



Data Sheet
2140MHz SAW 3030
SPT2140M3030A

V1.0

Description:

The Spectron SPT2140M3030A is a SAW filter that work frequency ranges from 2110 to 2170MHz. It is designed for applications in IOT equipments and Information & Communications filed.

The SPT2140M3030A provides +20 dBm power handling, low insertion loss and high out of band rejection.

The design and manufacturing of the SPT2140M3030A exploit Spectron's exclusive TSAW technology to deliver competitive performance against state of the art at a low cost.

The SPT2140M3030A 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 60.0 MHz
- Compact miniature size
 - 3.0 mm \times 3.0 mm footprint
 - 1.25 mm max-height

Applications:

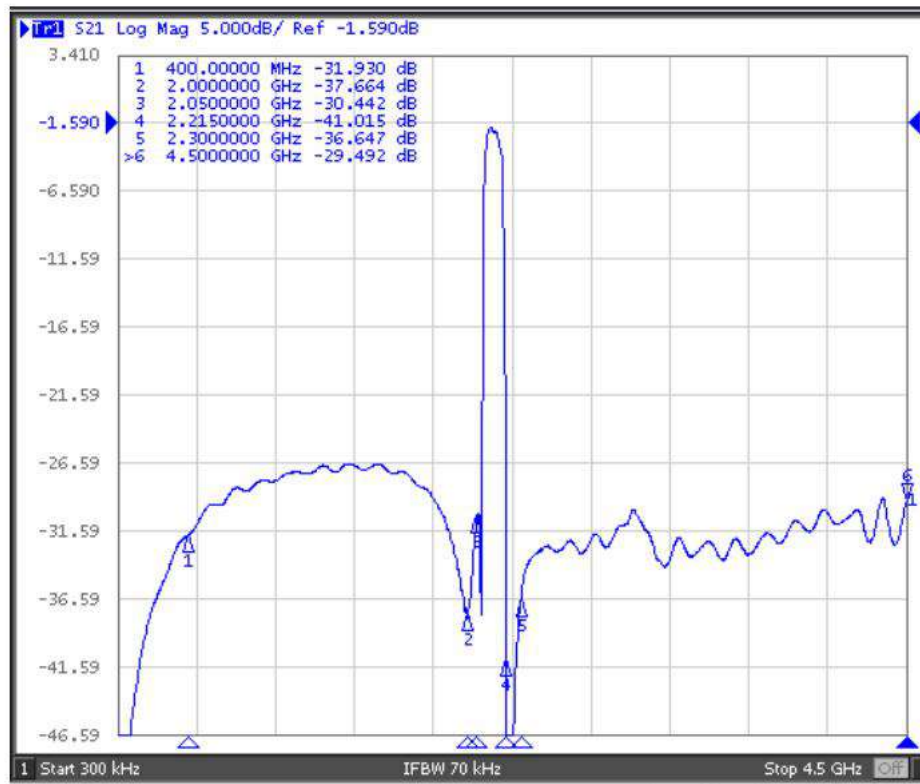
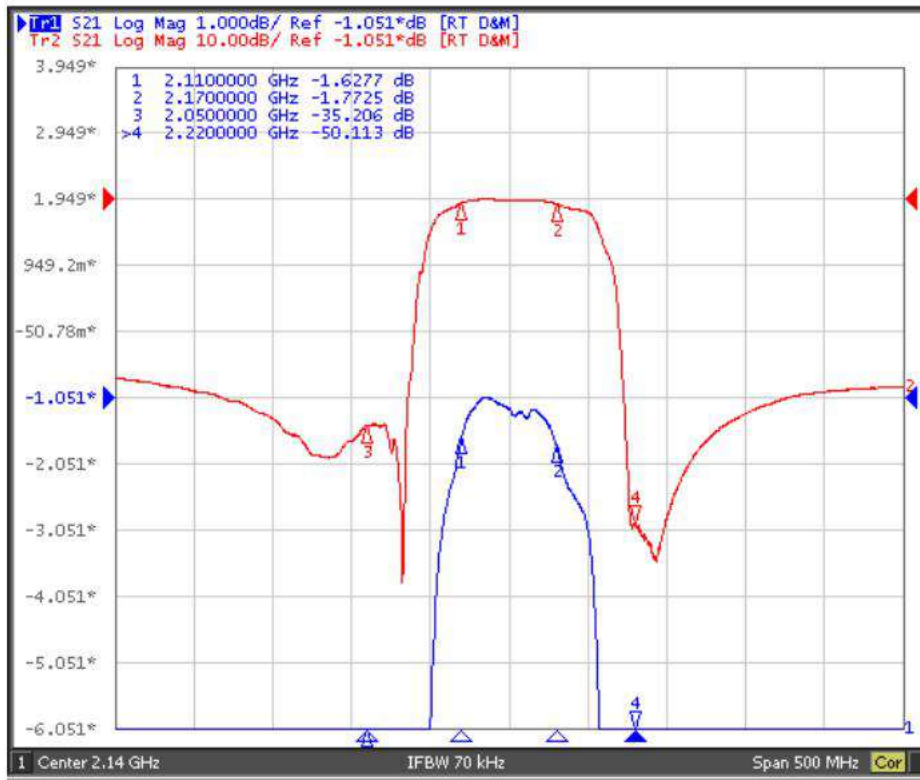
- IOT equipments
- Information & Communications Devices

Electrical Specifications**Table 1** Electrical Specifications.

