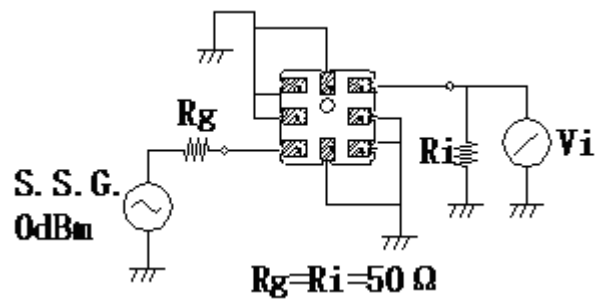
Pin No.	Description
5	Input
1	Output
2,3,4,6,7,8	Ground

Marking Description

S	Trademark
SF	SAW Filter
353	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.

Test Circuit (Bottom View)



Performance

Maximum Rating

Item		Value	Unit
DC Voltage	V_{DC}	3	V
Operation Temperature	T	-40 ~ +85	□
Storage Temperature	T_{stg}	-55 ~ +125	□
RF Power Dissipation	P	15	dBm

Electronic Characteristics

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

Terminating source impedance: 50Ω

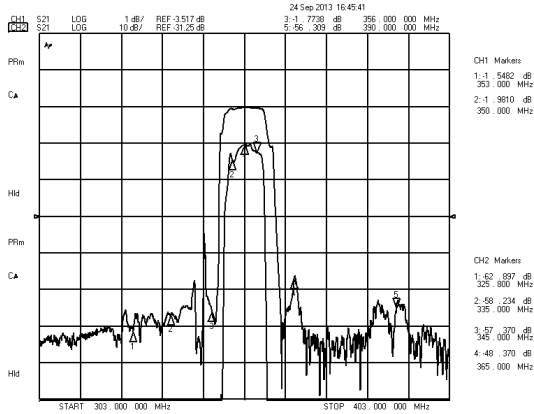
Terminating load impedance: 50Ω

Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc		353.00		MHz
Insertion Loss(min)	IL		1.6	2.5	dB
Insertion Loss 350.00 -356.00 MHz	IL		2.1	3.0	dB
Amplitude Ripple (p-p) 350.00 -356.00 MHz	$\Delta\alpha$		0.5	1.0	dB
Group Delay Ripple 350.00 -356.00 MHz			70.0	120.0	ns
Absolute Attenuation	α				
DC - 82.00 MHz		50.0	65.0		dB
82.00 -325.80MHz		40.0	50.0		dB
325.80-335.00MHz		45.0	55.0		dB
335.00-345.00MHz		25.0	35.0		dB
365.00-403.00MHz		35.0	45.0		dB
403.00-600.00MHz		40.0	50.0		dB
600.00-1500.00MHz		30.0	40.0		dB
1500.00-1900.00MHz		25.0	35.0		dB
Input VSWR 350.00 - 356.00 MHz			1.7:1	2.0:1	

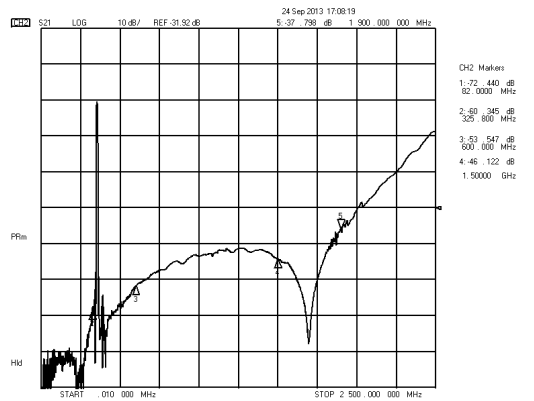
Output	VSWR				
		350.00 - 356.00 MHz	1.7:1	2.0:1	

