

# Data Sheet 887MHz SAW 3030 SPT887M30E

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

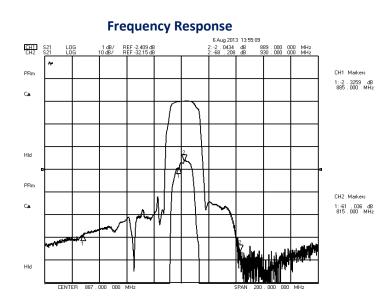
#### **Applications:**

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

Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc		887.00		MHz
Insertion Loss(min)	IL		2.1	2.7	dB
Insertion Loss 885.00-889.00MHz	IL		2.5	3.5	dB
Amplitude Ripple (p-p) 885.00-889.00MHz	$ riangle \alpha$		0.6	1.0	dB
Group Delay Ripple 885.00-889.00MHz	GDR		15.0	35.0	ns
Absolute Attenuation	α				
DC - 650.00 MHz		50.0	55.0		dB
650.00 -800.00 MHz		45.0	50.0		dB
800.00 -815.00 MHz		45.0	50.0		dB
930.00-1035.00 MHz		47.0	52.0		dB
1035.00 -1100.00 MHz		50.0	52.0		dB
1100.00 -2450.00 MHz		35.0	40.0		dB
2450.00 -3000.00 MHz		25.0	30.0		dB
Input VSWR 885.00-889.00MHz			1.5:1	2.0:1	/
Output VSWR 885.00-889.00MHz			1.5:1	2.0:1	/

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

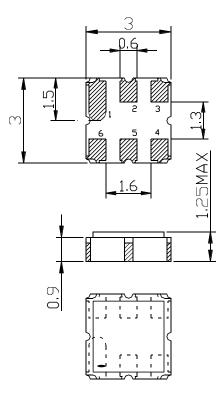
### **Frequency Characteristics.**



# Frequency Response (wideband) CH1 521 LOG 10 dB/ REF -2.92 dB 4:-55 . 938 dB 1.10000 GHz HId ٦Ì Æ . 300 000 MHz STOP 3 000.000 000 MHz

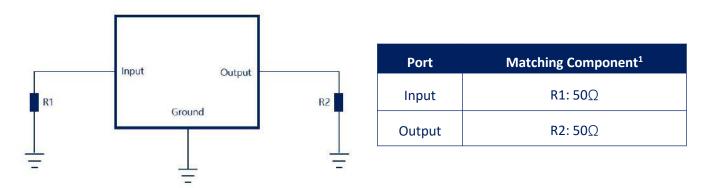
CH1 Markers 1:-73 . 488 dB 650 . 000 MHz 2:-59 . 607 dB 800 . 000 MHz 3:-58 . 786 dB 1.03500 GHz

#### **Package & Dimensions**



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

### Matching

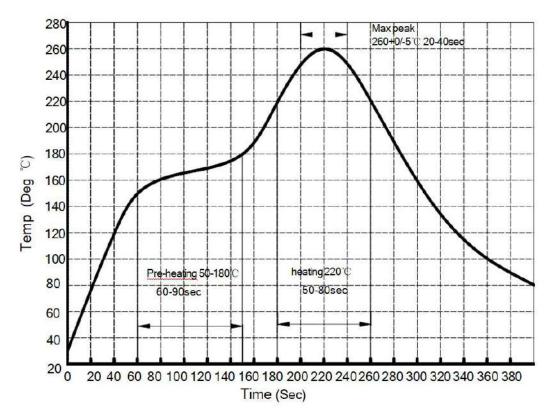


Matching component values shown are recommended based on the Spectron evaluation board. Value adjustment may be required on the end-user's circuit boards for the selected component manufacturer and PCB material.

#### **Maximum Ratings**

Item		Value	Unit
DC Voltage	Vdc	5	V
Operation Temperature	т	-40 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +85	°C
RF Power Dissipation	Р	20	dBm

# **Recommended Reflow Soldering Diagram**



### **Ordering Information**

Part Number	Number of Devices	Container
SPT887M30E	1000pcs	Tape and Reel

#### Reliability

No.	Test item	Test condition		
1	Temperature Storage	Temperature: $85^{\circ}C\pm 2^{\circ}C$ , Duration: 250h, Recovery time: 2h±0.5h (2) Temperature: $-55^{\circ}C\pm 3^{\circ}C$ , 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: 10~55HzAmplitude:1.5mmDirections: X,Y and ZDuration: 2h		
5	Drop Test	Cycle time: 10 times Height: 1.0m		
6	Solder Ability Test	Temperature: 245°C±5°CDuration: 3.0s5.0sDepth: DIP2/3 , SMD1/5		
7	Resistance to Soldering Heat	<ul> <li>(1) Thickness of PCB:1mm , Solder condition: 260°C±5°C , Duration: 10±1s</li> <li>(2) Temperature of Soldering Iron: 350°C±10°C, Duration: 3~4s, Recovery time : 2 ± 0.5h</li> </ul>		

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