



**Data Sheet**  
**1900MHz SAW 3030**  
**SPT1900M3030A**

V1.0

**Description:**

The Spectron SPT1900M3030A is a SAW filter that work frequency ranges from 1880MHz to 1920MHz. It is designed for applications in GNSS, Beidou System, IOT equipments and Information & Communications filed.

The SPT1900M3030A provides +20 dBm power handling, low insertion loss and high out of band rejection.

The design and manufacturing of the SPT1900M3030A exploit Spectron's exclusive TSAW technology to deliver competitive performance against state of the art at a low cost.

The SPT1900M3030A is compatible with high volume, lead-free SMT soldering processes.

**Features:**

- Single-Ended Input and Output
- Terminating Impedance: 50  $\Omega$
- RoHS Compliant

**Specifications:**

- Operation Temperature: -40°C to +85°C
- Usable passband 40.0 MHz
- Compact miniature size
  - 3.0 mm  $\times$  3.0 mm footprint
  - 1.25 mm max-height

**Applications:**

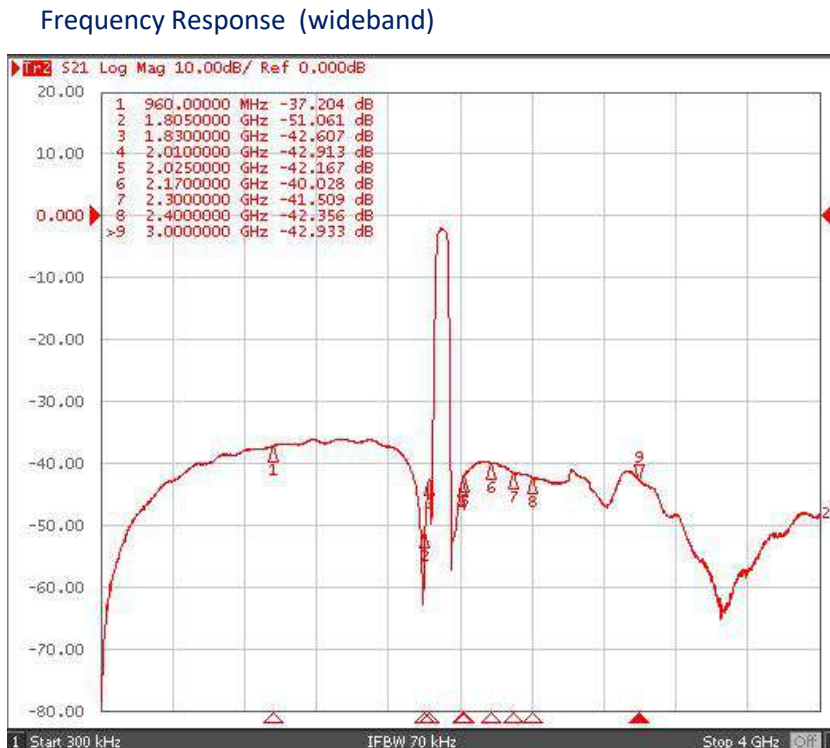
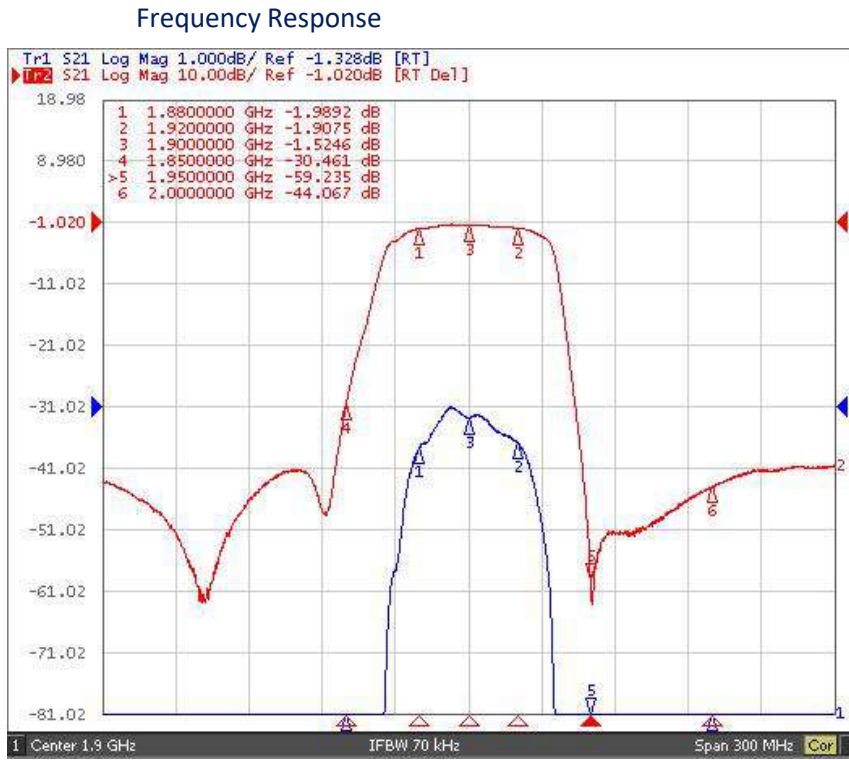
- GNSS
- IOT equipments
- Information & Communications Devices
- Beidou System

