



Data Sheet
777.5MHz SAW 3030
SPT778M30E

V1.0

Features:

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

Specifications:

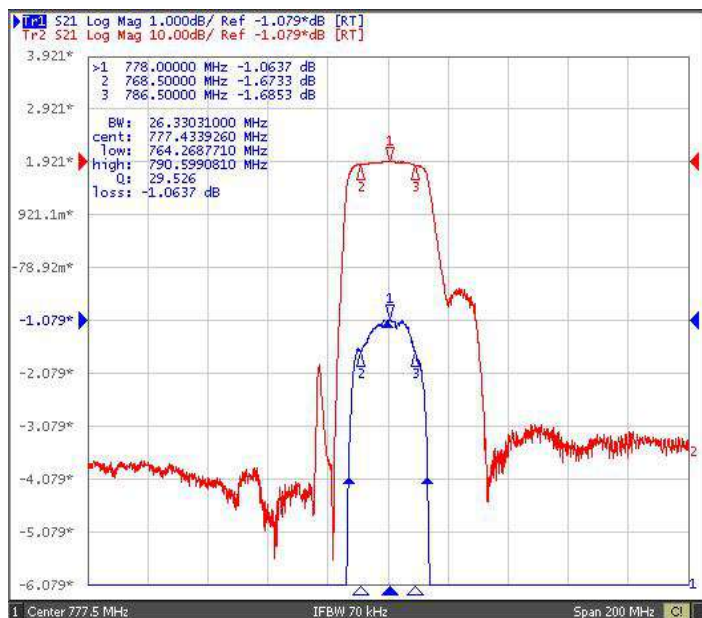
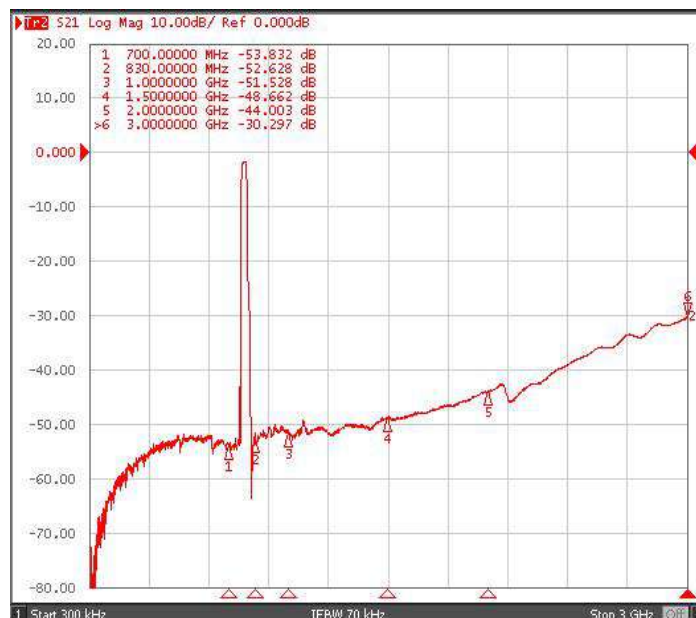
- Operation Temperature:-40°C to +85°C
- Compact miniature size
 - 3.0 mm × 3.0 mm footprint
 - 1.25 mm max-height

Applications:

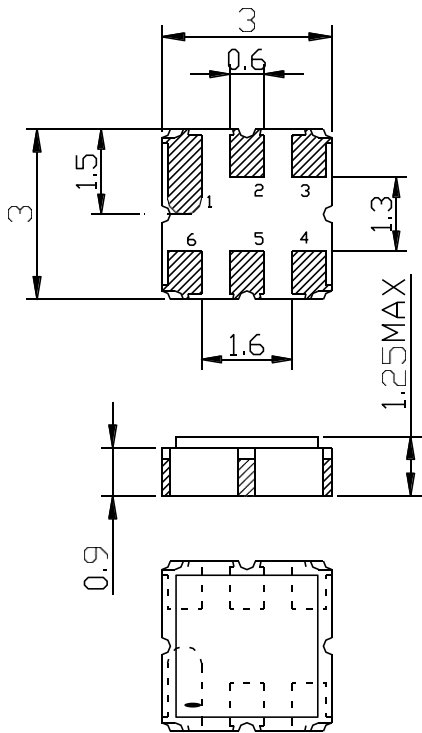
- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 18.0 MHz

