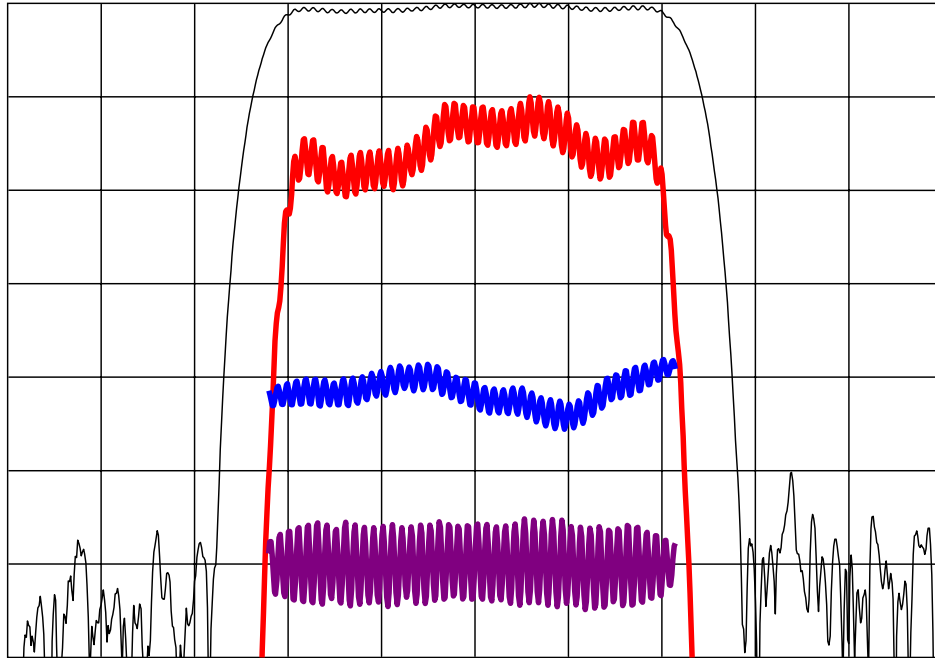


## DESCRIPTION

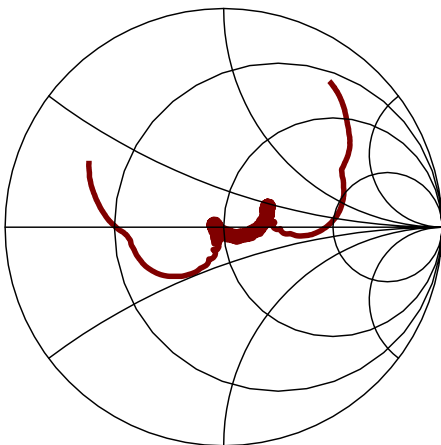
- 140 MHz SAW bandpass filter with 19.3 MHz bandwidth.
- 13.3 x 6.5 mm SMP package.
- RoHS compliant.

## TYPICAL PERFORMANCE

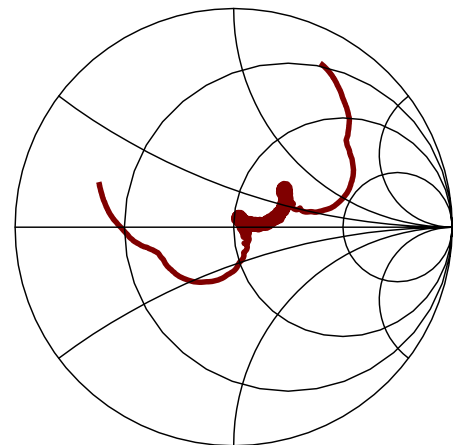


Horizontal: Frequency : 5 MHz/div  
 Vertical from Top: Relative Magnitude : 10 dB/div  
 Relative magnitude : 1 dB/div  
 Phase Linearity : 10 deg/div  
 Group Delay : 100 ns/div

**S11**



**S22**



## SPECIFICATION

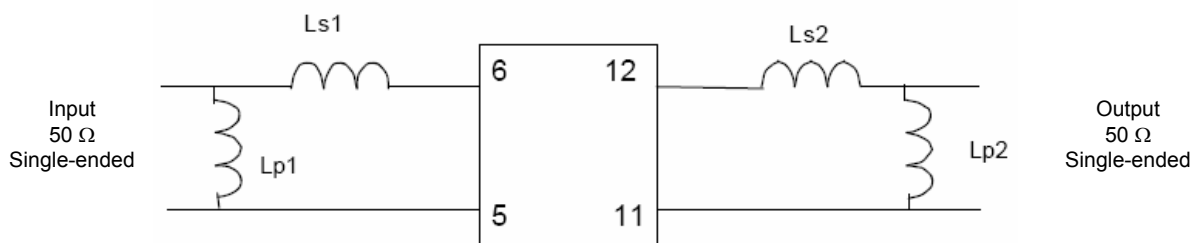
Parameter	Min	Typ	Max	Units
Center Frequency (Fc) <sup>1</sup>	-	140.0	-	MHz
Insertion Loss at Fc	-	16	18	dB
Lower 3 dB Frequency	-	128.90	130.35	MHz
Upper 3 dB Frequency	149.65	150.90	-	MHz
Lower 47 dB Frequency	125.50	126.30	-	MHz
Upper 47 dB Frequency	-	153.70	154.50	MHz
Amplitude Ripple <sup>3</sup>	-	1.0	1.4	dB p-p
Phase Linearity <sup>3</sup>	-	6	10	deg p-p
Group Delay Variation <sup>3,6</sup>	-	75	90	ns p-p
Input and Output Return Loss <sup>3,4</sup>	8	12	-	dB
Rejection (0.3 to 5 MHz) <sup>2,7</sup>	35	37	-	dB
Rejection (5 to 125.5 MHz) <sup>2,7</sup>	47	54	-	dB
Rejection (154.5 to 399 MHz) <sup>2,7</sup>	47	54	-	dB
Rejection (399 to 441 MHz) <sup>2,7</sup>	35	37	-	dB
Rejection (441 to 1000 MHz) <sup>2,7</sup>	47	54	-	dB
Source and Load Impedance	-	50	-	Ω
Ambient Temperature	-	25	-	°C