Frequency Characteristics

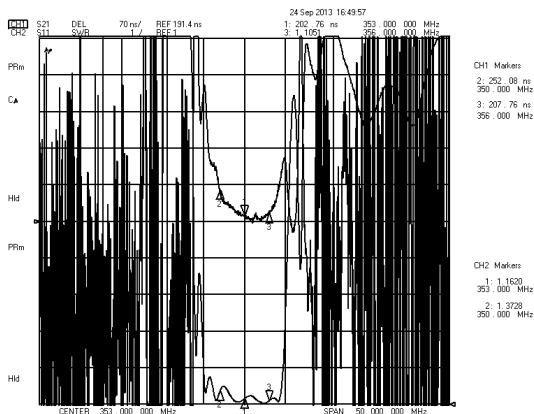
Frequency Response



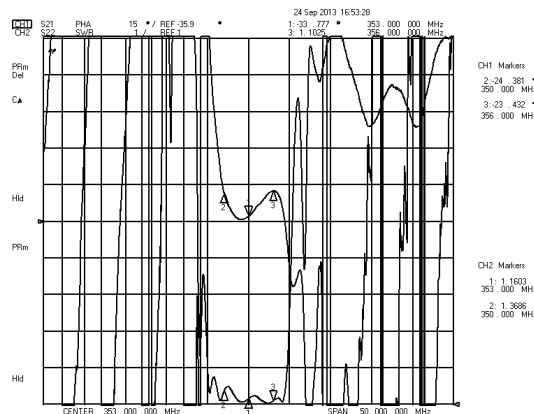
Frequency Response (wideband)



