



Data Sheet
433.92MHz SAW 3030
SPT433M3030A

V1.0

Description:

The Spectron SPT433M3030A is a SAW filter that work frequency ranges from 433 to 434.71MHz. It is designed for applications in remote controls, IOT equipments and Information & Communications filed.

The SPT433M3030A provides +15 dBm power handling, low insertion loss and high out of band rejection.

The design and manufacturing of the SPT433M3030A exploit Spectron's exclusive TSAW technology to deliver competitive performance against state of the art at a low cost.

The SPT433M3030A is compatible with high volume, lead-free SMT soldering processes.

Features:

- Single-Ended Input and Output
- Terminating Impedance: 50 Ω
- Environmental
 - RoHS Compliant

Specifications:

- Operation Temperature: -40°C to +85°C
- Usable passband 1.71 MHz
- Compact miniature size
 - 3.0 mm × 3.0 mm footprint
 - 1.25 mm max-height

Applications:

- Remote controls
- 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 | | 433.92 | | MHz |
| Insertion Loss(min) | IL | | 1.8 | 2.0 | dB |
| Insertion Loss 433.00– 434.71MHz | IL | | 2.0 | 2.5 | dB |
| Amplitude Ripple (p-p) 433.00– 434.71MHz | $\Delta\alpha$ | | 0.5 | 1.0 | dB |
| 3dB bandwidth | BW3dB | | 7.0 | 7.5 | MHz |
| Group Delay Ripple 433.00– 434.71MHz | GDR | | 20.0 | 50.0 | ns |
| Absolute Attenuation | α | | | | |
| DC - 380.00MHz | | 55.0 | 60.0 | | dB |
| 380.00 - 413.50MHz | | 50.0 | 55.0 | | dB |
| 413.50 - 424.00MHz | | 43.0 | 48.0 | | dB |
| 443.75 - 454.00MHz | | 35.0 | 40.0 | | dB |
| 454.00 - 470.00MHz | | 45.0 | 50.0 | | dB |
| 470.00 - 650.00MHz | | 50.0 | 55.0 | | dB |
| 650.00 -1000.00MHz | | 45.0 | 50.0 | | dB |
| Input VSWR 433.00– 434.71MHz | | | 1.8:1 | 2.0:1 | / |
| Output VSWR 433.00– 434.71MHz | | | 1.8:1 | 2.0:1 | / |

Figure 1 Electrical Characteristics: Frequency response.

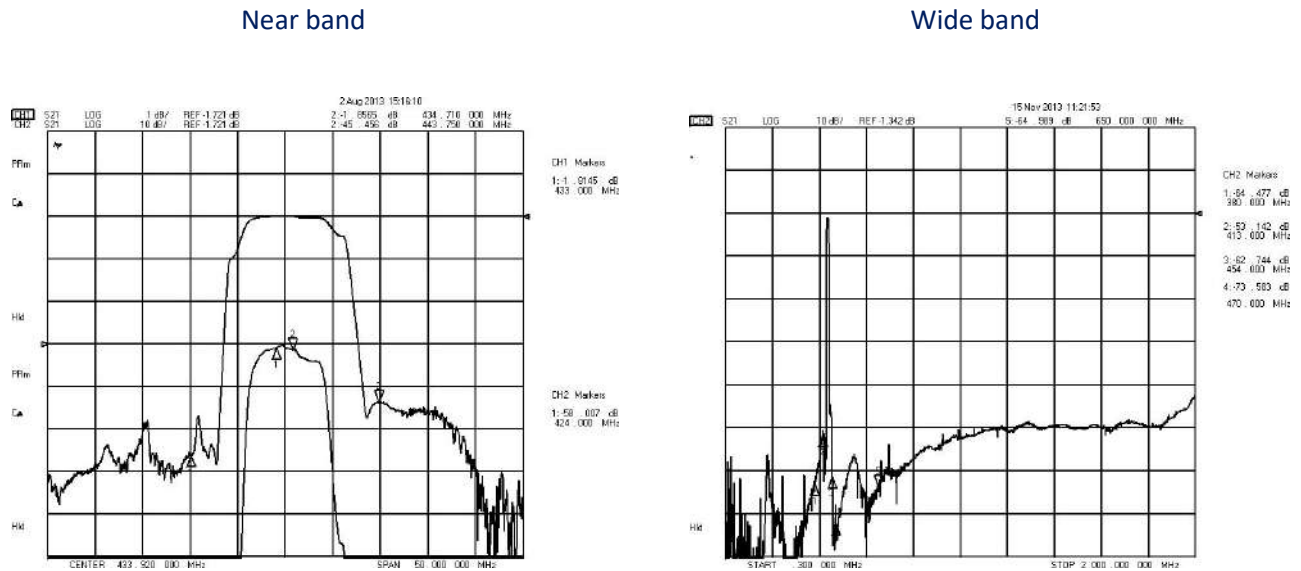


Figure 2 Electrical Characteristics: Delay Ripple & Phase Linearity & VSWR.

