



Data Sheet
159.5MHz SAW 5050
SPT159M5050A

V1.0

Description:

The Spectron SPT159M5050A is a SAW filter that work frequency ranges from 156.5MHz to 162.5MHz. It is designed for applications in wireless module and Information & Communications filed.

The SPT159M5050A provides +20 dBm power handling, low insertion loss and high out of band rejection.

The design and manufacturing of the SPT159M5050A exploit Spectron's exclusive TSAW technology to deliver competitive performance against state of the art at a low cost.

The SPT159M5050A is compatible with high volume, lead-free SMT soldering processes.

Features:

- Single-Ended Input and Output
- Terminating Impedance: 50 Ω
- RoHS Compliant
- Package size 5.00x5.00x1.50mm³

Specifications:

- Operation Temperature: -40°C to +85°C
- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 6 MHz
- 3dB bandwidth TYP 11MHz

Applications:

- Information & Communications Devices
- Wireless module

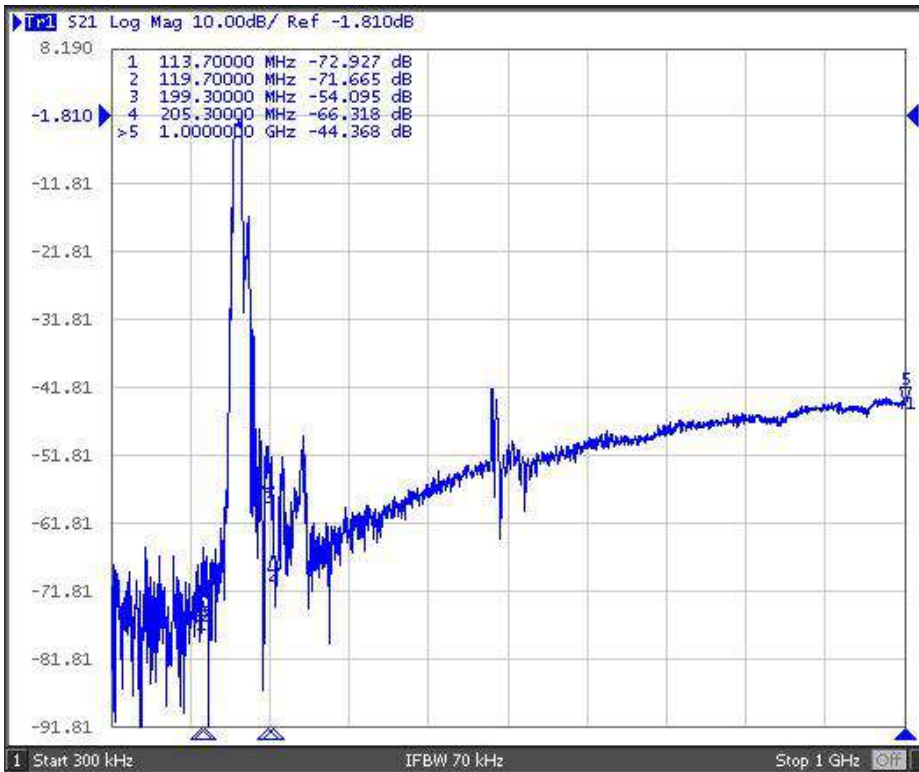
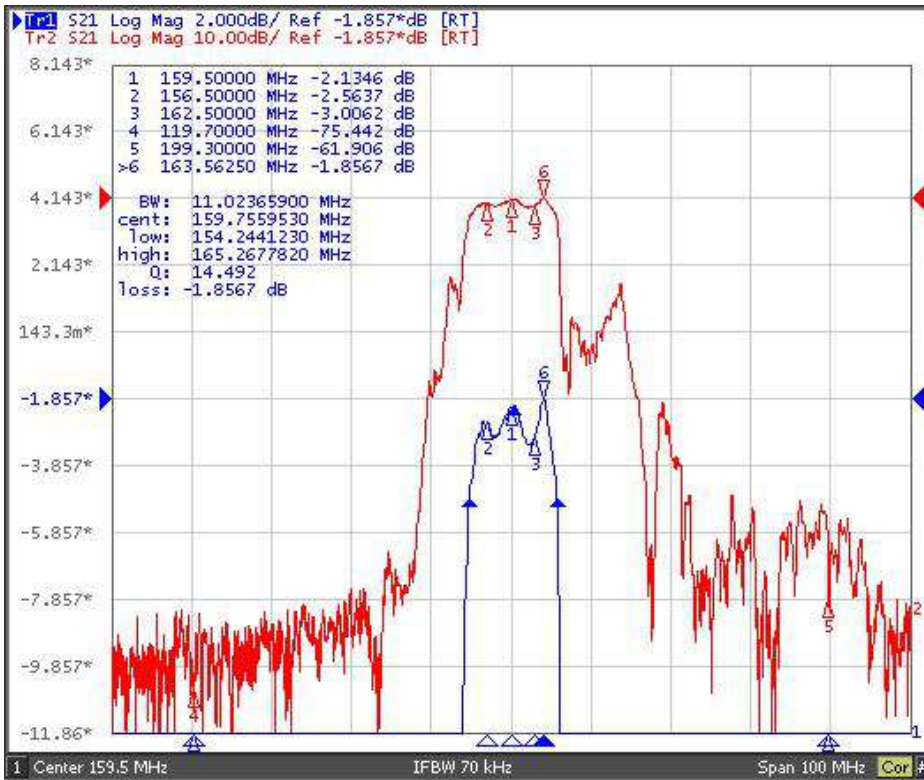
Electrical Specifications

