



Data Sheet
957MHz SAW 3030
SPT957M30E

V1.0

Features:

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

Specifications:

- Operation Temperature:-40°C to +85°C
- Compact miniature size
 - 3.0 mm × 3.0 mm footprint
 - 1.25 mm max-height

Applications:

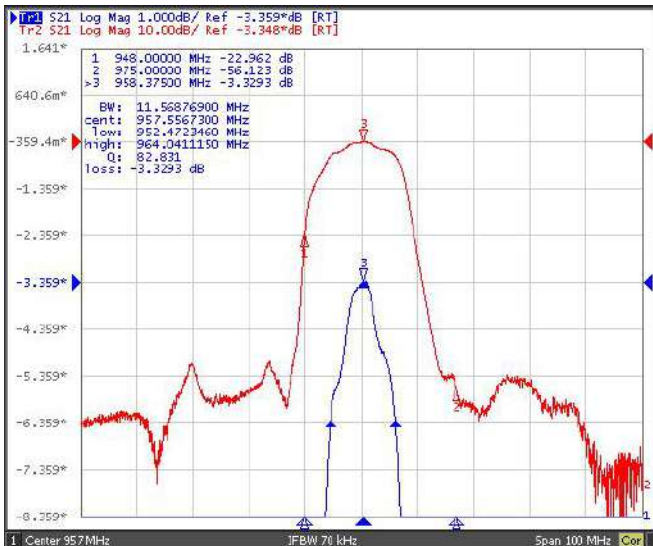
- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 8.0 MHz

Electrical Specifications. Test Temperature: 25°C±2°C

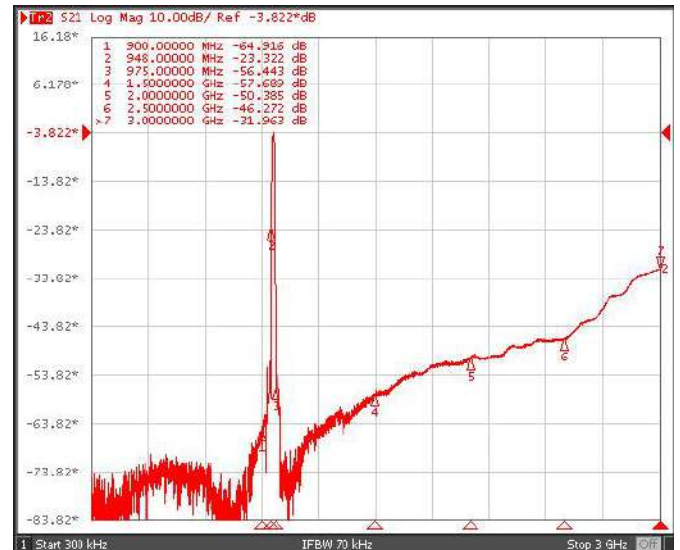
Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc		957.00		MHz
Insertion Loss(min)	IL		3.3	3.5	dB
Amplitude Ripple (p-p)	$\Delta\alpha$		0.8	1.0	dB
3dB Bandwidth	BW _{-3dB}	8.0	11.0		MHz
40dB Bandwidth	BW _{-40dB}		23.0	30.0	MHz
Group Delay Ripple	953.00 - 961.00 MHz	GDR	35.0	100.0	ns
Absolute Attenuation		α			
	DC - 900.00 MHz		50.0	55.0	dB
	948.00 MHz		15.0		dB
	975.00 MHz	20.0	50.0		dB
	975.00 -1500.00 MHz	45.0	50.0		dB
	1500.00 - 3000.00 MHz	25.0	30.0		dB
Input VSWR	953.00 - 961.00 MHz		2.2:1	2.5:1	/
Output VSWR	953.00 - 961.00 MHz		2.0:1	2.5:1	/

Frequency Characteristics.

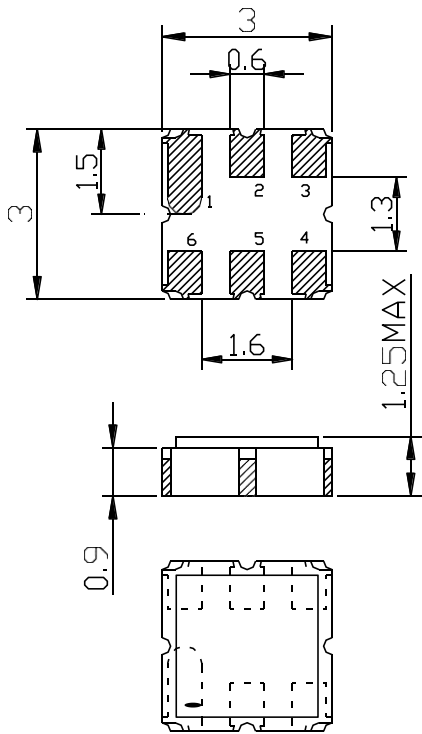
Frequency Response



Frequency Response (wideband)

