

Data Sheet 1842.5MHz SAW 3030 SPT1842M3030A

V1.0

Description:

The Spectron SPT1842M3030A is a SAW filter that work frequency ranges from 1805 to 1880MHz.It is designed for applications in RF module. IOT equipments and Information& Communications filed.

The SPT1842M3030A provides +20dBm power handling, low insertion loss and high out of band rejection.

The design and manufacturing of the SPT1842M3030A exploit Spectron's exclusive TSAWtechnology to deliver competitive performance against state of the art at a low cost.

The SPT1842M3030A is compatible with highvolume, lead-free SMT soldering processes.

Features:

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

Specifications:

- Operation Temperature:-40°C to +85°C
- Usable passband 75MHz
- Compact miniature size
 - $3.0 \text{ mm} \times 3.0 \text{ mm footprint}$
 - 1.25 mm max-height

Applications:

- RF module
- IOT equipments
- Information& Communications Devices

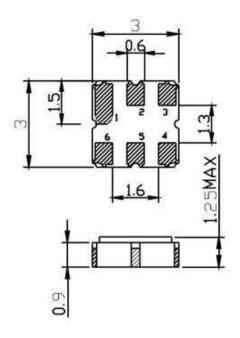
Electrical Specifications

Table 1 Electrical Specifications.

Test Temperature: $25^{\circ}C \pm 2^{\circ}C$

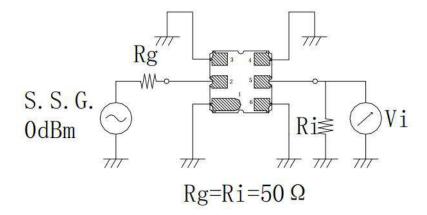
Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc		1842.50		MHz
Insertion Loss(min)	IL		2.0	2.5	dB
Insertion Loss 1805 00 - 1880 00MHz	IL		2.3	4.0	dB
Amplitude Ripple (p-p) 1805.00 - 1880.00MHz	∆a		1.5	*3.0	dB
Group Delay Ripple 1805 00 - 1880 00MHz	GDR		15.0	50.0	ns
Absolute Attenuation	а				
DC - 1500.00MHz		22.0	25.0		dB
1500.00- 1710.00MHz		23.0	25.0		dB
1710.00- 1785.00MHz		15.0	30.0		dB
1795.00MHz		8.0*	10.0*		dB
1900.00MHz		13.0*	15.0*		dB
1915.00-2000.00MHz		25.0	30.0		dB
2000.00-3000.00MHz	-	25.0	30.0		В
VSWR 1805.00 - 1880.00MHz			1.9:1	2.2:1	1

Package & Dimensions



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

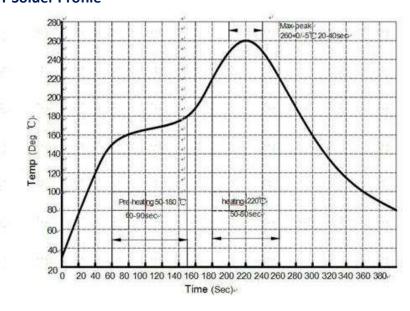
Test circuit



Maximum Ratings

Item		Value	Unit
DC Voltage	VDC	5	V
Operation Temperature	Т	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~+85	°C
RF Power Dissipation	Р	20	dBm

Recommended SMT Solder Profile



Ordering Information

Part Number	Number of Devices	Container
SPT1842M3030A	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: 3.0s5.0s 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 		

Spectron Technologies, Spectron Microsystems, and the spectrum logo are among the trademarks of Spectron and/or its affiliates in the People's Republic of China, certain other countries, and/or the EU.

Copyright © 2022 Spectron. All Rights Reserved.

The term "Spectron" refers to Specton (Shenzhen) Technologies Co. Ltd and its subsidiaries.

Information furnished by Spectron is believed to be accurate and reliable. Spectron reserves the right to make changes without further notice to any products or data herein to improve reliability, function, or design. However, Spectron does not assume any liability arising from the application or use of this information, nor the application or use of any product or circuit described herein. Neither does Spectron convey any license under its patent rights nor the rights of others.