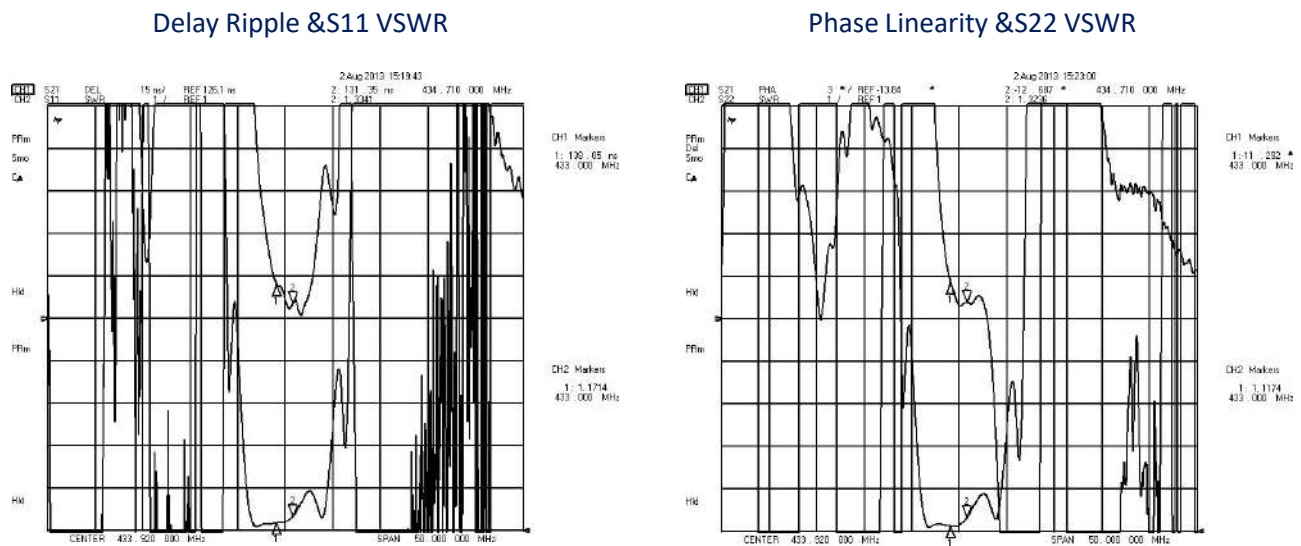
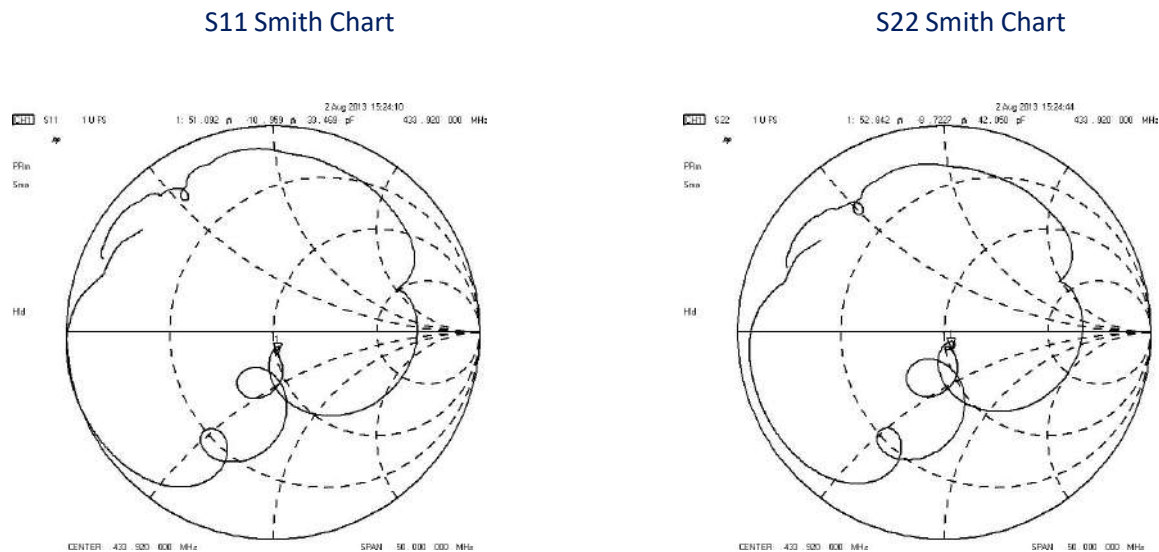
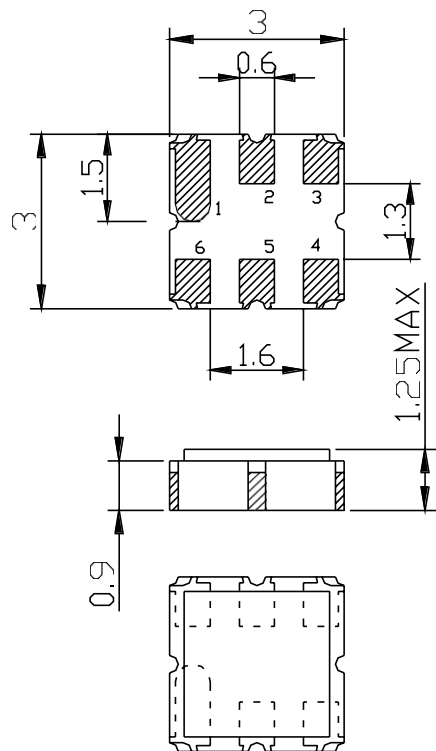


