



**Spectron<sup>®</sup>**  
**Technologies**

**Data Sheet**  
**512.5MHz SAW 3030**  
**SPT512M30E**

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:**

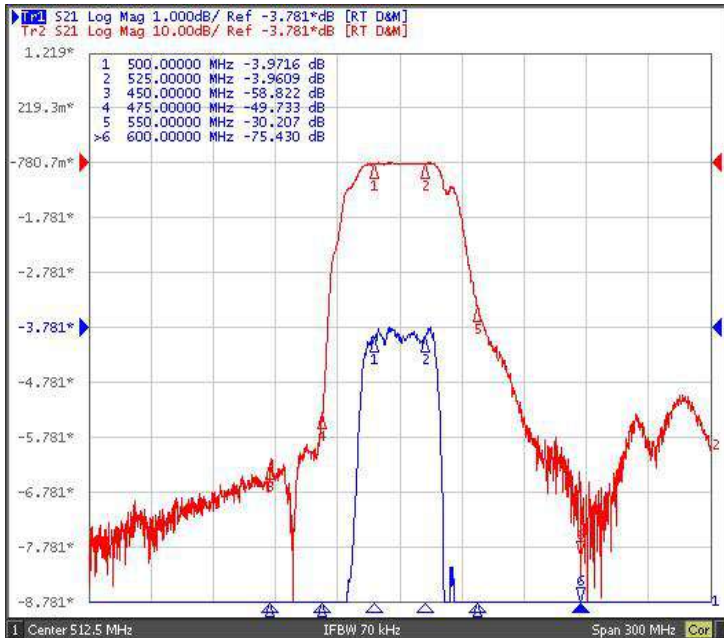
- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 25.0 MHz

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

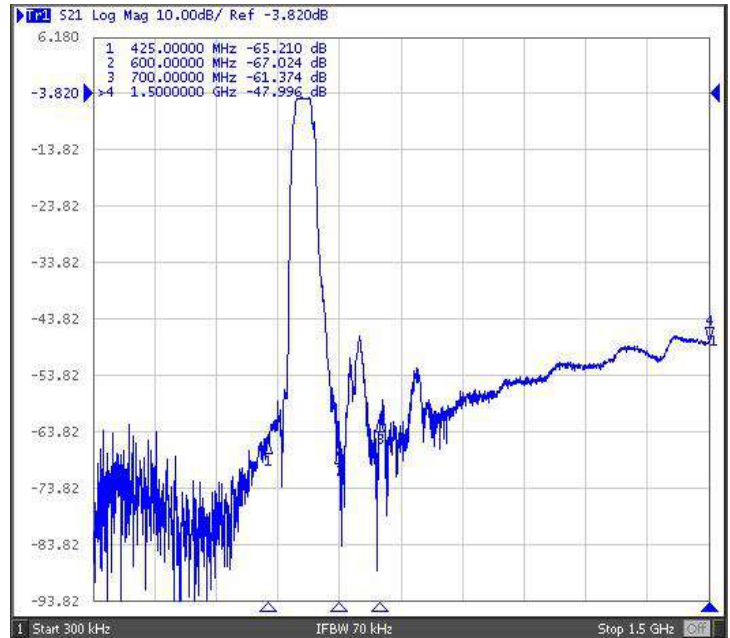
Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc		512.50		MHz
Insertion Loss(min)	IL		3.8	4.0	dB
Insertion Loss	500.00 - 525.00 MHz	IL	4.0	5.0	dB
Amplitude Ripple (p-p)	500.00 - 525.00 MHz	$\Delta\alpha$	0.5	1.0	dB
Group Delay Ripple	500.00 - 525.00 MHz		15.0	35.0	ns
Absolute Attenuation		$\alpha$			
	DC- 425.00 MHz	45.0	50.0		dB
	425.00 - 475.00 MHz	40.0	43.0		dB
	550.00 - 600.00 MHz	20.0	25.0		dB
	600.00 - 700.00 MHz	40.0	43.0		dB
	700.00 - 1500.00 MHz	40.0	43.0		dB
Input VSWR	500.00 - 525.00 MHz		1.8:1	2.0:1	
Output VSWR	500.00 - 525.00 MHz		1.8:1	2.0:1	

