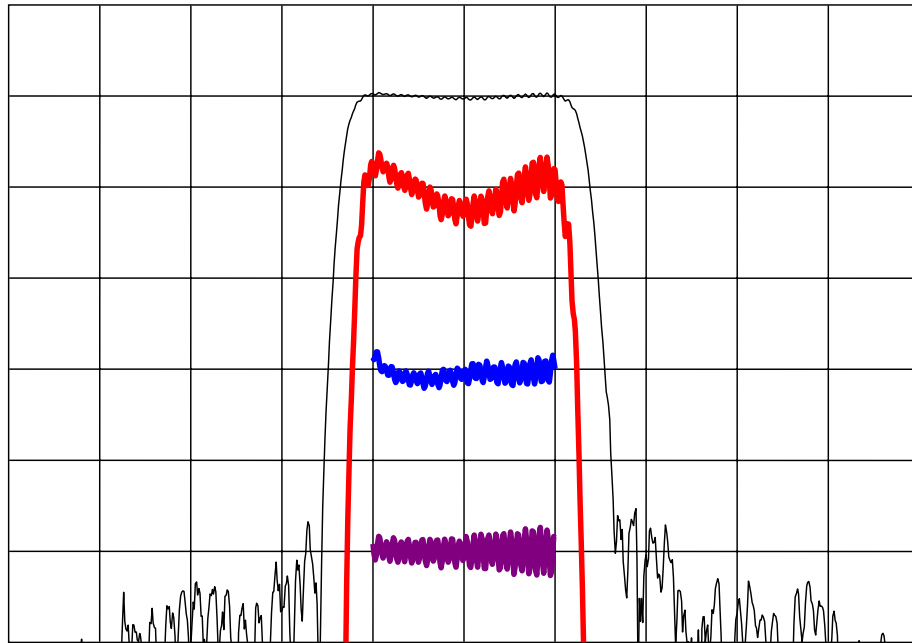


## DESCRIPTION

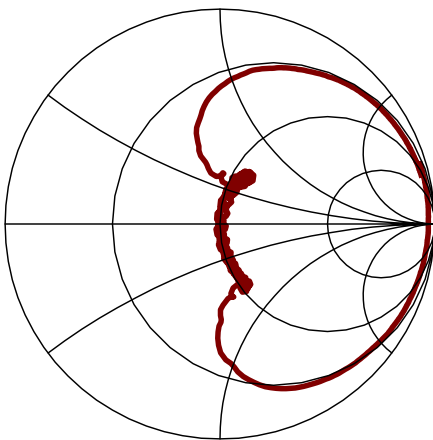
- 96 MHz SAW bandpass filter with 20 MHz bandwidth.
- 5 x 7 mm SMP.
- RoHS compliant.

## TYPICAL PERFORMANCE

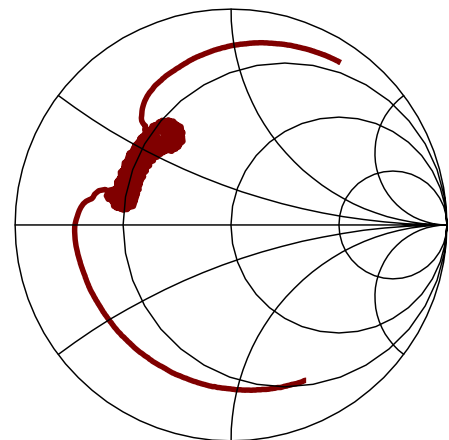


Horizontal: Frequency : 10 MHz/div  
 Vertical from Top: Relative Magnitude : 10 dB/div  
 Relative magnitude : 1 dB/div  
 Phase Linearity : 5 deg/div  
 Group Delay Deviation : 100 ns/div

**S11**



**S22**



## SPECIFICATION

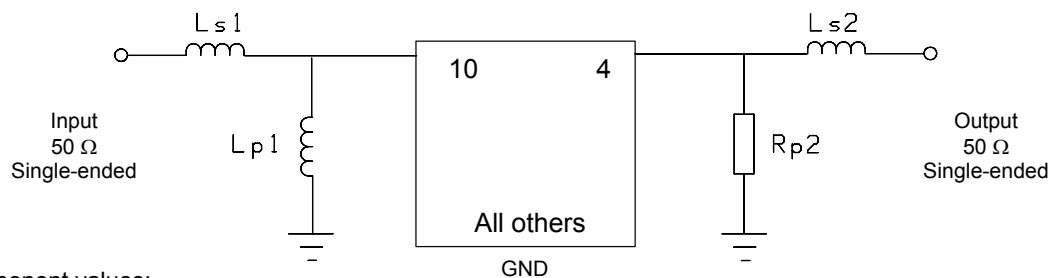
Parameter	Min	Typ	Max	Units
Center Frequency, $F_C$ <sup>1</sup>	-	96.00	-	MHz
Insertion Loss (86-106 MHz) <sup>1,2</sup>	-	11.3	13	dB
1 dB Bandwidth	20.0	23.4	-	MHz
Relative Attenuation to Ins Loss (0.3-68.4 MHz) <sup>1,3</sup>	50	55	-	dB
Relative Attenuation to Ins Loss (at 76.8 MHz) <sup>1,3</sup>	45	50	-	dB
Relative Attenuation to Ins Loss (123.6 to 162.8 MHz) <sup>1,3</sup>	40	48	-	dB
Relative Attenuation to Ins Loss (162.8 to 240 MHz) <sup>1,3</sup>	35	53	-	dB
Relative Attenuation to Ins Loss (240 to 1000 MHz) <sup>1,3</sup>	25	35	-	dB
Amplitude Ripple (86 to 106 MHz) <sup>1,4</sup>	-	0.75	1	dB p-p
Group Delay Ripple (86 to 106 MHz) <sup>1,5</sup>	-	50	60	ns/div
1 dB Compression Point (86 to 106 MHz)	12	15	-	dBm
Input IP3 <sup>6</sup>	35	40	-	dBm
Temperature Coefficient	-	94	-	ppm/°C
Source/Load Impedance	50			ohms
Ambient Temperature	-	25	-	°C