Table 1 Electrical Specifications.

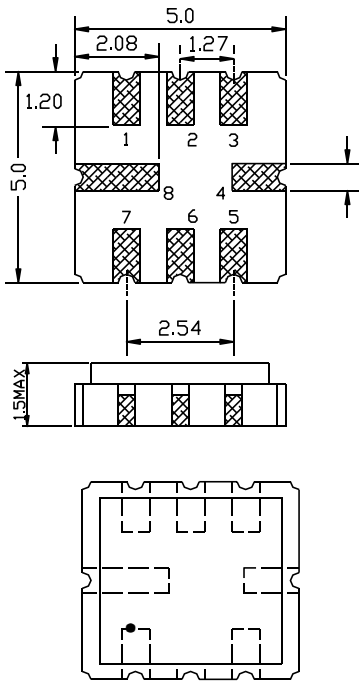
| Item | | Minimum | Typical | Maximum | Unit |
|------------------------|----------------------|---------|---------|---------|------|
| Center Frequency | fc | | 159.5 | | MHz |
| Insertion Loss | @159.50 MHz | | 2.2 | 3.5 | dB |
| Insertion Loss | 156.50 – 162.50 MHz | | 3.1 | 4.5 | dB |
| Amplitude Ripple (p-p) | 156.50 – 162.50 MHz | | 1.4 | 2.0 | dB |
| -3dB Bandwidth | BW _{3dB} | 8.0 | 11.0 | | MHz |
| Absolute Attenuation | α | | | | |
| | DC - 113.70 MHz | 50.0 | 55.0 | | dB |
| | 113.70 - 119.70 MHz | 50.0 | 55.0 | | dB |
| | 199.30 - 205.30 MHz | 40.0 | 45.0 | | dB |
| | 205.30 - 1000.00 MHz | 35.0 | 40.0 | | dB |

1. Min/Max specifications are guaranteed at the indicated temperature (unless otherwise noted).
2. Typical data is the average value (arithmetic mean) of the parameter over the indicated band at +25°C

Figure 1 Electrical Characteristics: Frequency response.

