



Data Sheet

866.5MHz SAW 3030

SPT866M3030A

V1.1

Description:

The Spectron SPT866M3030A is a SAW filter that work frequency ranges from 863MHz to 870MHz. It is designed for applications in wireless module and Information & Communications field.

The SPT866M3030A provides +20 dBm power handling, low insertion loss and high out of band rejection.

The design and manufacturing of the SPT866M3030A exploit Spectron's exclusive TSAW technology to deliver competitive performance against state of the art at a low cost.

The SPT866M3030A 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 7.0 MHz
- Compact miniature size
 - 3.0 mm \times 3.0 mm footprint
 - 1.25 mm max-height

Applications:

- Information & Communications Devices
- Wireless module

Electrical Specifications**Table 1** Electrical Specifications. Test Temperature: 25°C±2°C

Single Filter			Specification		
Parameter	Condition [MHz]	Unit	Minimum ¹	Typical ²	Maximum ¹
Insertion Loss	863.00 - 870.00	dB	-	2.7	3.5
Inband Ripple	863.00 - 870.00	dB	-	2.7	3.5
VSWR	863.00 - 870.00	-	-	1.5	2.0
Group Delay Ripple	863.00 - 870.00	ns	-	30.0	100.0
Absolute Attenuation	0.00 - 800.00	dB	50.0	55.0	-
	800.00-853.5	dB	40.0	45.0	-
	881.50 - 1200.00	dB	50.0	55.0	-
	1200.00 - 2000.00	dB	40.0	45.0	-

