



**Data Sheet**  
**800MHz SAW 3030**  
**SPT800M30E**

V1.0

**Features:**

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

**Specifications:**

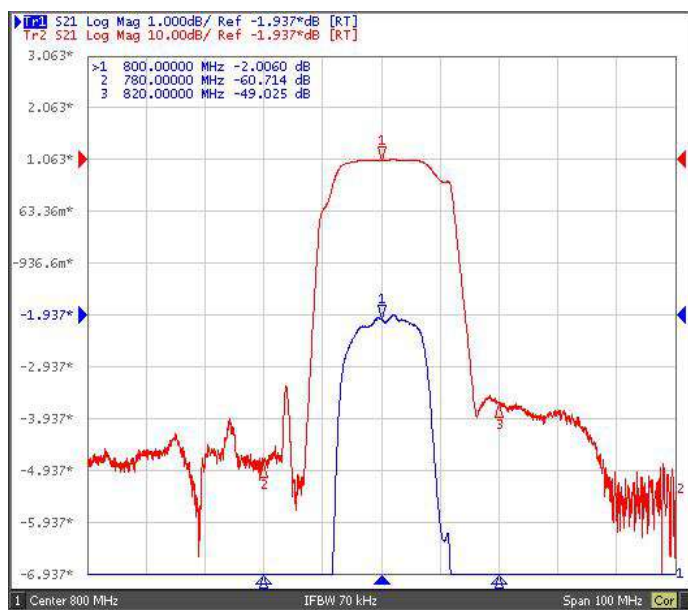
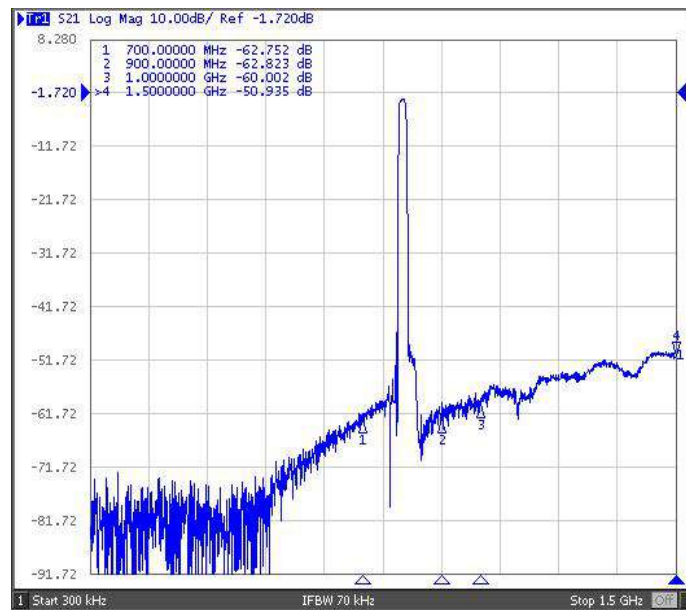
- Operation Temperature:-40°C to +85°C
- Compact miniature size
  - 3.0 mm × 3.0 mm footprint
  - 1.25 mm max-height

**Applications:**

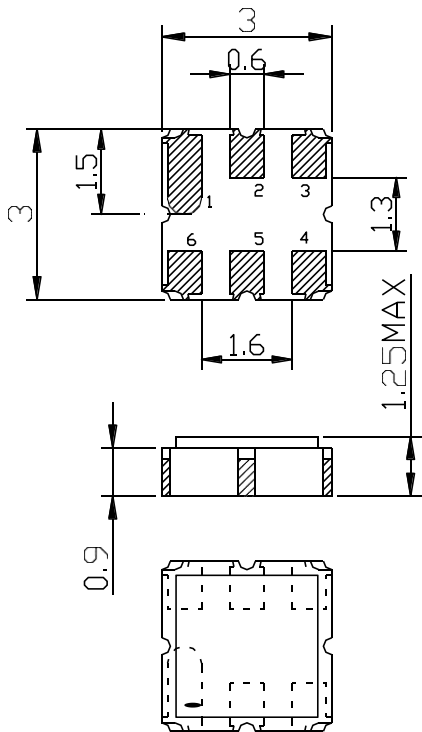
- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 4.0 MHz

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

Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc		800.00		MHz
Insertion Loss	@800 MHz		2.0	3.0	dB
Amplitude Ripple (p-p)	$\Delta\alpha$		0.5	1.0	dB
Group Delay Ripple	798.00 - 802.00 MHz		10.0	30.0	ns
Absolute Attenuation	$\alpha$				
	DC- 700.00 MHz	35.0	40.0		dB
	900.00 - 1000.00 MHz	40.0	45.0		dB
	1000.00 - 1500.00 MHz	40.0	45.0		dB
Input VSWR			1.6:1	2.0:1	/
Output VSWR			1.6:1	2.0:1	/