Figure 3 Electrical Characteristics: Delay Ripple & Phase Linearity & VSWR.

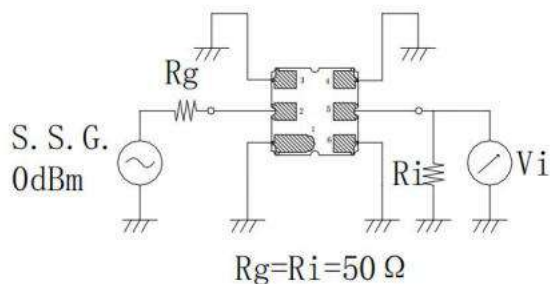


Package & Dimensions



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

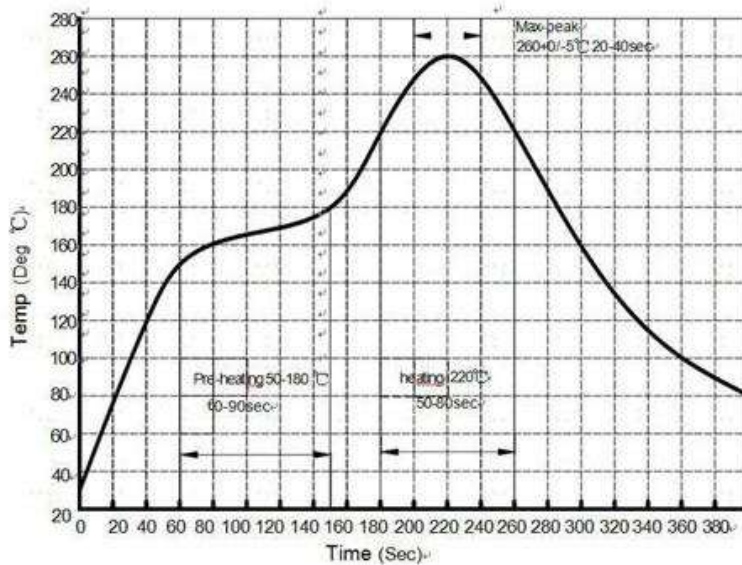
Test circuit



Maximum Ratings

| Item | | Value | Unit |
|-----------------------|------|------------|------|
| DC Voltage | VDC | 3 | V |
| Operation Temperature | T | -40 ~ +85 | °C |
| Storage Temperature | Tstg | -55 ~ +125 | °C |
| RF Power Dissipation | P | 15 | dBm |

Recommended SMT Solder Profile



Ordering Information

| Part Number | Number of Devices | Container |
|--------------|-------------------|---------------|
| SPT433M3030A | 1000pcs | Tape and Reel |

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