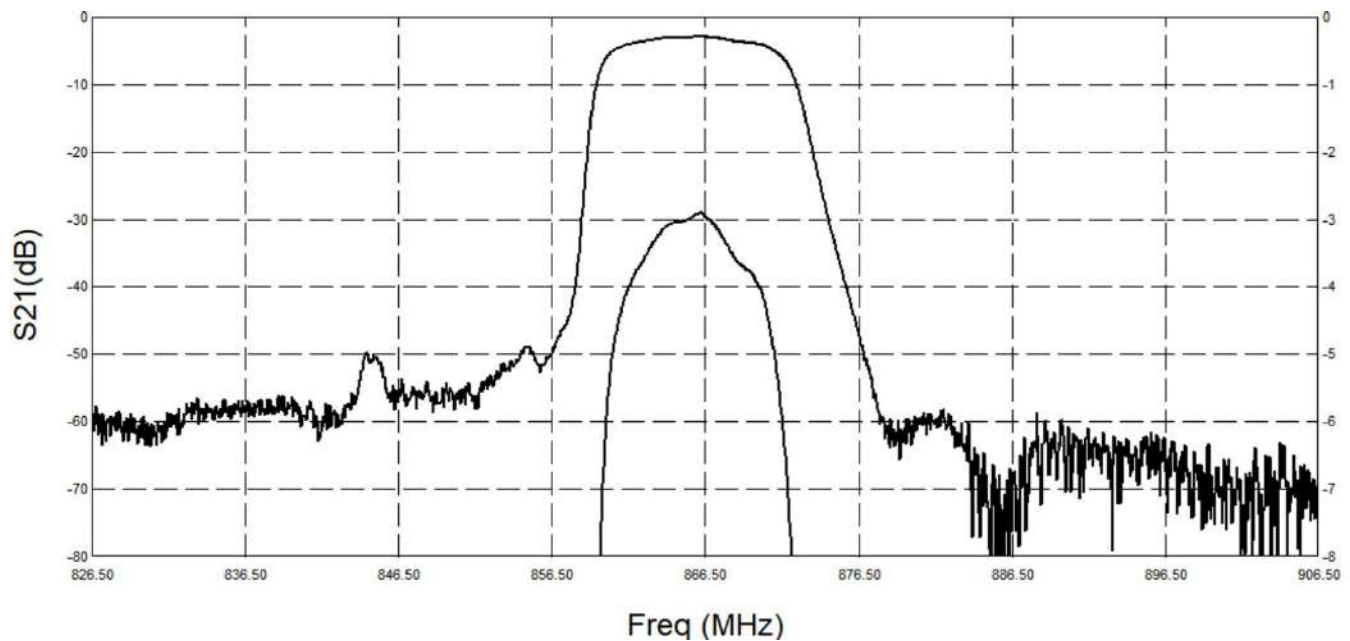
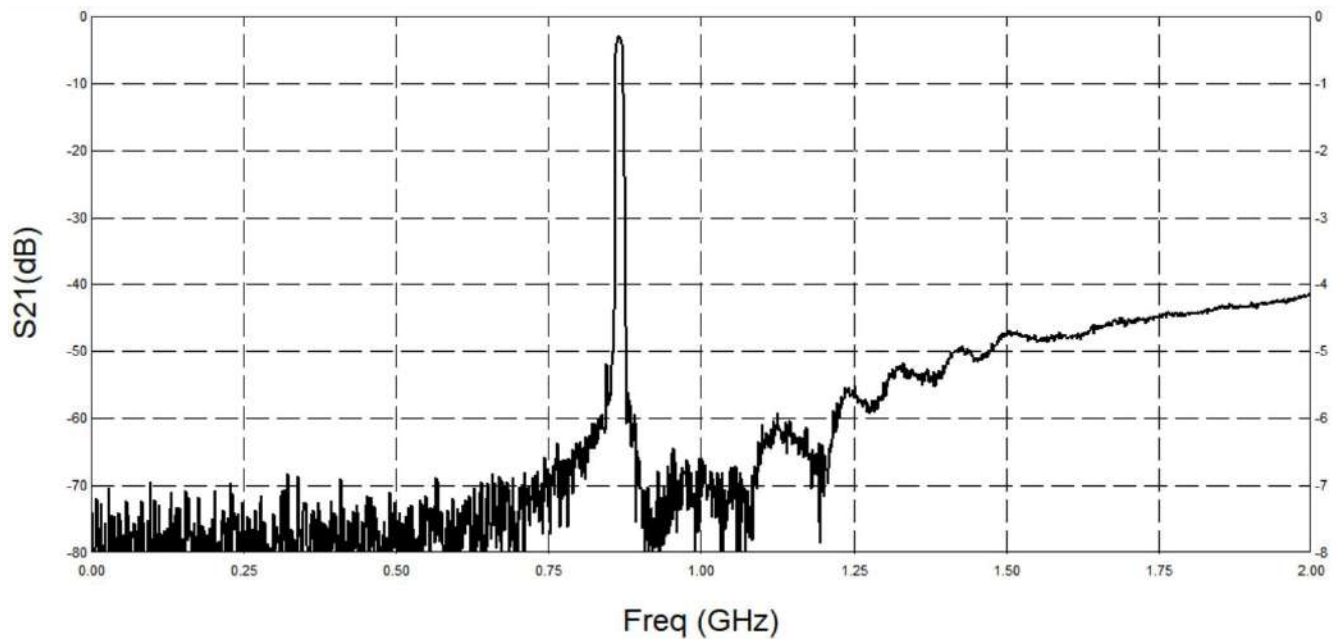
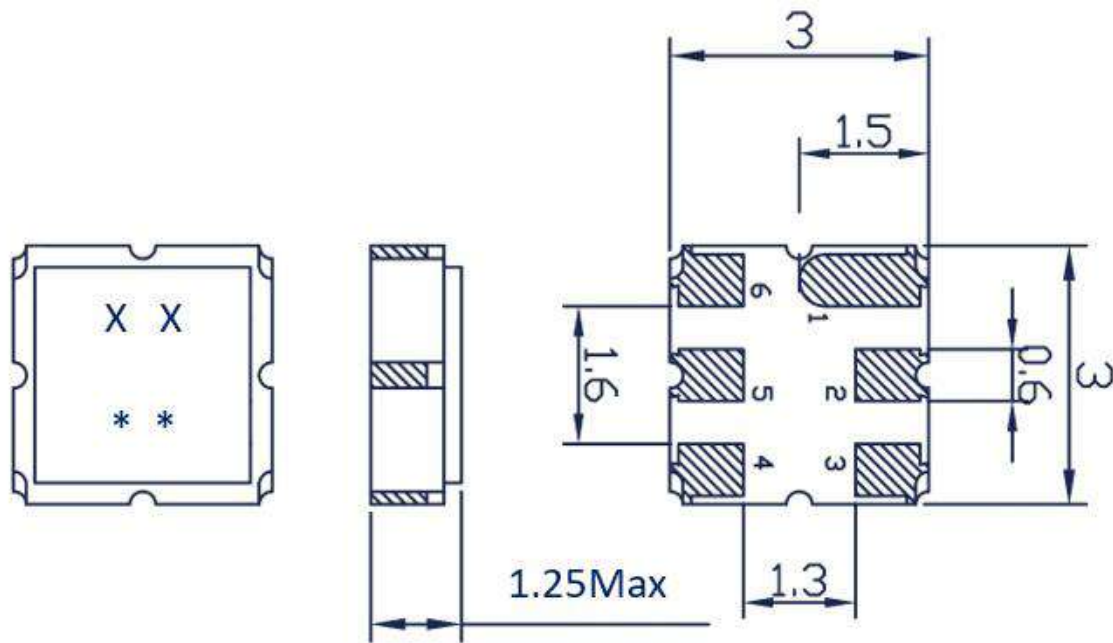
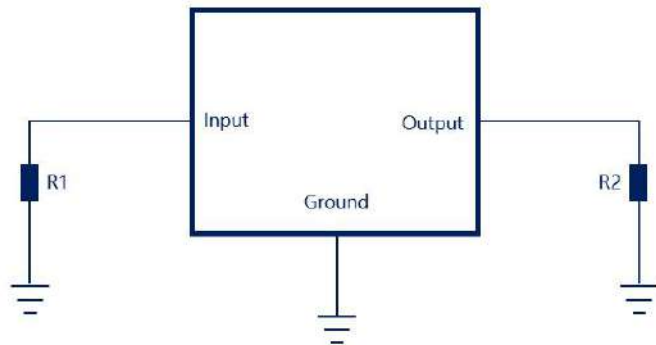
Figure 1 Electrical Characteristics: Insertion Loss

