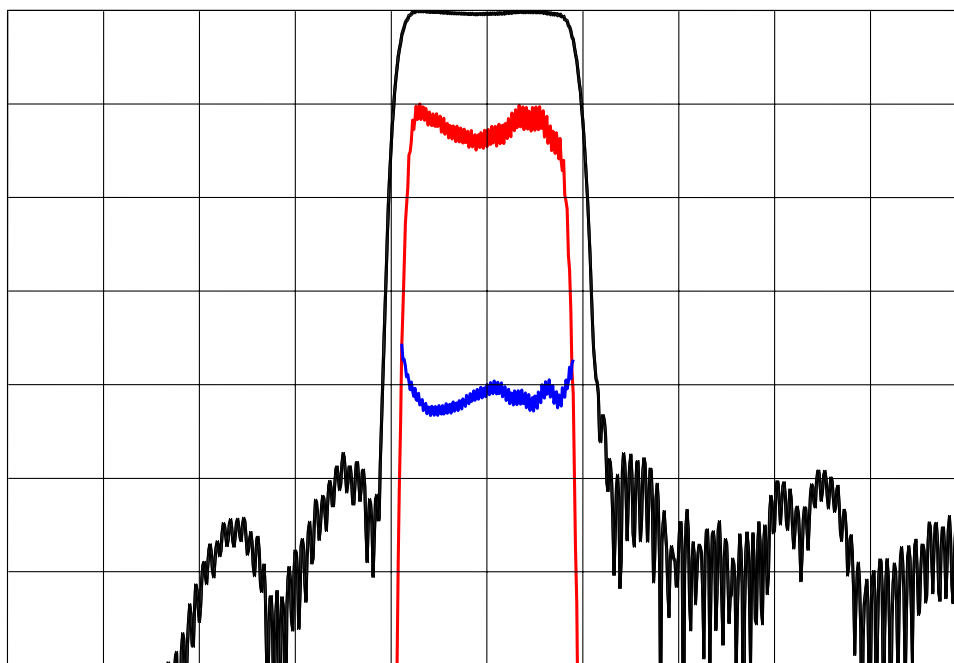


**DESCRIPTION**

- 160 MHz SAW bandpass filter with 30 MHz bandwidth.
- 13.3 x 6.5 mm LCC package.
- RoHS compliant.

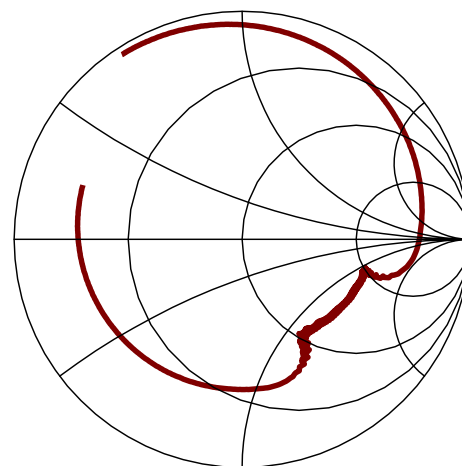
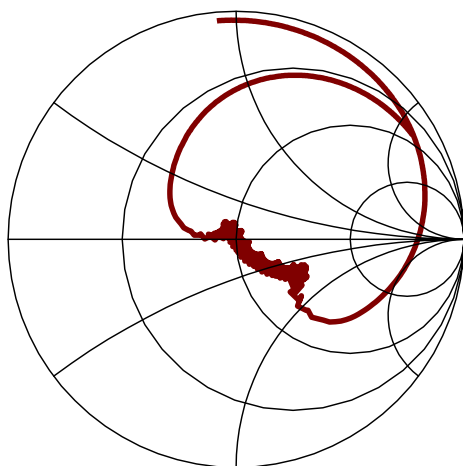
**TYPICAL PERFORMANCE**



Horizontal: Frequency : 20 MHz/div  
 Vertical from Top: Relative Magnitude : 10 dB/div  
 Relative magnitude : 1 dB/div  
 Phase Linearity : 10 deg/div