**Electrical Specifications****Table 1** Electrical Specifications.

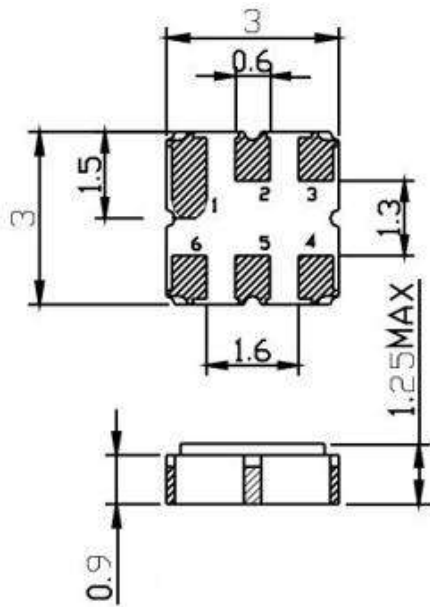
Test Temperature: 25°C±2°C

Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc		1900.00		MHz
Insertion Loss(min)	IL		1.5	2.0	dB
Insertion Loss	1880.00-1920.00MHz IL		1.8	2.5	dB
Amplitude Ripple (p-p)	1880.00-1920.00MHz $\Delta\alpha$		1.0	1.2	dB
Group Delay Ripple	1880.00-1920.00MHz GDR		10.0	40.0	ns
Absolute Attenuation	$\alpha$				
	DC - 960.00 MHz	32.0	35.0		dB
	960.00 -1805.00 MHz	30.0	35.0		dB
	1805.00 -1830.00 MHz	35.0	40.0		dB
	1830.00 -1850.00 MHz	15.0	30.0		dB
	1950.00 -2010.00 MHz	15.0	30.0		dB
	2010.00 -2025.00 MHz	30.0	42.0		dB
	2110.00 -2170.00 MHz	35.0	38.0		dB
	2300.00 -2400.00 MHz	35.0	40.0		dB
	2140.00 -3000.00 MHz	28.0	35.0		dB
VSWR	1880.00-1920.00MHz		1.6:1	2.0:1	/

Figure 1 Electrical Characteristics:

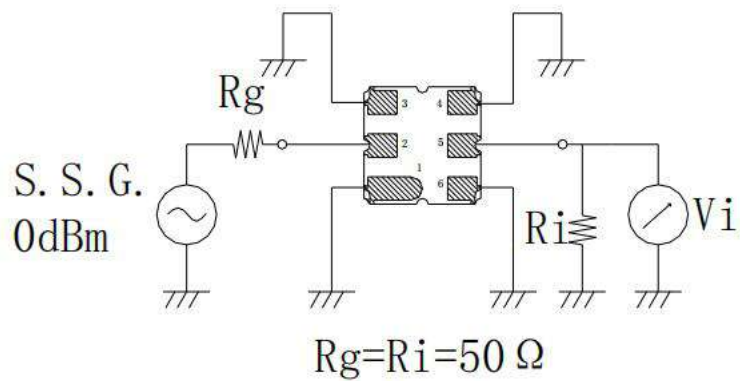


### Package & Dimensions



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

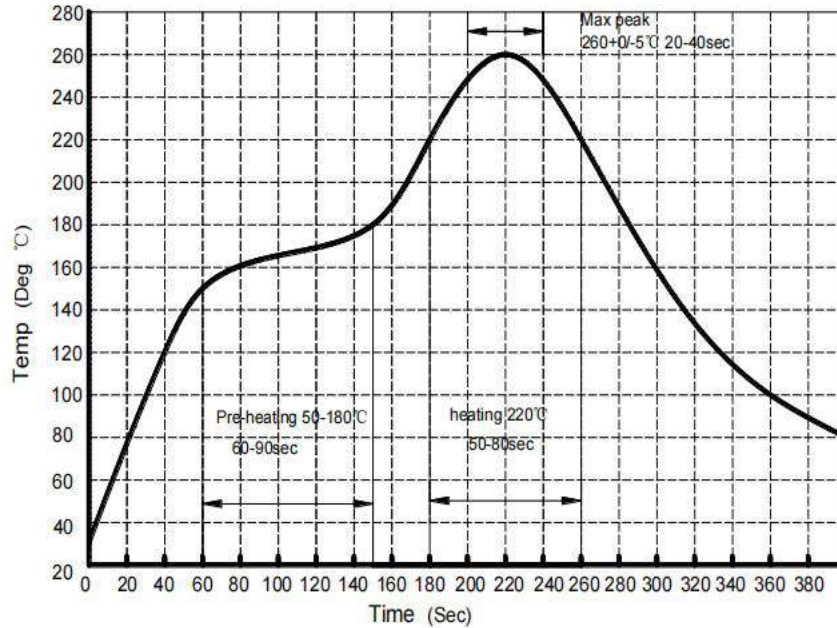
### Test circuit



### Maximum Ratings

Item		Value	Unit
Operation Temperature	T	-40 ~ +85	°C
Storage Temperature	$T_{stg}$	-40 ~ +125	°C
RF Power Dissipation	P	20	dBm

## Recommended SMT Solder Profile



## Ordering Information

Part Number	Number of Devices	Container
SPT1900M3030A	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	<p>(1) Thickness of PCB:1mm , Solder condition: 260°C±5°C , Duration: 10±1s</p> <p>(2) Temperature of Soldering Iron: 350°C±10°C, Duration: 3~4s,</p> <p>Recovery time : 2 ± 0.5h</p>
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