



Data Sheet
1747.5MHz SAW 3030
SPT1747M3030A

V1.0

Description:

The Spectron SPT1747M3030A is a SAW filter that work frequency ranges from 1710 to 1785MHz. It is designed for applications in IOT equipments and Information & Communications filed.

The SPT1747M3030A provides +20 dBm power handling, low insertion loss and high out of band rejection.

The design and manufacturing of the SPT1747M3030A exploit Spectron's exclusive TSAW technology to deliver competitive performance against state of the art at a low cost.

The SPT1747M3030A 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 75.0 MHz
- Compact miniature size
 - 3.0 mm \times 3.0 mm footprint
 - 1.25 mm max-height

Applications:

- IOT equipments
- Information & Communications Devices

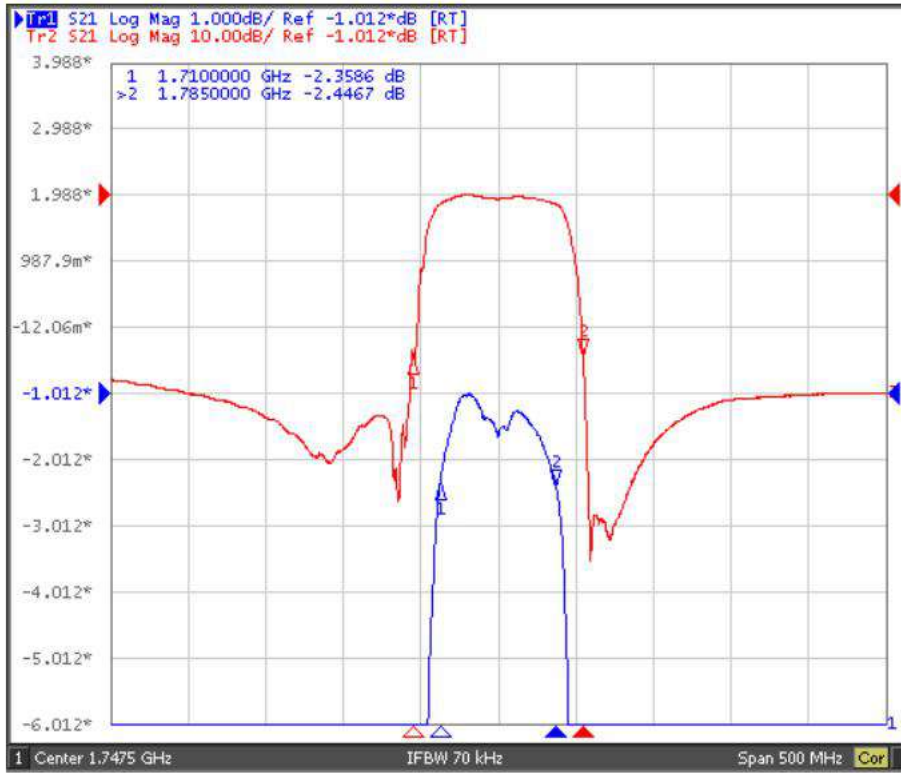
Electrical Specifications**Table 1** Electrical Specifications.

Test Temperature: 25°C±2°C

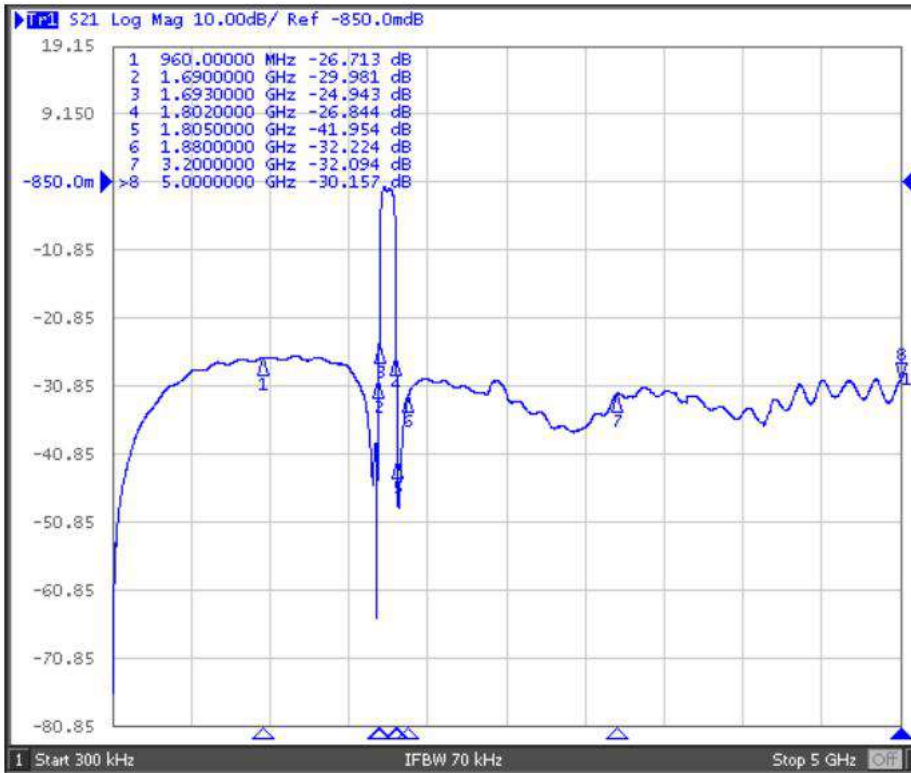
Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc		1747.50		MHz
Insertion Loss(min)	IL		1.5	2.0	dB
Insertion Loss 1710.00 - 1785.00MHz	IL		2.5	3.0	dB
Amplitude Ripple (p-p) 1710.00 - 1785.00MHz	Δa		2.0*	3.0	dB
Group Delay Ripple 1710.00 - 1785.00MHz	GDR		18.0	40.0	ns
Absolute Attenuation	α				
DC - 960.00MHz		20.0	25.0		dB
960.00 - 1690.00MHz		20.0	25.0		dB
1690.00 - 1693.00MHz		15.0	20.0		dB
1802.00 - 1805.00MHz		20.0	25.0		dB
1805.00 - 1880.00MHz		25.0	30.0		dB
1880.00 - 3200.00MHz		23.0	28.0		dB
3200.00 - 5000.00MHz		4.0	28.0		dB
VSWR 1710.00 - 1785.00MHz			1.8:1	2.2:1	/