- Notes:
1. Fixed reference.
  2. Rejection can be greatly affected by PCB layout.
  3. Defined over 131 to 149 MHz.
  4. When matched in MNC test fixture.
  5. Final test performed at 25°C. Test limits will be guardbanded to insure full compliance over the temperature range.
  6. With a 450 kHz smoothing aperture applied (2.5% of information bandwidth).
  7. Includes spurious responses.

## MAXIMUM RATINGS

Parameter	Min	Max	Units
Storage Temperature Range	-40	85	°C
Operating Temperature Range <sup>5</sup>	-40	60	°C
Input Power Level	-	10	dBm

## MATCHING CIRCUIT



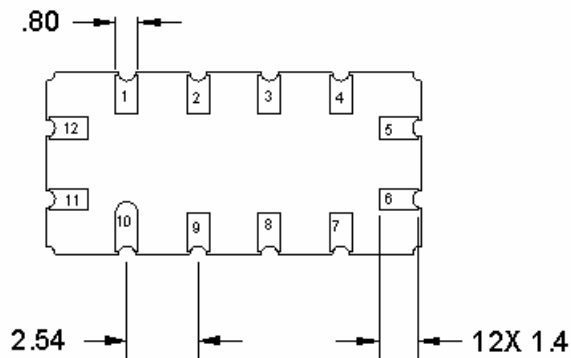
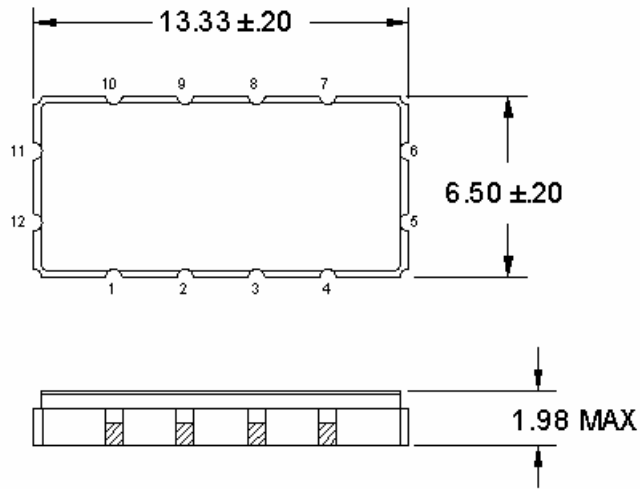
Typical component values:  
(Minimum inductor Q = 45)

$$\begin{array}{l} Ls1 = 82 \text{ nH} \\ Lp1 = 43 \text{ nH} \end{array} \qquad \begin{array}{l} Ls2 = 82 \text{ nH} \\ Lp2 = 43 \text{ nH} \end{array}$$

Notes:

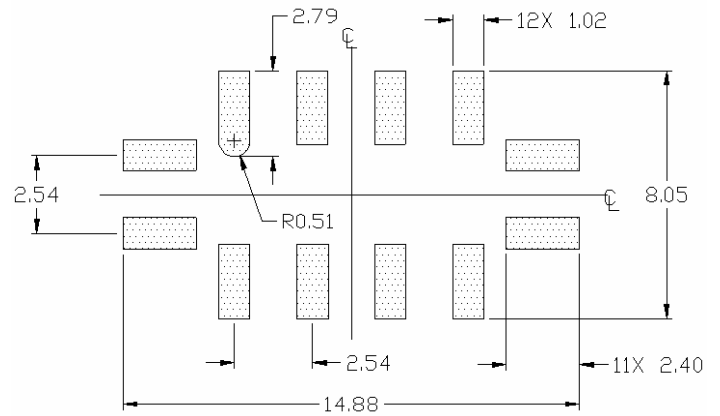
1. Recommend the use of  $\pm 2\%$  tolerance components.
2. Component values shown are for guidance only and may change depending on board layout.

**PACKAGE OUTLINE**



Package Material:  
Body:  $Al_2O_3$  ceramic  
Lid: Kovar, Ni plated  
Terminations: Au plating 1  $\mu\text{m}$  min,  
over a 1.3-8.9  $\mu\text{m}$  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:	6
Input return:	5
Output:	12
Output return:	11
Ground:	1,2,3,4,7,8,9,10

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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