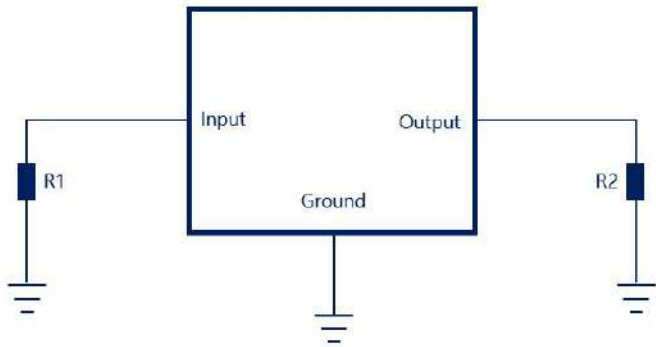
**Frequency Characteristics.****Frequency Response****Frequency Response (wideband)**

Package & Dimensions



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

Matching



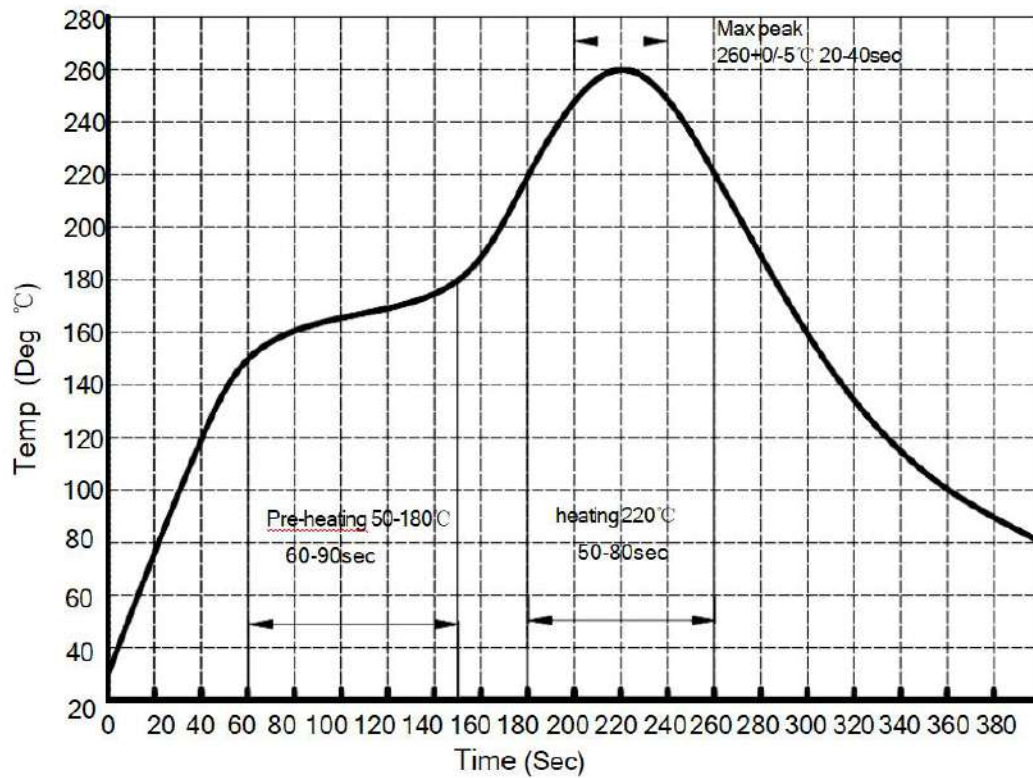
Port	Matching Component <sup>1</sup>
Input	R1: 50Ω
Output	R2: 50Ω

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 <sub>DC</sub>	5	V
Operation Temperature	T	-40 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +85	°C
RF Power Dissipation	P	20	dBm

## Recommended Reflow Soldering Diagram



## Ordering Information

Part Number	Number of Devices	Container
SPT800M30E	1000pcs	Tape and Reel

## Reliability

No.	Test item	Test condition
1	Temperature Storage	Temperature: 85°C±2°C , Duration: 250h , Recovery time: 2h±0.5h (2) Temperature: -55°C±3°C , Duration: 250h ,Recovery time: 2h±0.5h
2	Humidity Test	Conditions: 60°C±2°C ,90~95% RH    Duration: 250h
3	Thermal Shock	Heat cycle conditions: TA=-55°C±3°C, TB=85°C±2°C, 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
6	Solder Ability Test	Temperature: 245°C±5°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°C±5°C , Duration: 10±1s (2) Temperature of Soldering Iron: 350°C±10°C, Duration: 3~4s,  Recovery time : 2 ± 0.5h

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