Figure 1 Electrical Characteristics:

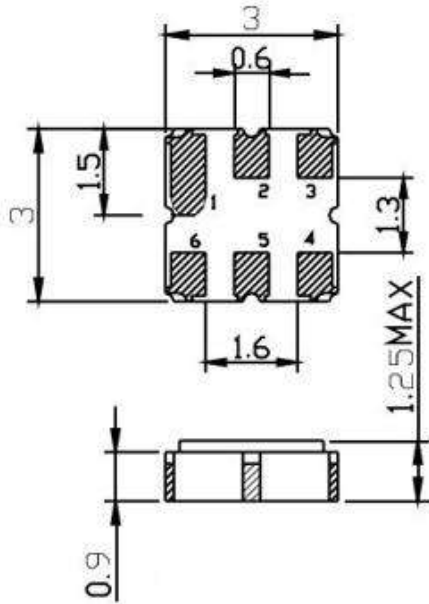
Frequency Response



Frequency Response (wideband)

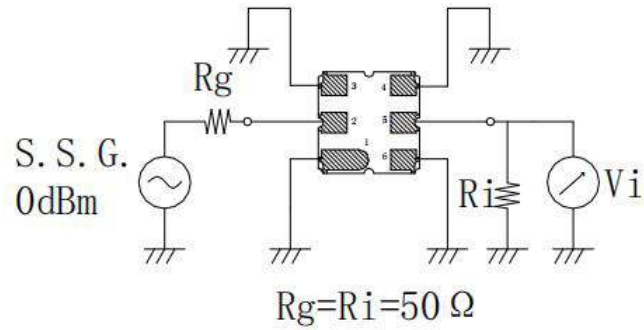


Package & Dimensions



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

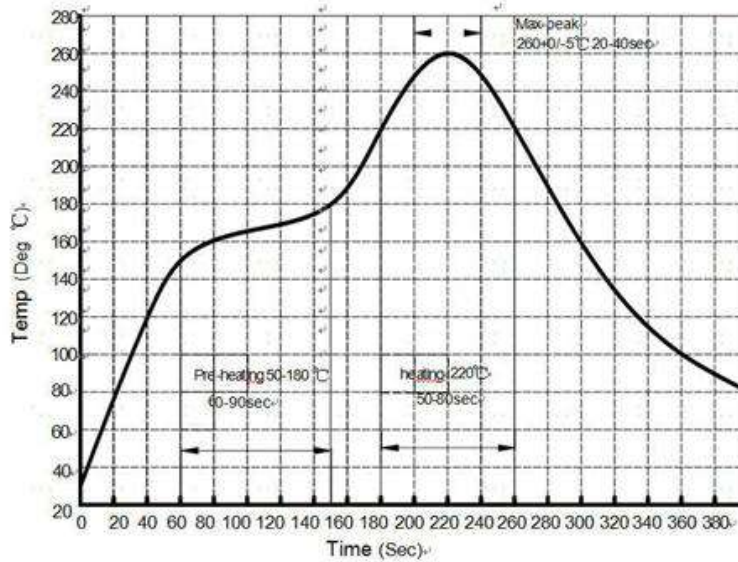
Test circuit



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
SPT1747M3030A	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 Depth: DIP--2/3 , SMD--1/5	Duration: 3.0s--5.0s
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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