



Data Sheet
725.5MHz SAW 3030
SPT725M30E

V1.0

Features:

- Ceramic Package for Surface Mounted Technology (SMT)
- RoHS compatible
- Package size 3.00x3.00x1.25mm³
- Electrostatic Sensitive Device(ESD)

Specifications:

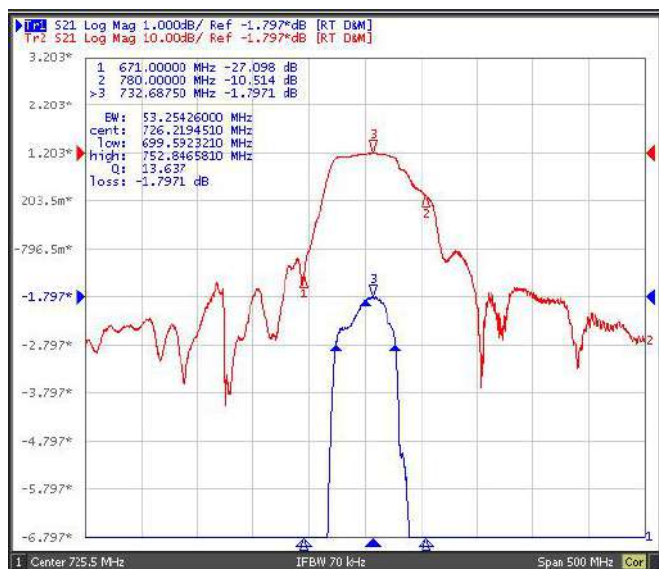
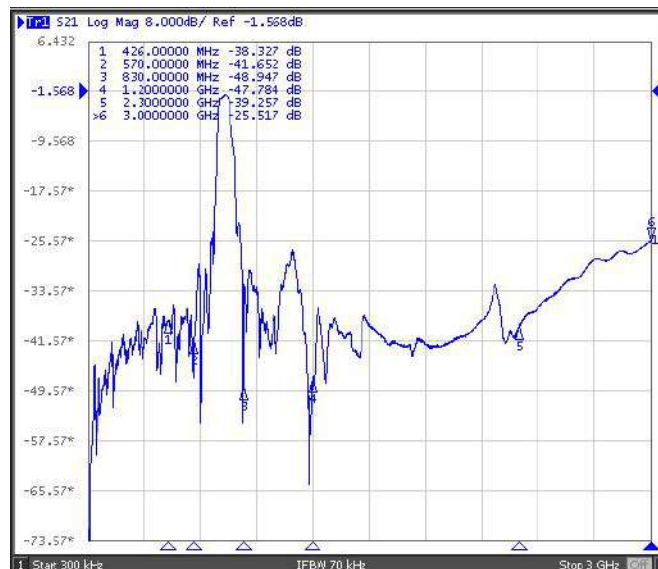
- Operation Temperature:-40°C to +85°C
- Compact miniature size
 - 3.0 mm × 3.0 mm footprint
 - 1.25 mm max-height

Applications:

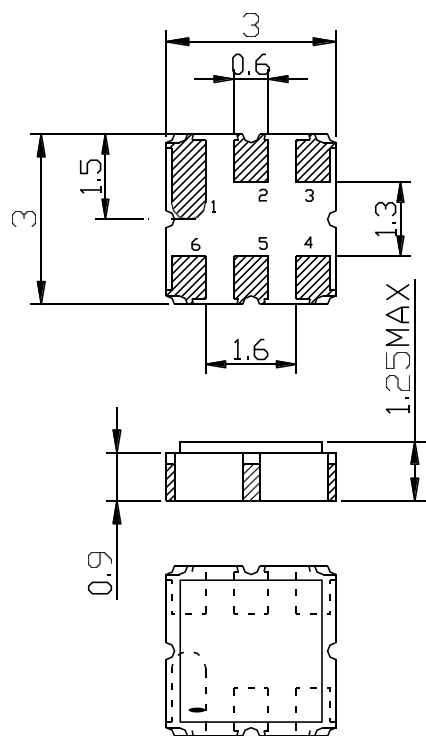
- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 45.0 MHz

Electrical Specifications. Test Temperature: 25°C±2°C

| Item | | Minimum | Typical | Maximum | Unit |
|------------------------|-----------------------|---------|---------|---------|------|
| Center Frequency | fc | | 725.50 | | MHz |
| Insertion Loss(min) | IL | | 1.8 | 2.5 | dB |
| 1 dB Bandwidth | BW _{1dB} | 45.0 | 53.0 | | MHz |
| Amplitude Ripple (p-p) | $\Delta\alpha$ | | 0.8 | 1.2 | dB |
| Group Delay Ripple | GDR | | 10.0 | 20.0 | ns |
| Absolute Attenuation | α | | | | |
| | DC - 426.00 MHz | 30.0 | 35.0 | | dB |
| | 426.00 - 570.00 MHz | 30.0 | 35.0 | | dB |
| | 830.00 - 1200.00 MHz | 20.0 | 25.0 | | dB |
| | 1200.00 - 2300.00 MHz | 25.0 | 30.0 | | dB |
| | 2300.00 - 3000.00 MHz | 20.0 | 24.0 | | dB |
| Input VSWR | 703.00 - 748.00 MHz | | 1.7:1 | 2.0:1 | / |
| Output VSWR | 703.00 - 748.00 MHz | | 1.7:1 | 2.0:1 | / |