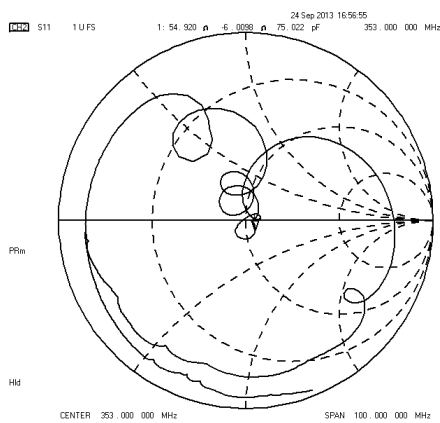
Delay Ripple & S11 VSWR



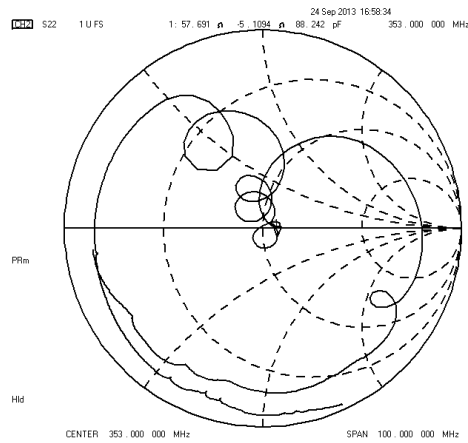
Phase Linearity & S22 VSWR



S11 Smith Chart



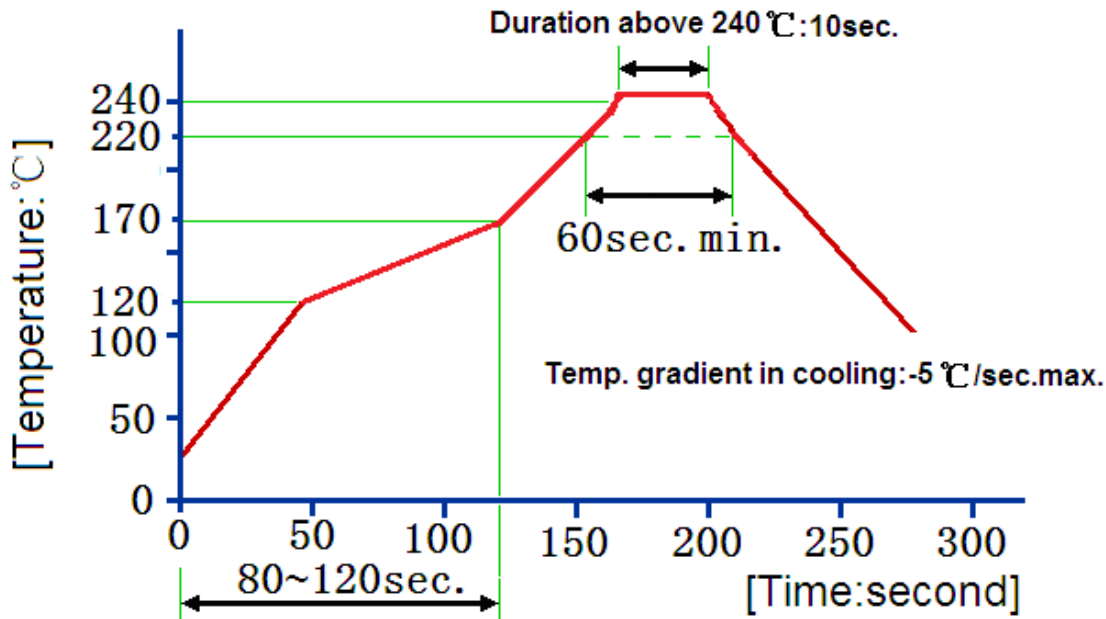
S22 Smith Chart



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

No.	Test item	Test condition
1	Temperature Storage	(1) Temperature: $85^{\circ}\text{C}\pm 2^{\circ}\text{C}$, Duration: 250h, Recovery time: $2\text{h}\pm 0.5\text{h}$ (2) Temperature: $-55^{\circ}\text{C}\pm 3^{\circ}\text{C}$, Duration: 250h, Recovery time: $2\text{h}\pm 0.5\text{h}$
2	Humidity Test	Conditions: $60^{\circ}\text{C}\pm 2^{\circ}\text{C}$, 90~95% RH Duration: 250h
3	Thermal Shock	Heat cycle conditions: $\text{TA}=-55^{\circ}\text{C}\pm 3^{\circ}\text{C}$, $\text{TB}=85^{\circ}\text{C}\pm 2^{\circ}\text{C}$, $t_1=t_2=30\text{min}$, Switch time: $\leq 3\text{min}$, Cycle time: 100 times, Recovery time: $2\text{h}\pm 0.5\text{h}$.
4	Vibration Fatigue	Frequency of vibration: 10~55Hz Amplitude: 1.5mm
5	Drop Test	Cycle time: 10 times Height: 1.0m
6	Solder Ability Test	Temperature: $245^{\circ}\text{C}\pm 5^{\circ}\text{C}$ Duration: 3.0s--5.0s Depth: DIP--2/3, SMD--1/5
7	Resistance to Soldering Heat	(1) Thickness of PCB: 1mm, Solder condition: $260^{\circ}\text{C}\pm 5^{\circ}\text{C}$, Duration: $10\pm 1\text{s}$ (2) Temperature of Soldering Iron: $350^{\circ}\text{C}\pm 10^{\circ}\text{C}$, Duration: 3~4s,

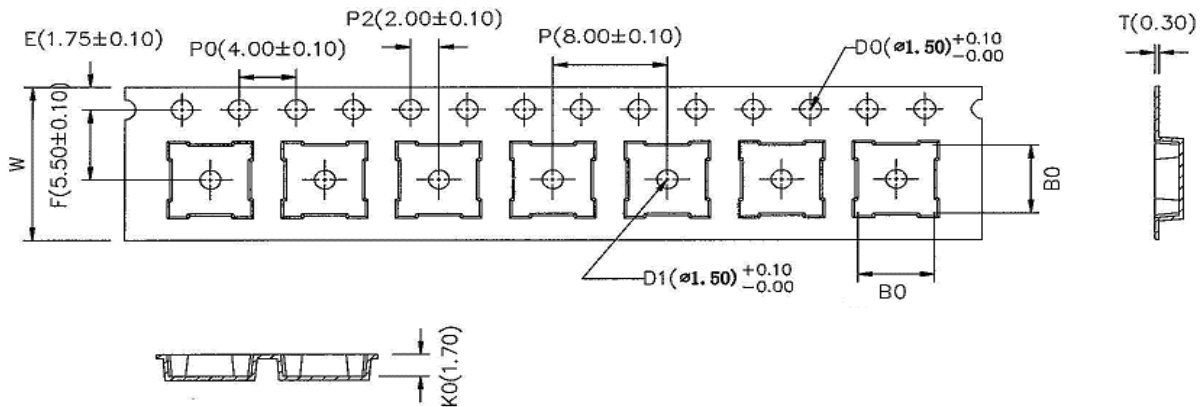
Recommended Reflow Soldering Diagram



Reflow cycles: 3 cycles max.

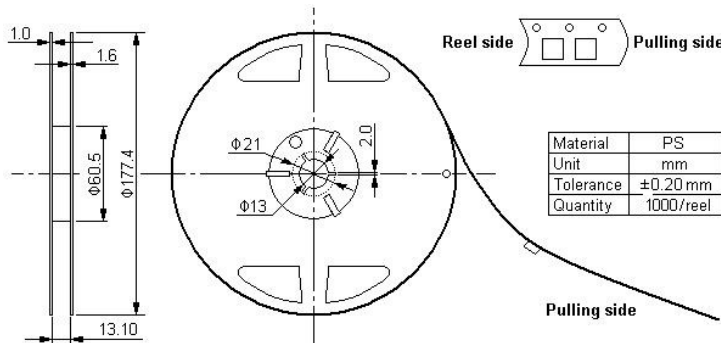
Packing Information

Carrier Tape



* B0: 5.35 for S5050; 4.15 for S3838; 3.35 for S3030

Reel Dimensions



Outer Packing

Type	Quantity	Dimension	Description	Weight
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Internal box	1000	190×188×42	carton box 2 reel / internal box 5 boxes / external box	0.18
External box	10000	235×205×210		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.