

Data Sheet 806MHz SAW 3030 SPT806M3030A

V1.0

Description:

The Spectron SPT806M3030A is a SAW filter that work frequency ranges from 791MHz to 821MHz.It is designed for applications in wireless module and Information& Communications filed.

The SPT806M3030A provides +20 dBm power handling, low insertion loss and high out of band rejection.

The design and manufacturing of the SPT806M3030A exploit Spectron's exclusive TSAW technology to deliver competitive performance against state of the art at a low cost.

The SPT806M3030A is compatible with high volume, lead-free SMT soldering processes.

Features:

- Single-Ended Input and Output
- Terminating Impedance: 50 Ω
- RoHS Compliant

Specifications:

- Operation Temperature:-40°C to +85°C
- Usable passband 30.0 MHz
- Compact miniature size
 - $-3.0 \text{ mm} \times 3.0 \text{ mm footprint}$
 - 1.25 mm max-height

Applications:

- Information& Communications Devices
- Wireless module

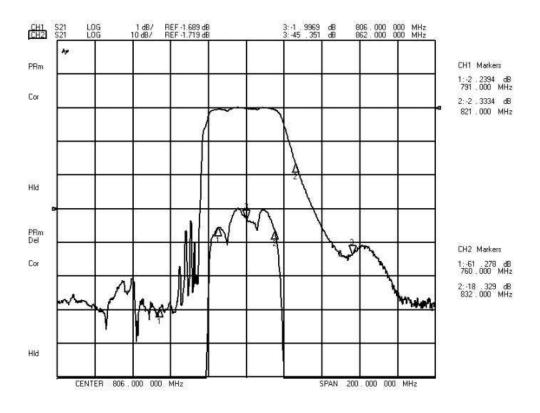
Electrical Specifications

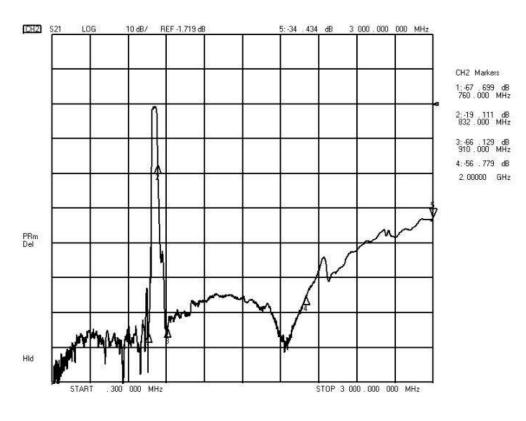
 Table 1 Electrical Specifications.

Test Temperature: 25°C±2°C

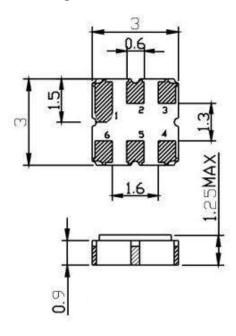
Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc		806.0		MHz
Insertion Loss(min)	IL		1.5	2.0	dB
Insertion Loss 791.00 - 821.00 MHz	IL		2.4	3.5	dB
Amplitude Ripple (p-p) 791.00 - 821.00 MHz	∆a		0.9	2.0	dB
Group Delay Ripple 791.00 - 821.00 MHz	GDR		50.0	100.0	ns
Absolute Attenuation	а				
DC - 765.00 MHz		50.0	55.0		dB
776.00 MHz		15.0	17.0		dB
832.00 - 862.00 MHz		10.0	15.0		dB
862.00 - 910.00 MHz		40.0	45.0		dB
910.00 - 2000.00 MHz		35.0	40.0		dB
Input VSWR 791.00 - 821.00 MHz			1.6:1	2.0:1	/
Output VSWR 791.00 - 821.00 MHz			1.6:1	2.0:1	/

Figure 1 Electrical Characteristics: Frequency response.



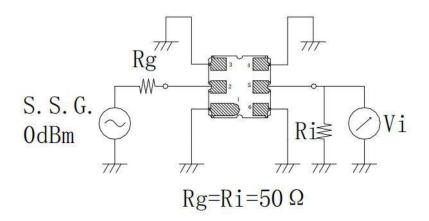


Package & Dimensions



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

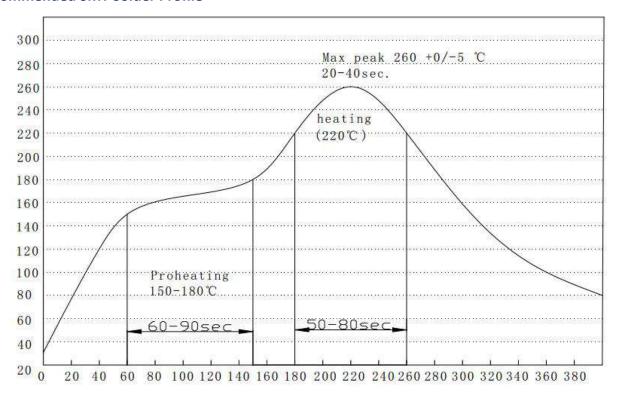
Test circuit



Maximum Ratings

ltem		Value	Unit
Operation Temperature	Т	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +85	°C
RF Power Dissipation	Р	20	dBm

Recommended SMT Solder Profile



Ordering Information

Part Number	Number of Devices	Container
SPT806M3030A	1000pcs	Tape and Reel

Reliability

No.	Test item	Test condition		
1	Temperature Storage	Temperature: $85^{\circ}\text{C}\pm2^{\circ}\text{C}$, Duration: 250h, Recovery time: $2h\pm0.5h$ (2) Temperature: $-55^{\circ}\text{C}\pm3^{\circ}\text{C}$, Duration: 250h, Recovery time: $2h\pm0.5h$		
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: 3.0s5.0s Depth: DIP2/3 , SMD1/5		
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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