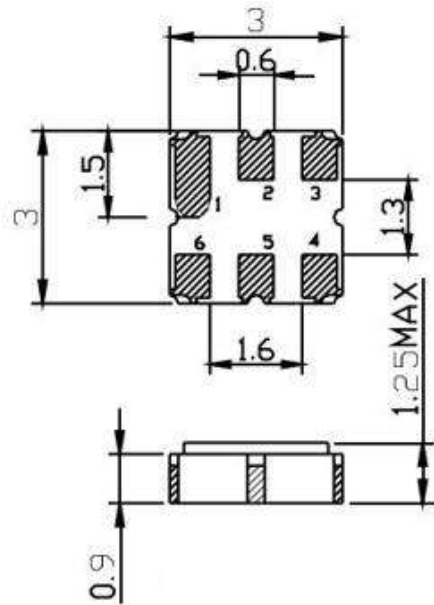
Test Temperature: 25°C±2°C

Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc		2140.0		MHz
Insertion Loss	IL		2.0	3.0	dB
2110.00 - 2170.00 MHz					
Amplitude Ripple (p-p)	$\Delta\alpha$		0.6	1.5	dB
2110.00 - 2170.00 MHz					
Group Delay Ripple	GDR		10.0	25.0	ns
2110.00 - 2170.00 MHz					
Absolute Attenuation	α				
DC - 500.00 MHz		25.0	30.0		dB
500.00 - 2000.00 MHz		20.0	28.0		dB
2000.00 - 2050.00 MHz		25.0	30.0		dB
2215.00 - 2300.00 MHz		30.0	35.0		dB
2300.00 - 4500.00 MHz		25.0	30.0		dB
VSWR			1.8:1	2.0:1	/
2110.00 - 2170.00 MHz					

Figure 1 Electrical Characteristics: Frequency response.

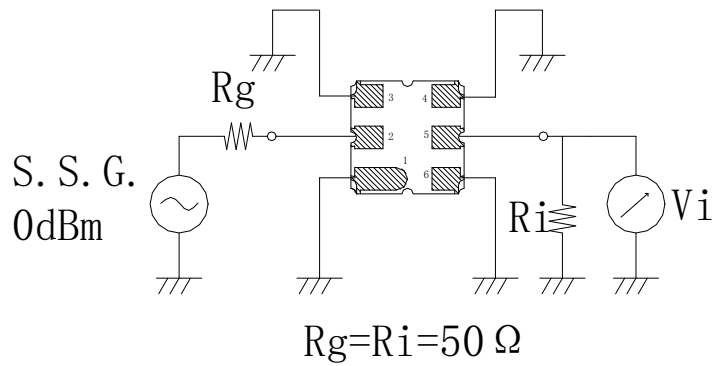


Package & Dimensions



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

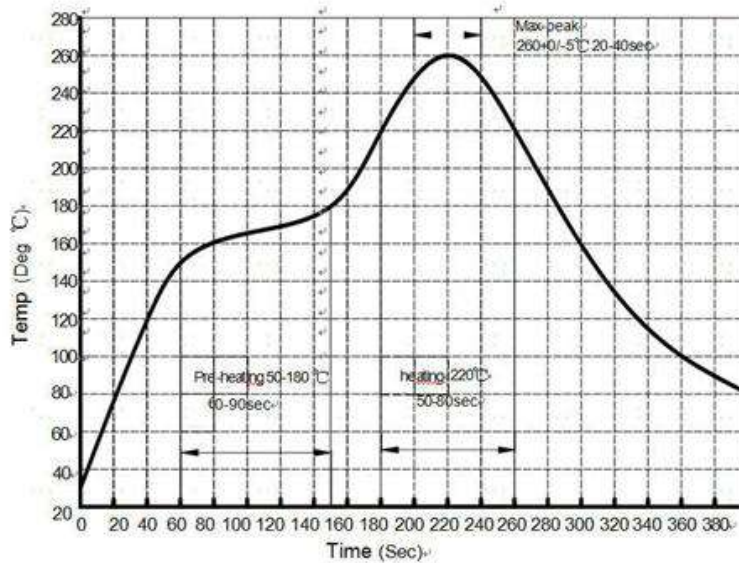
Test circuit



Maximum Ratings

Item		Value	Unit
DC Voltage	V_{DC}	3	V
Operation Temperature	T	-40 ~ +85	°C
Storage Temperature	T_{stg}	-55 ~ +125	°C
RF Power Dissipation	P	20	dBm

Recommended SMT Solder Profile



Ordering Information

Part Number	Number of Devices	Container
SPT2140M3030A	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 Directions: X,Y and Z Amplitude:1.5mm 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

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.