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

Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc		777.50		MHz
Insertion Loss(min)	IL		1.3	1.8	dB
Insertion Loss	IL		1.9	2.5	dB
Amplitude Ripple (p-p)	$\Delta\alpha$		0.5	1.0	dB
3 dB Bandwidth	BW _{3dB}	25.0	26.0		MHz
Group Delay Ripple	GDR		40.0	100.0	ns
Absolute Attenuation	α				
DC - 750.00 MHz		45.0	50.0		dB
815.00 - 1000.00 MHz		45.0	50.0		dB
1000.00 - 1500.00 MHz		40.0	45.0		dB
1500.00 - 3000.00 MHz		25.0	30.0		dB
Input VSWR			1.8:1	2.0:1	/
Output VSWR			1.8:1	2.0:1	/

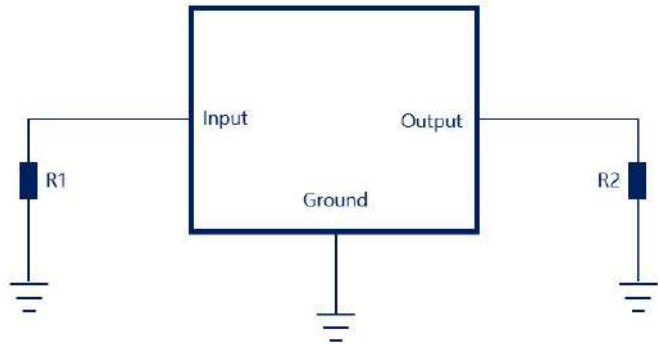
Frequency Characteristics.**Frequency Response****Frequency Response (wideband)**

Package & Dimensions



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

Matching



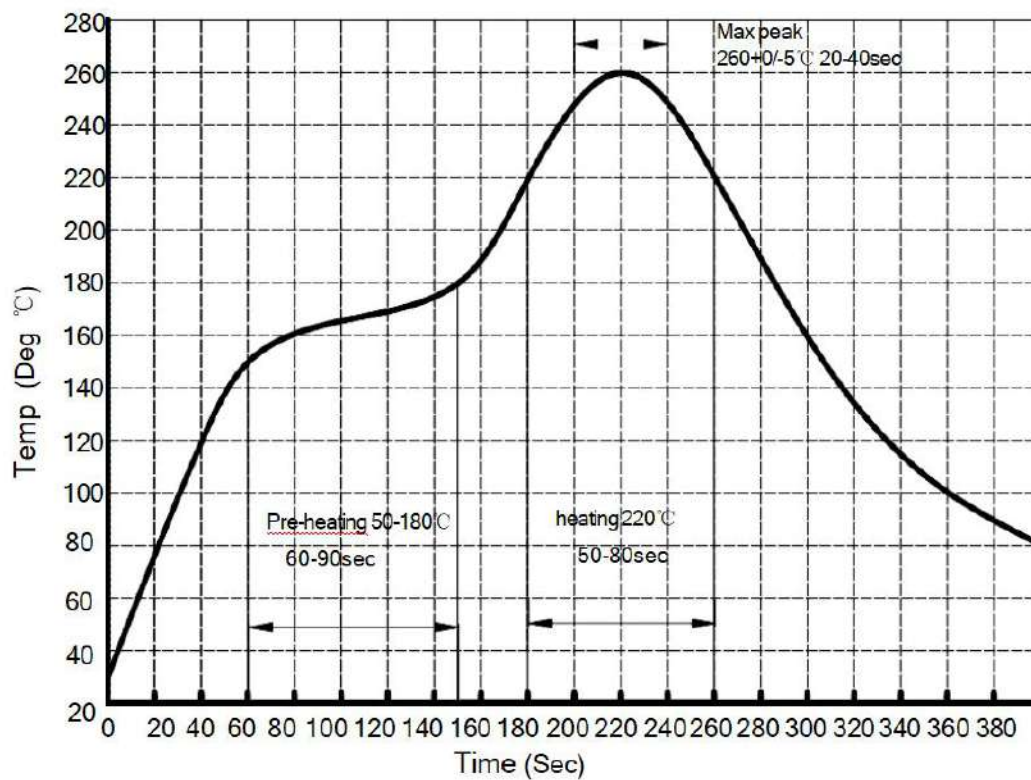
Port	Matching Component ¹
Input	R1: 50Ω
Output	R2: 50Ω

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
SPT778M30E	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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