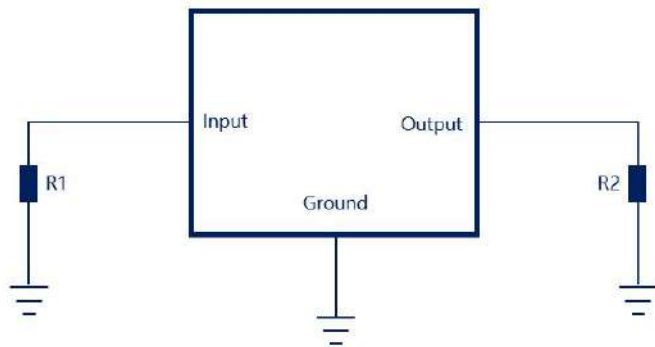


Package & Dimensions



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

Matching



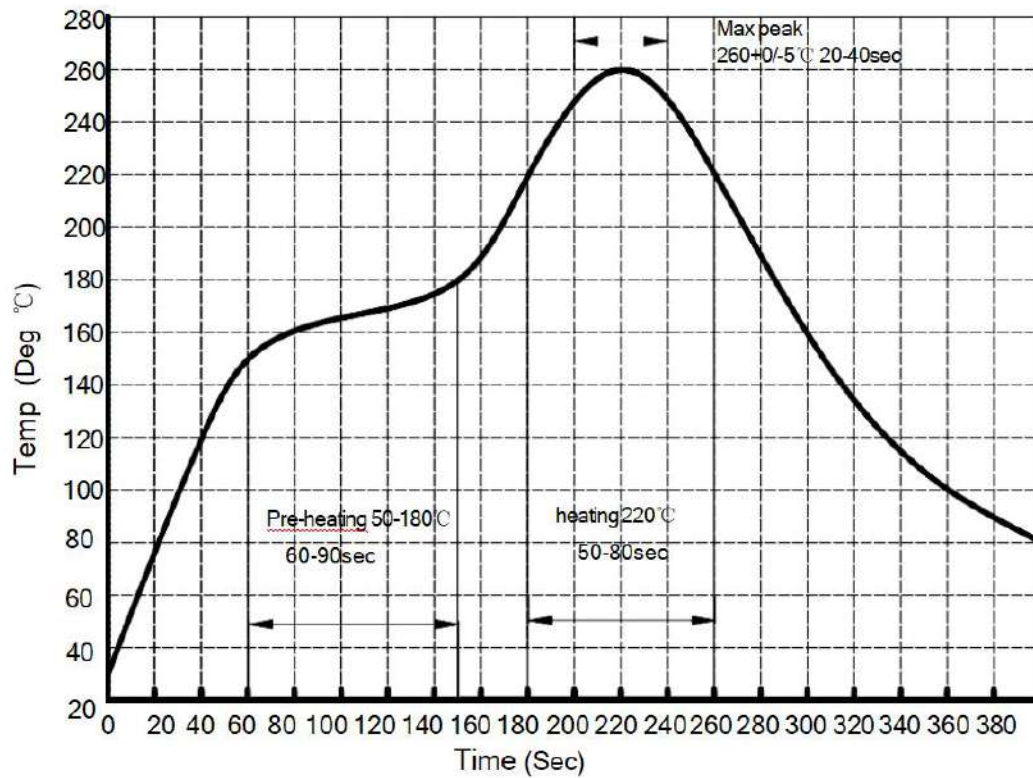
Port	Matching Component ¹
Input	R1: 50Ω
Output	R2: 50Ω

Matching component values shown are recommended based on the Spectron evaluation board. Value adjustment may be required on the end-user's circuit boards for the selected component manufacturer and PCB material.

Maximum Ratings

Item		Value	Unit
DC Voltage	V _{DC}	5	V
Operation Temperature	T	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +85	°C
RF Power Dissipation	P	20	dBm

Recommended Reflow Soldering Diagram



Ordering Information

Part Number	Number of Devices	Container
SPT957M30E	1000pcs	Tape and Reel

Reliability

No.	Test item	Test condition
1	Temperature Storage	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: $60^{\circ}\text{C}\pm 2^{\circ}\text{C}$, $90\sim 95\%$ 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: $10\sim 55\text{Hz}$ Amplitude: 1.5mm Directions: X,Y and Z Duration: 2h
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, Recovery time : $2 \pm 0.5\text{h}$

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