



Data Sheet
433.92MHz BW=1.71MHz SAW 5050
SPT433M5050A

V1.0

Description:

The Spectron SPT433M5050A 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 SPT433M5050A provides +15 dBm power handling, low insertion loss and high out of band rejection.

The design and manufacturing of the SPT433M5050A exploit Spectron's exclusive TSAW technology to deliver competitive performance against state of the art at a low cost.

The SPT433M5050A 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
- Compact miniature size
 - 5.0 mm \times 5.0 mm footprint
 - 1.5 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.

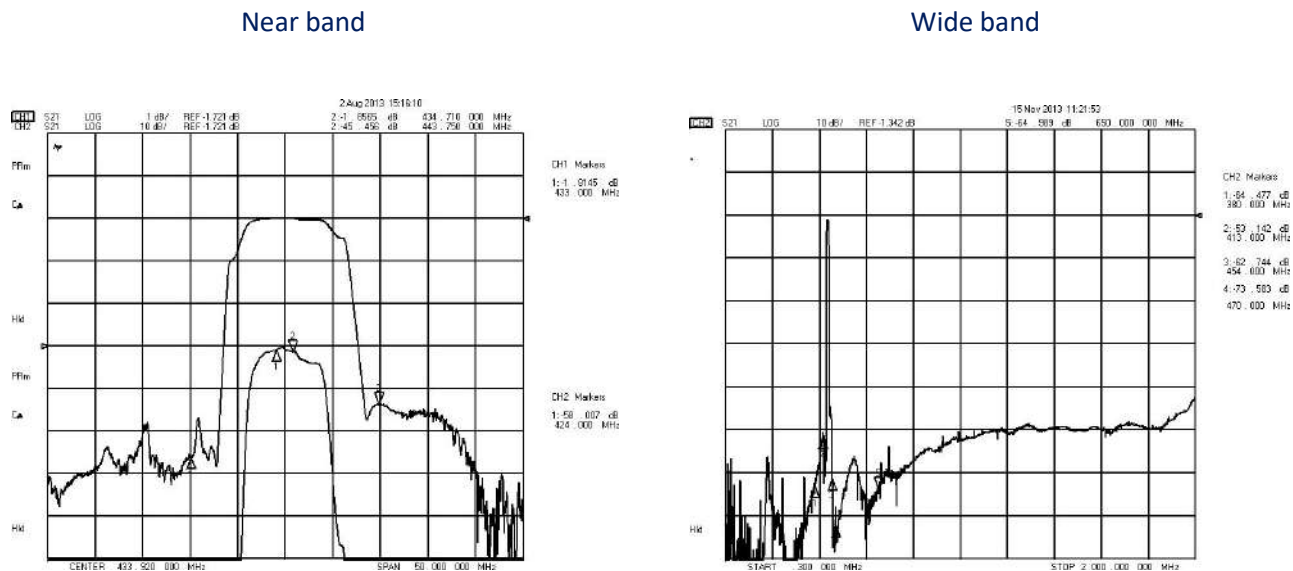


Figure 2 Electrical Characteristics: Delay Ripple & Phase Linearity & VSWR.