**Frequency Characteristics.**

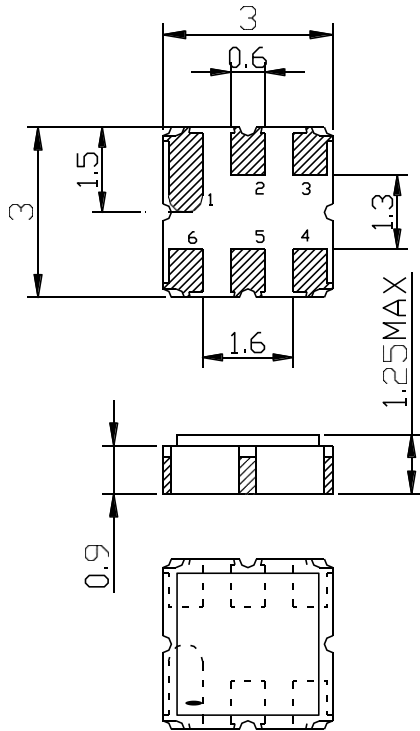
**Frequency Response**



**Frequency Response (wideband)**

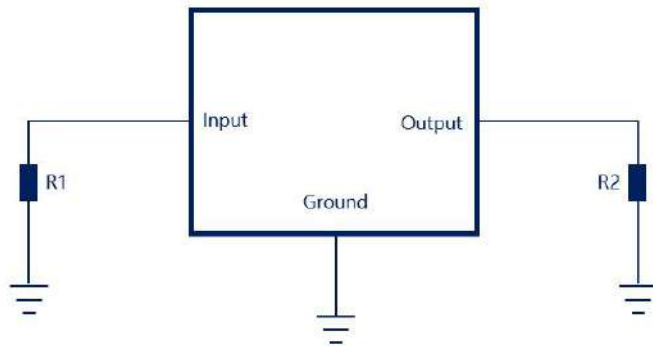


**Package & Dimensions**



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

**Matching**



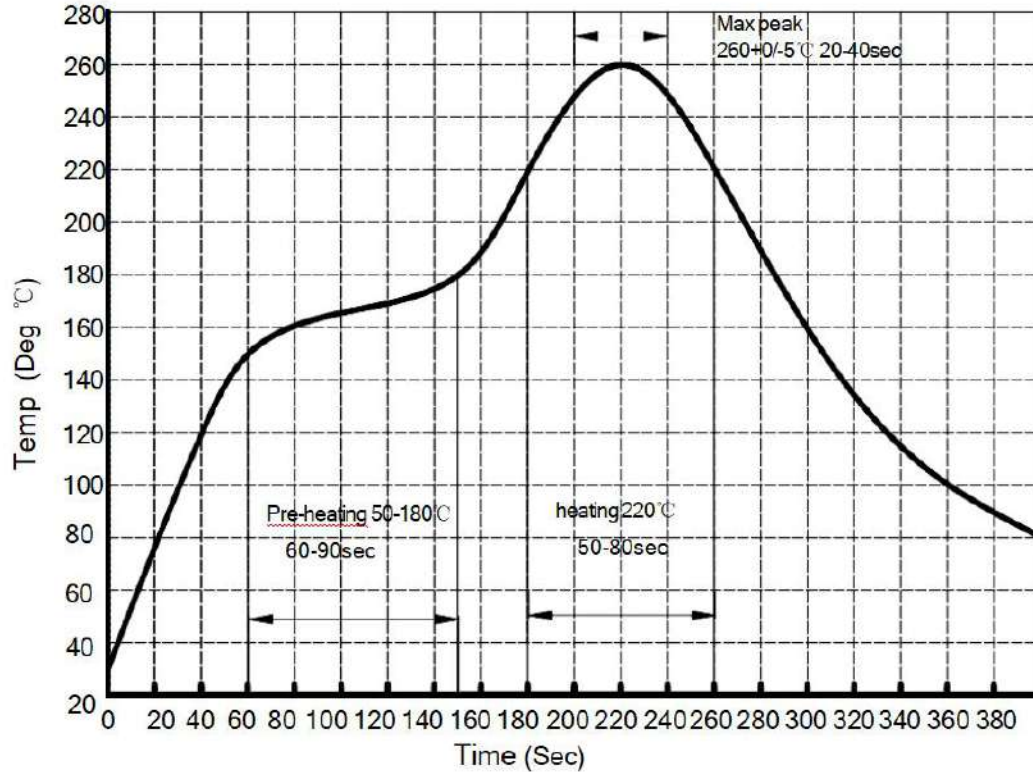
Port	Matching Component <sup>1</sup>
Input	R1: 50Ω
Output	R2: 50Ω

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
SPT512M30E	1000pcs	Tape and Reel

