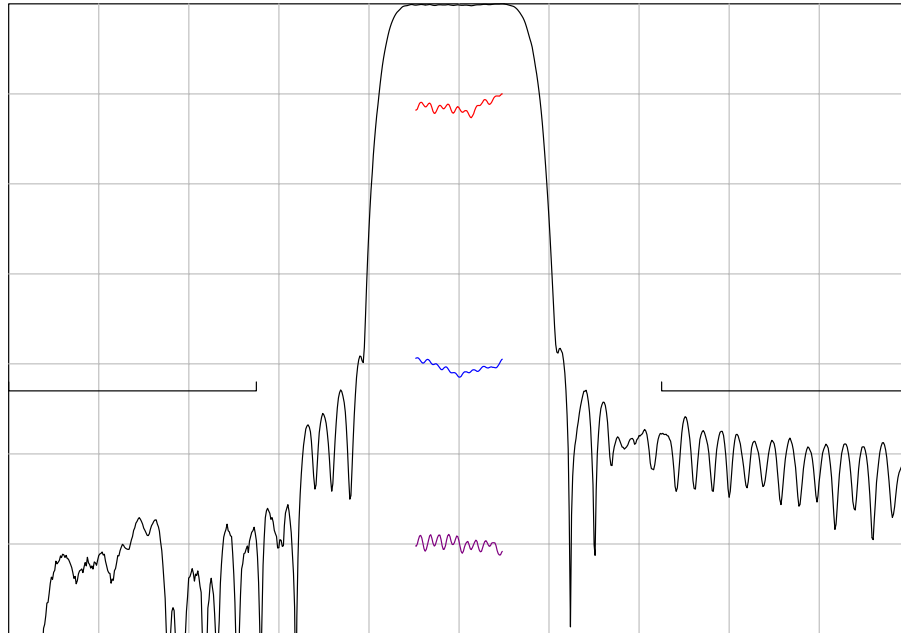


**DESCRIPTION**

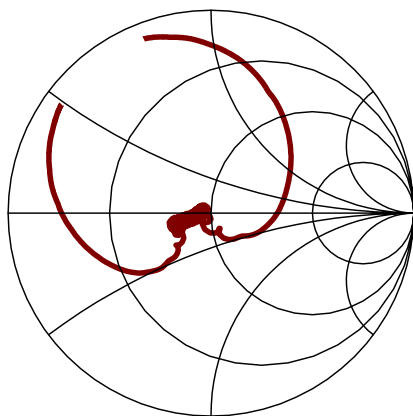
- 96 MHz SAW bandpass filter with 5 MHz bandwidth.
- 13.3 x 6.5 mm SMP.
- RoHS compliant.

**TYPICAL PERFORMANCE**

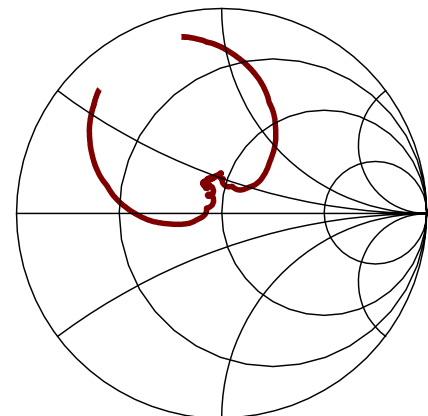


Horizontal: Frequency : 4 MHz/div  
 Vertical from Top: Relative Magnitude : 10 dB/div  
 Relative magnitude : 0.8 dB/div  
 Phase Linearity : 10 deg/div  
 Group Delay Deviation : 100 ns/div

**S11**



**S22**



## SPECIFICATION

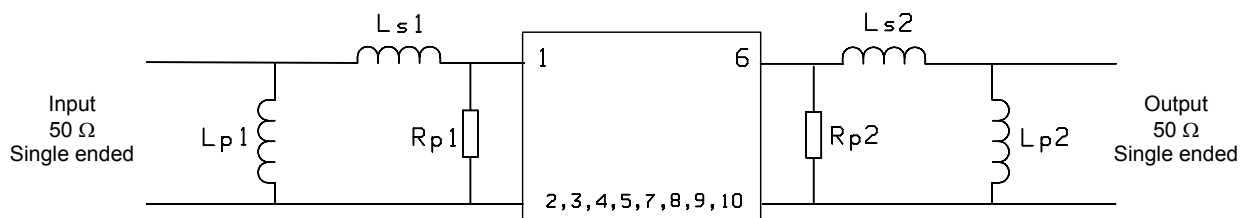
Parameter <sup>1</sup>	Min	Typ	Max	Units
Center Frequency (Fc) <sup>3</sup>	95.9	96.0	96.1	MHz
Minimum Insertion Loss	-	13.5	15	dB
1 dB Bandwidth	5.00	5.38	-	MHz
15 dB Bandwidth	-	7.48	8.00	MHz
Passband Variation (Fc +/- 1.92 MHz)	-	0.5	0.8	dB p-p
Phase Linearity (Fc +/- 1.92 MHz)	-	2.4	5.0	deg p-p
Group Delay Variation (Fc +/- 1.92 MHz) <sup>2</sup>	-	35	80	ns p-p
Absolute Delay	-	1.23	3	us
Change in Absolute Delay (from unit to unit)	-10	0	10	ns
Absolute Delay Variation (from -40°C to 55°C)	-	5	15	ns
Input Return Loss (Fc +/- 1.92 MHz)	10	13	-	dB
Output Return Loss (Fc +/- 1.92 MHz)	10	13	-	dB
Rejection (40 to 87 MHz)	43	48	-	dB
Rejection (105 to 150 MHz)	43	48	-	dB
Source and Load Impedance	-	50	-	Ω
Ambient Temperature	-	25	-	°C