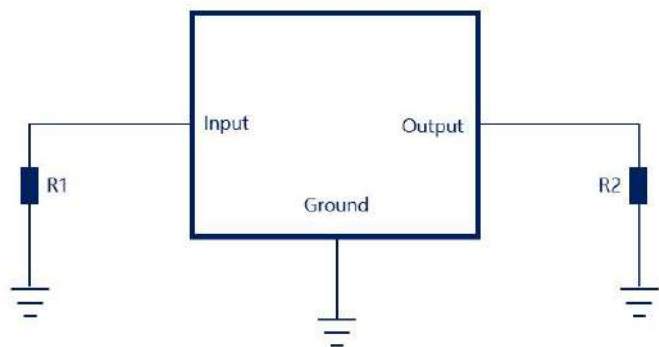
Frequency Characteristics.**Frequency Response****Frequency Response (wideband)**

Package & Dimensions



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

Matching



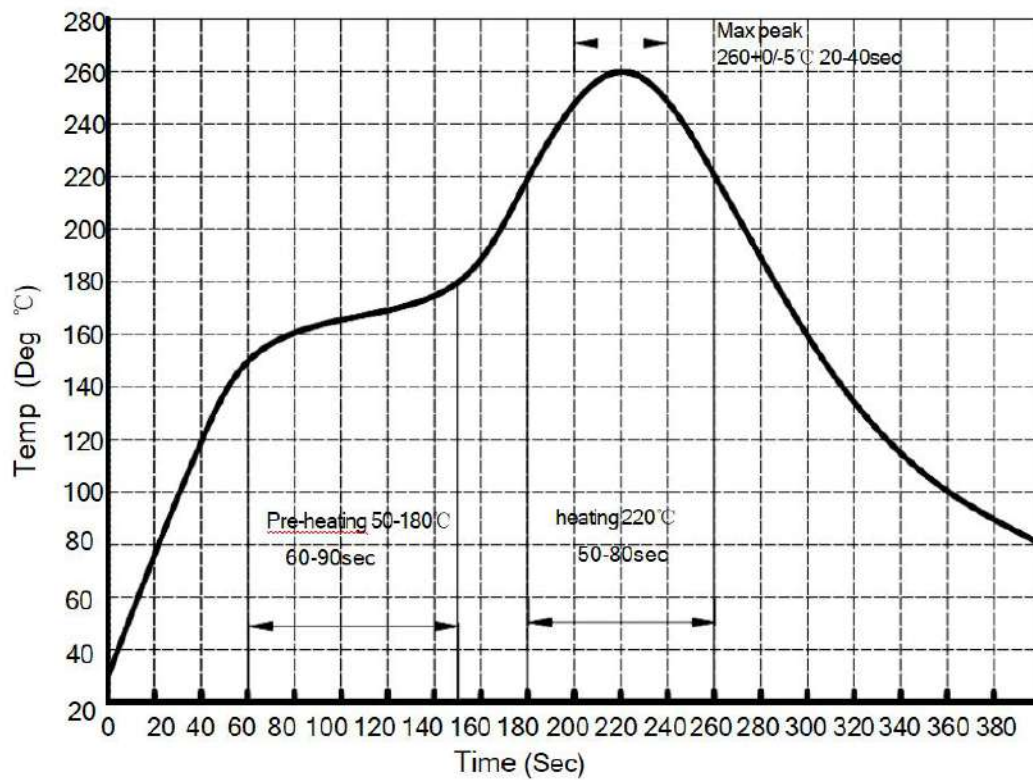
| Port | Matching Component ¹ |
|--------|---------------------------------|
| Input | R1: 50Ω |
| Output | R2: 50Ω |

Matching component values shown are recommended based on the Spectron evaluation board. Value adjustment may be required on the end-user's circuit boards for the selected component manufacturer and PCB material.

Maximum Ratings

| Item | | Value | Unit |
|-----------------------|------------------|-----------|------|
| DC Voltage | V _{DC} | 5 | V |
| Operation Temperature | T | -40 ~ +85 | °C |
| Storage Temperature | T _{stg} | -40 ~ +85 | °C |
| RF Power Dissipation | P | 20 | dBm |

Recommended Reflow Soldering Diagram



Ordering Information

| Part Number | Number of Devices | Container |
|-------------|-------------------|---------------|
| SPT725M30E | 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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