- Notes:
1. Measured with terminating impedance matched to 50Ω and with 50Ω analyzer.
  2. Average Insertion Loss in indicated frequency range.
  3. Measured as attenuation below the insertion loss point (Insertion loss is reference).
  4. Amplitude ripple should be measured without smoothing.
  5. Group delay ripple may be measured with a smoothing aperture of 250 KHz .
  6. By design.

## MAXIMUM RATINGS

Parameter	Min	Max	Units
Storage Temperature Range	-40	85	°C
Operating Temperature Range	-25	85	°C
Input Power Level	-	12	dBm

## MATCHING CIRCUIT



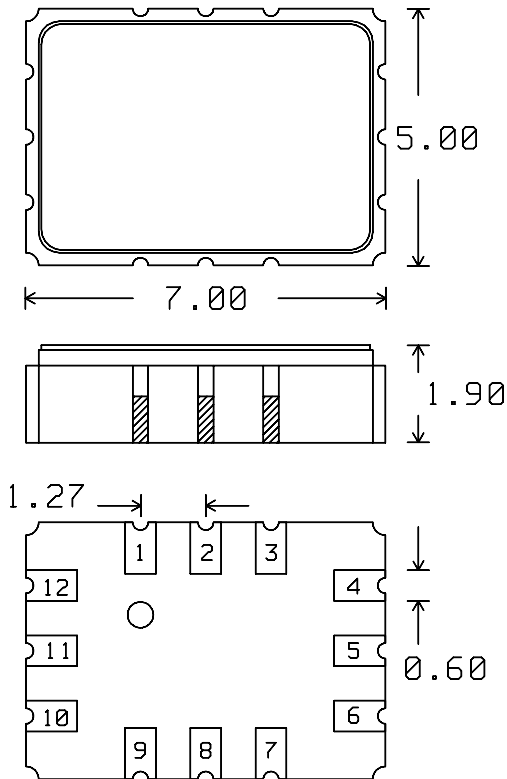
Typical component values:

$$\begin{aligned} L_{s1} &= 220 \text{ nH} & L_{s2} &= 82 \text{ nH} \\ L_{p1} &= 270 \text{ nH} & R_{p2} &= 680 \text{ } \Omega \end{aligned}$$

Notes:

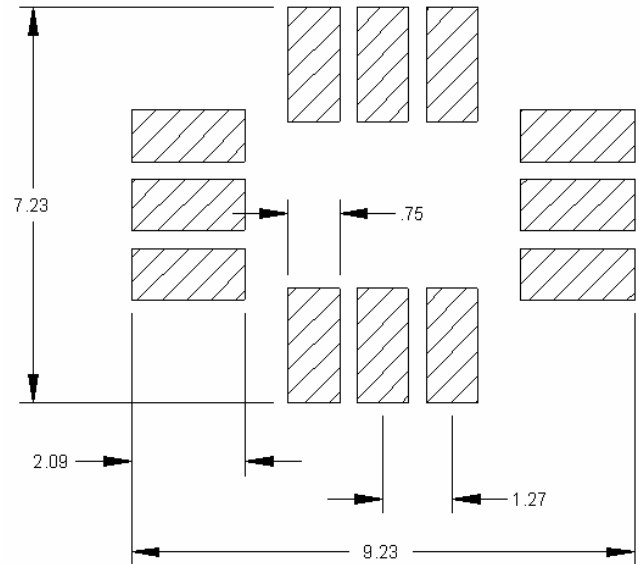
1. Recommend use of 2% tolerance matching components.
2. Component values are for reference only and may change depending on board layout.

**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**

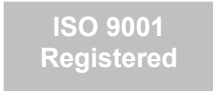


**Units:** mm

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

**Pad Configuration:**

Input: 10  
Output: 4  
Ground: All other pads



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