- Notes:
1. All dB levels are referenced to the insertion loss
  2. A smoothing aperture of 0.125 MHz may be applied to this measurement.
  3. Average of lower and upper 3 dB frequencies; applies at 23°C only.

## MAXIMUM RATINGS

Parameter	Min	Max	Units
Storage Temperature Range	-40	85	°C
Operating Temperature Range	-40	55	°C
Input Power Level	-	13	dBm

## MATCHING CIRCUIT



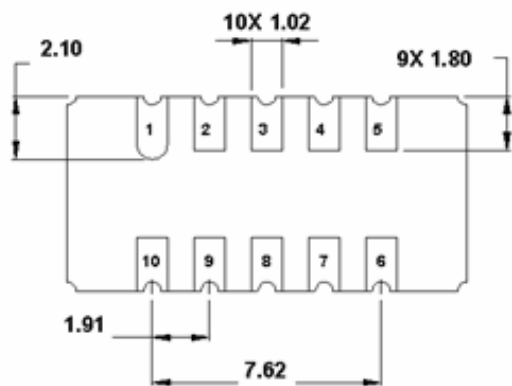
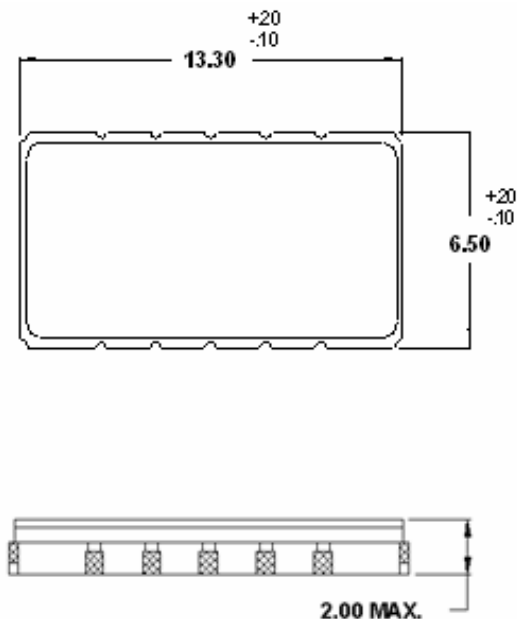
Typical component values:

Minimum inductor Q = 40)	Ls1 = 91 nH	Ls2 = 150 nH
	Lp1 = 39 nH	Lp2 = 47 nH
	Rp1 = 4.7 KΩ	Rp2 = 1.8 KΩ

### Notes

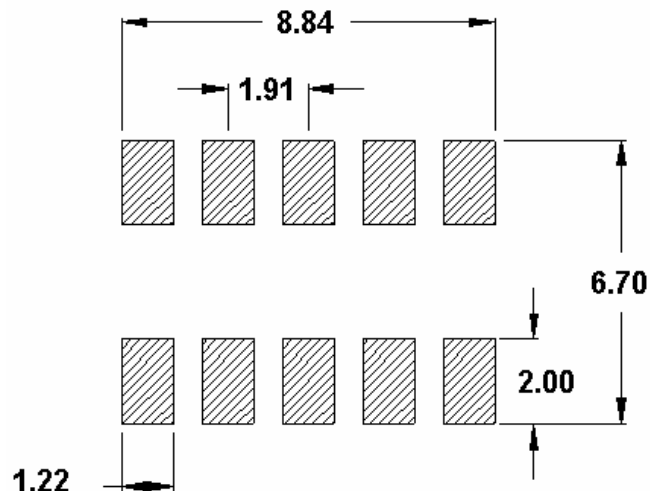
- Suggest the use of 2% tolerance matching components.
- Tuning values shown are for reference only. Optimum values may change depending upon board layout.

**PACKAGE OUTLINE**



Package Material:  
Body:  $Al_2O_3$  ceramic  
Lid: Kovar, Ni plated  
Terminations: Au plating 1  $\mu$ m min,  
over a 1.3-8.9  $\mu$ m Ni plating

**SUGGESTED FOOTPRINT**



**Units:** mm

Tolerances are  $\pm 0.15$  mm except for the overall length and width, which are nominal values.

**Pad Configuration:**

Input: 1  
Output: 6  
Ground: All other pads

ISO 9001  
Registered

All specifications are believed to be accurate and reliable. However, Spectrum Microwave reserves the right to make changes without notice.  
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