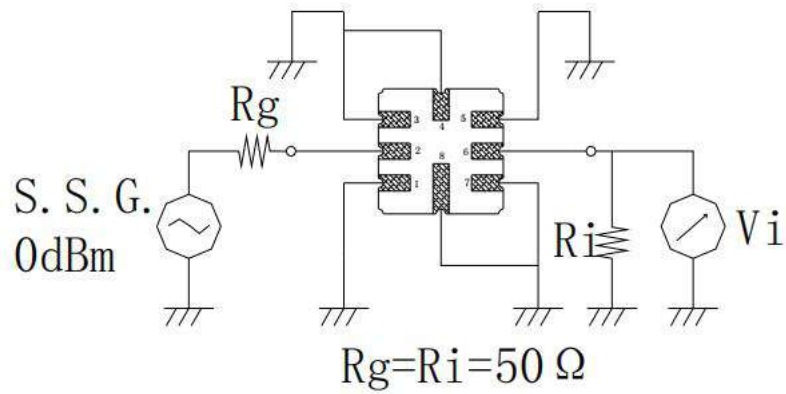


Package & Dimensions



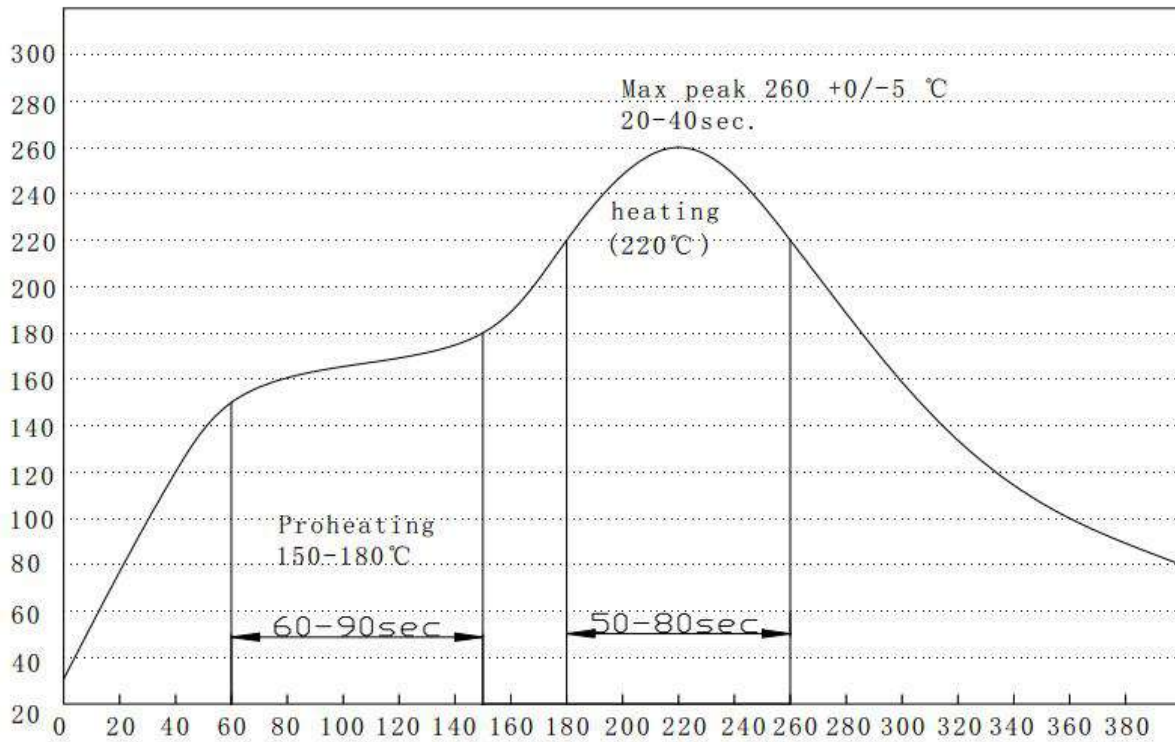
| Pin No. | Description |
|-------------|-------------|
| 2 | Input |
| 6 | Output |
| 1,3,4,5,7,8 | Ground |

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 |
|--------------|-------------------|---------------|
| SPT159M5050A | 1000pcs | Tape and Reel |

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