

# Data Sheet 2492MHz SAW 3030 SPT2492M3030A

V1.0

## **Description:**

The Spectron SPT2492M3030A is a SAW filter that work frequency ranges from 2487MHz to 2497MHz.It is designed for applications in GNSS,Beidou System, IOT equipments and Information& Communications filed.

The SPT2492M3030A provides +10 dBm power handling, low insertion loss and high out of band rejection.

The design and manufacturing of the SPT2492M3030A exploit Spectron's exclusive TSAW technology to deliver competitive performance against state of the art at a low cost.

The SPT2492M3030A 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 10.0 MHz
- Compact miniature size
  - 3.0 mm × 3.0 mm footprint
  - 1.25 mm max-height

## **Applications:**

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

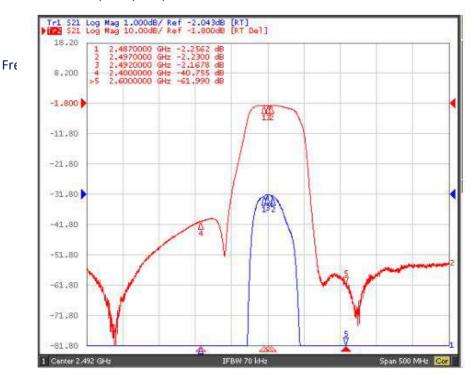
## **Electrical Specifications**

 Table 1 Electrical Specifications.

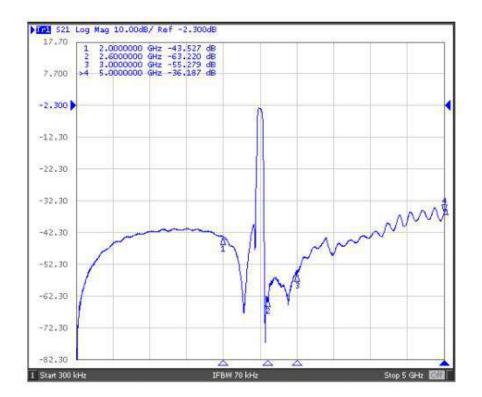
Test Temperature:  $25^{\circ}C \pm 2^{\circ}C$ 

Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc		2492.00		MHz
Insertion Loss(min)	IL		2.0	2.5	dB
Insertion Loss 2487.00 – 2497.00MHz	IL		2.2	3.0	dB
Amplitude Ripple (p-p) 2487.00 – 2497.00MHz	∆a		0.4	1.0	dB
Group Delay Ripple 2487.00 – 2497.00MHz	GDR		10.0	30.0	ns
Absolute Attenuation	а				
DC - 1000.00 MHz		30.0	35.0		dB
1000.00 - 1616.00 MHz		30.0	35.0		dB
1616.00 - 2400.00 MHz		32.0	37.0		dB
2600.00 - 3000.00 MHz		45.0	50.0		dB
3000.00 - 5000.00 MHz		15.0	20.0		dB
Input VSWR 2487.00 – 2497.00MHz			1.7:1	2.0:1	/
Output VSWR 2487.00 – 2497.00MHz			1.7:1	2.0:1	/

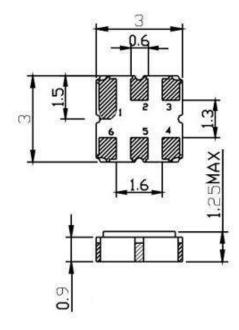
#### Figure 1 Electrical Characteristics:



#### **Frequency Response**

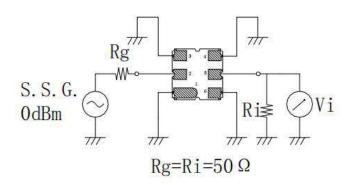


## Package & Dimensions



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

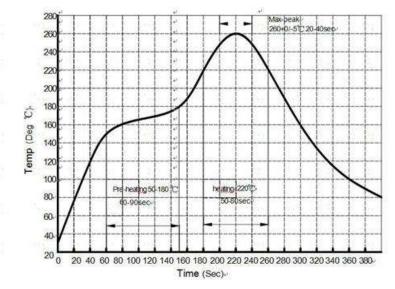
## Test circuit



## **Maximum Ratings**

Item		Value	Unit
Operation Temperature	т	-40 ~ +85	
Storage Temperature	T <sub>stg</sub>	-40 ~ +125	°C
RF Power Dissipation	Р	10	dBm

## **Recommended SMT Solder Profile**



## **Ordering Information**

Part Number	Number of Devices	Container
SPT2492M3030A	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°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 $\pm$ 3°C, TB=85°C $\pm$ 2°C, t1=t2=30min, Switch time: $\leq$ 3min, Cycle time: 100 times, Recovery time: 2h $\pm$ 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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