Figure 2 Electrical Characteristics: Narrow band**Package & Dimensions**

Marking Description	
XX	Product Code
**	Date Code

Pin Configuration	
2	Input
5	Output
Others	Ground

Test circuit

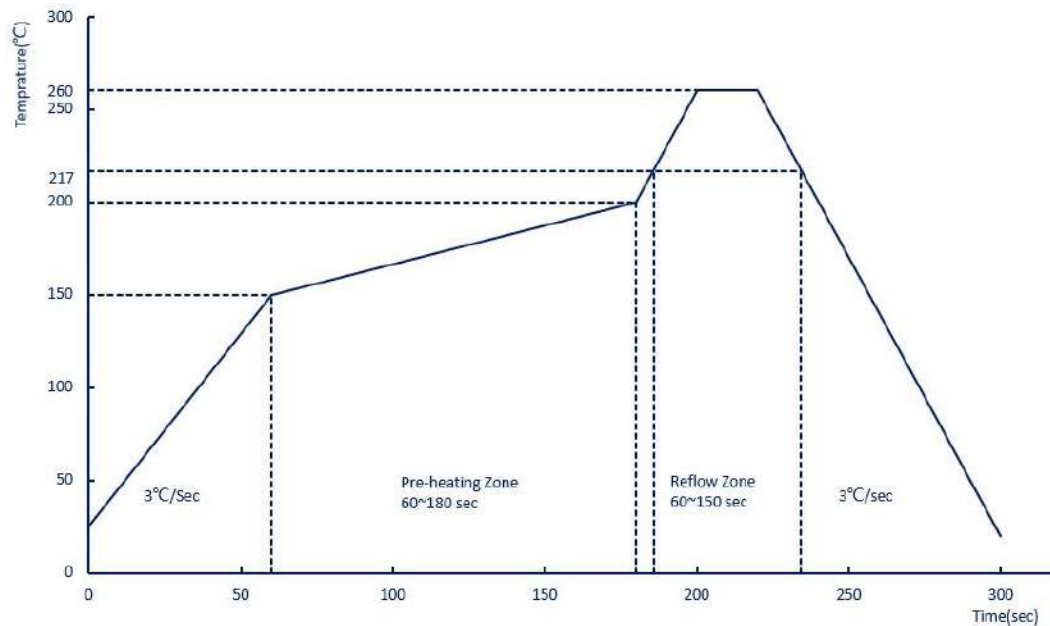


Port	Matching Component
Input	R1: 50Ω
Output	R2: 50Ω

Maximum Ratings

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

Recommended SMT Solder Profile



Ordering Information

Part Number	Number of Devices	Container
SPT866M3030A	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: 3.0s--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

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