**S11 (60 to 260 MHz)**

**S22 (60 to 260 MHz)**



## SPECIFICATION

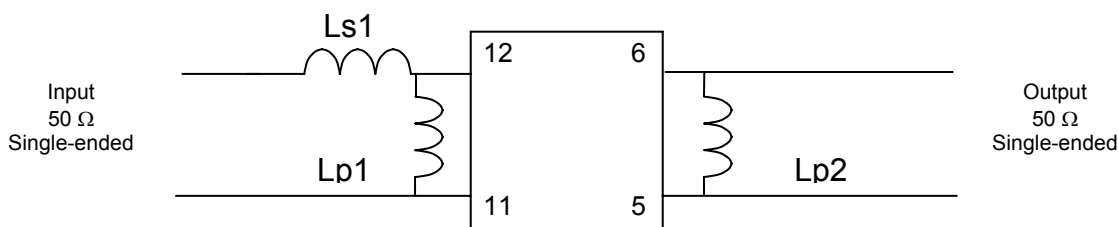
Parameter	Min	Typ	Max	Units
Center Frequency (Fc) <sup>1,3</sup>	159.75	160.0	160.25	MHz
Insertion Loss	-	12.2	14	dB
1 dB Bandwidth	30	33.0	-	MHz
3 dB Bandwidth	-	35.0	-	MHz
40 dB Bandwidth	-	44.0	50	MHz
Passband Amplitude Ripple <sup>2</sup>	-	0.8	1	dB p-p
Phase Ripple( Fc +/- 15 MHz) <sup>2</sup>	-	9	12	deg p-p
Rejection: 10 - 135 MHz	40	50	-	dB
185 - 280 MHz	40	50	-	dB
270 - 370 MHz	20	25	-	dB
VSWR ( Fc +/- 15 MHz)	4.4	6	-	dB
Ambient Temperature (Tref)	-	25	-	°C

- Notes:
1. Average of the lower and upper 3 dB band edge frequencies.
  2. When used in the suggested matching network.
  3. Typical change of filter frequency response with temperature is  $\Delta f = (T-T_{ref}) * T_c * F_c$ , in ppm.

## MAXIMUM RATINGS

Parameter	Min	Typ	Max	Units
Storage Temperature Range	-40	25	85	°C
Operating Temperature Range (T)	-20	25	70	°C
Temperature Coefficient of Frequency (Tc) <sup>3</sup>	-	-94	-	ppm/°C
Input Power Level	-	10	13	dBm

## MATCHING CIRCUIT



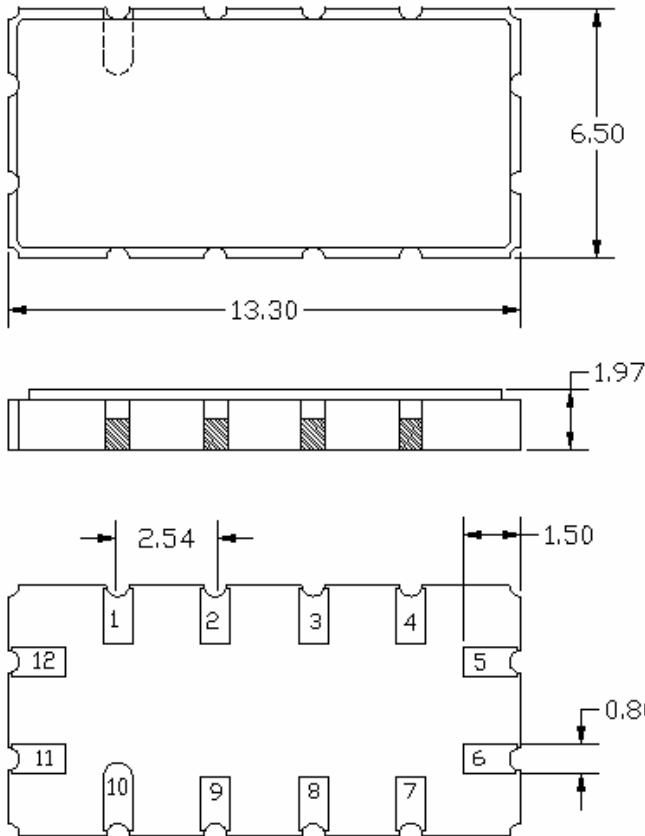
Typical component values:

$$\begin{aligned} Ls1 &= 47 \text{ nH} & Ls2 &= 47 \text{ nH} \\ Lp1 &= 43 \text{ nH} \end{aligned}$$

Notes:

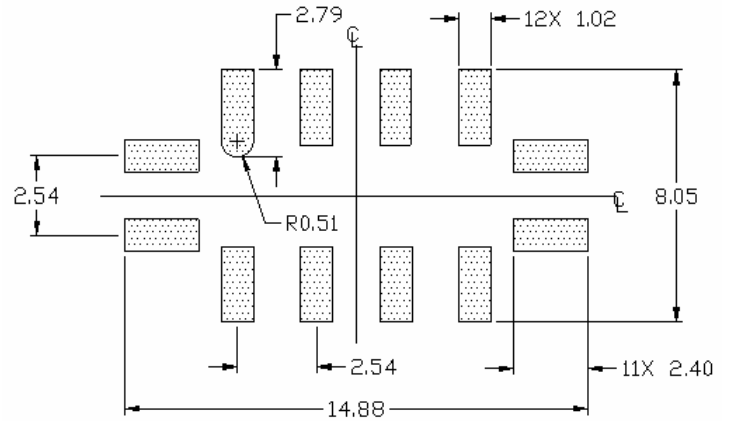
1. Recommend use of 2% tolerance matching components. Inductor Q=45.
2. Component values are for reference only and may change depending on board layout.

**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 where indicated and for the overall length and width, which are nominal values.

**Pad Configuration:**

Input:	11
Input return:	12
Output:	5
Output return:	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.  
© 2010 All rights reserved.