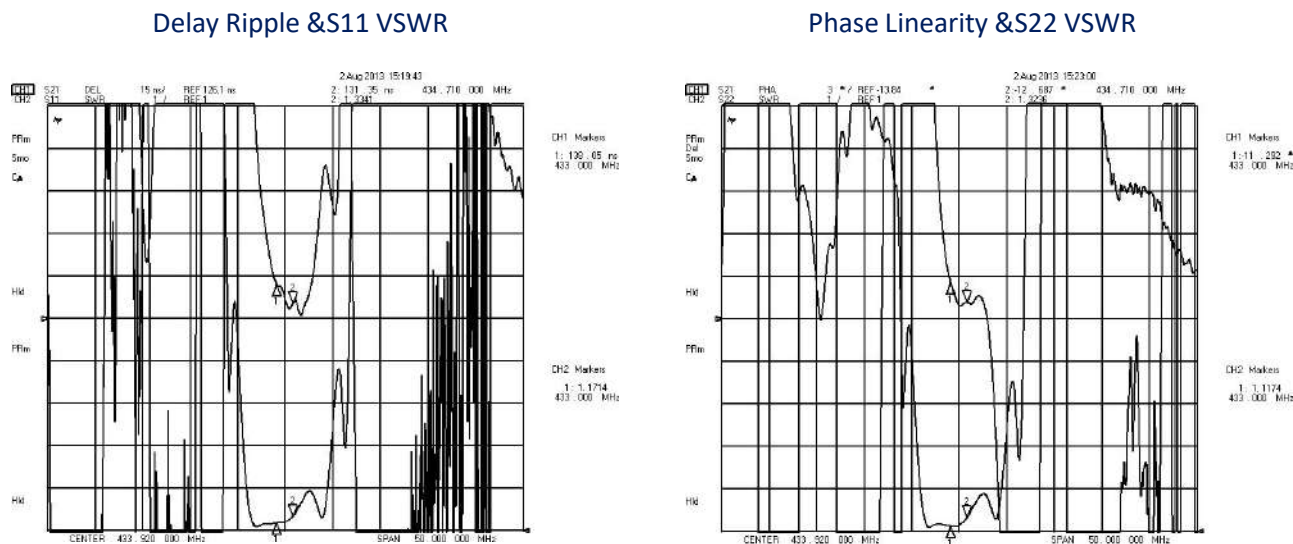
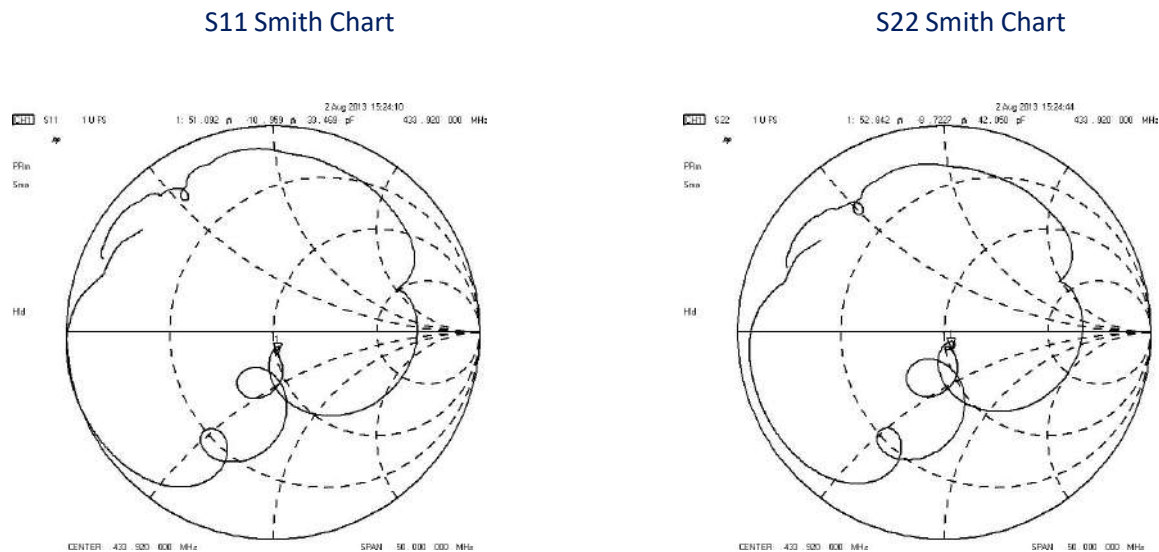
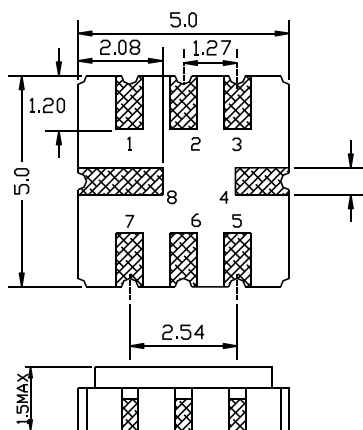


Figure 3 Electrical Characteristics: Delay Ripple & Phase Linearity& VSWR.

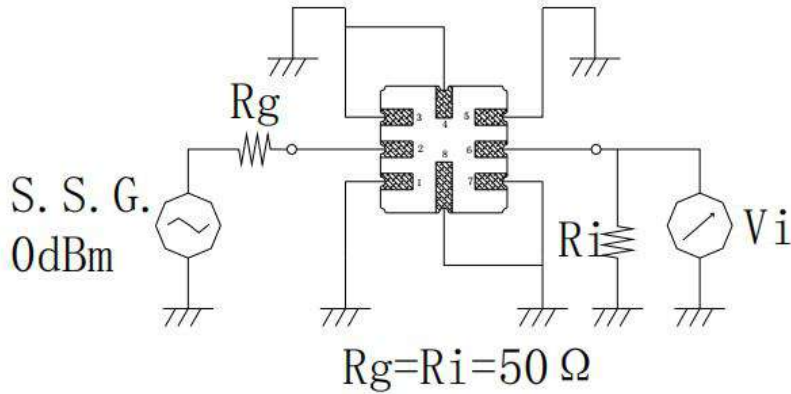


Package & Dimensions



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

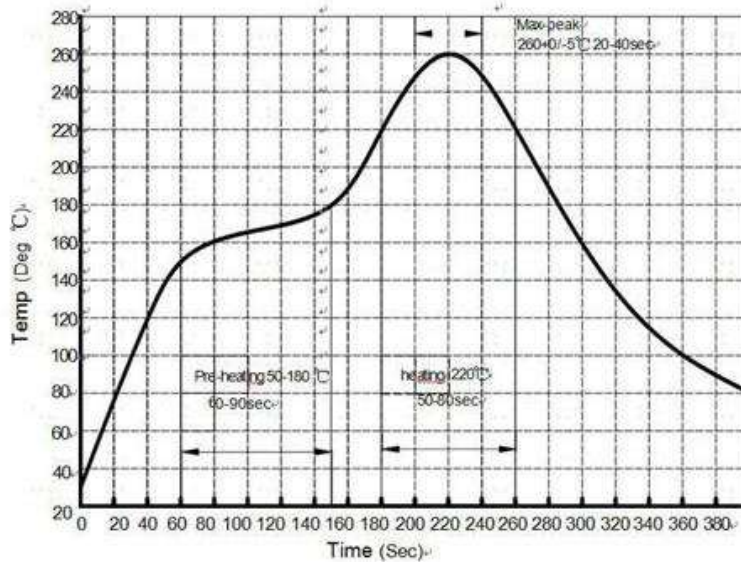
Test circuit



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
SPT433M5050A	1000pcs	Tape and Reel

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