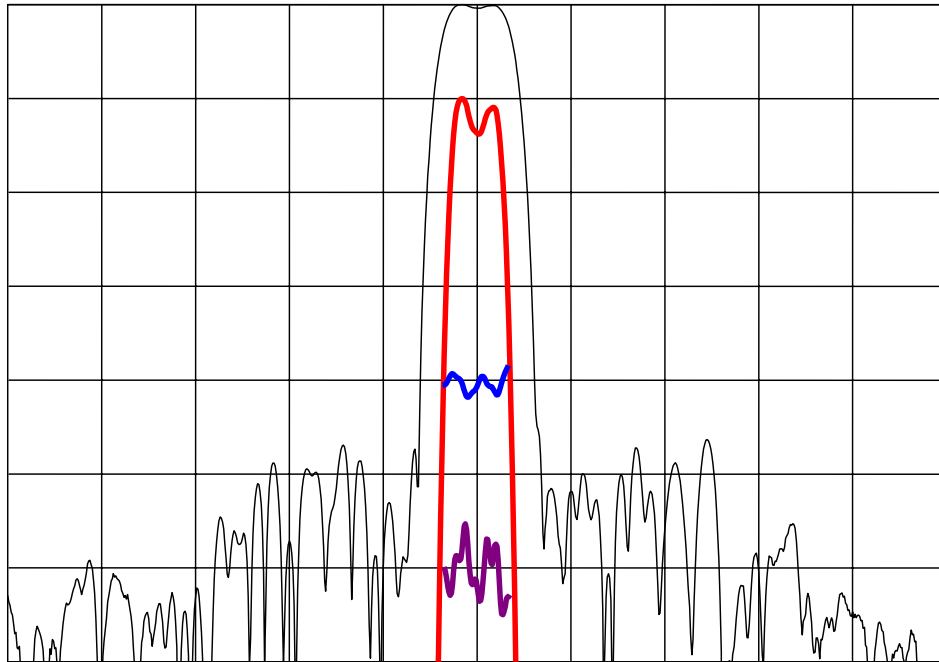


## DESCRIPTION

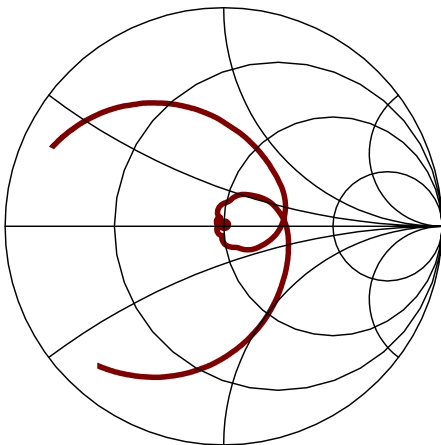
- 137.5 MHz SAW bandpass filter with 1 MHz bandwidth.
- 19 x 6.5 mm LCC package.
- RoHS compliant.

## TYPICAL PERFORMANCE

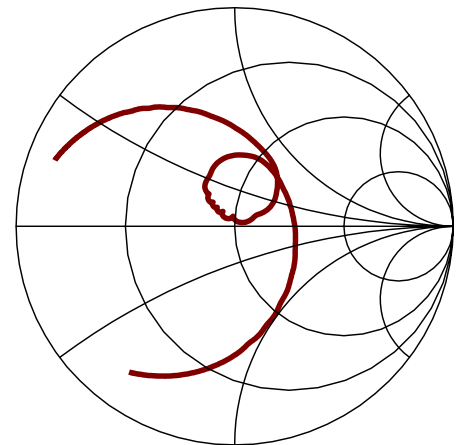


Horizontal: Frequency : 2 MHz/div  
 Vertical from Top: Relative Magnitude : 10 dB/div  
 Relative magnitude : 1 dB/div  
 Phase Linearity : 5 deg/div  
 Group Delay Deviation : 50 ns/div

**S11 (127.5 to 147.5 MHz)**



**S22 (127.5 to 147.5 MHz)**



## SPECIFICATION

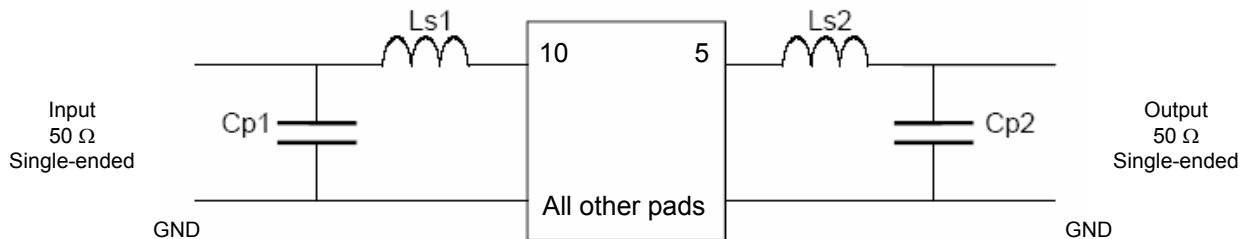
Parameter	Min	Typ	Max	Units
Center Frequency, $F_c$ (fixed reference)	-	137.5	-	MHz
Insertion loss at $F_c$	-	11.2	14	dB
1 dB Bandwidth	1.0	1.20	-	MHz
3 dB Bandwidth	-	1.46	-	MHz
40 dB Bandwidth	-	2.46	2.6	MHz
Passband Amplitude Ripple <sup>2</sup>	-	0.65	1	dB p-p
Passband Phase Linearity <sup>2</sup>	-	1.2	5	deg p-p
Passband Group Delay Ripple <sup>2</sup>	-	40	-	ns p-p
Rejection (10 to 127.5 MHz)	40	43	-	dB
Rejection (147.5 to 200 MHz)	40	43	-	dB
Return Loss at Input and Output <sup>2,3</sup>	-	18	-	dB
Absolute Delay	-	1.08	1.5	us
Source/Load Impedance	50			ohms
Ambient Temperature	-	25	-	°C

- Notes:
1. Fixed reference. All specified bandwidths are centered at this frequency.
  2. Over the central 1 MHz bandwidth.
  3. When matched using external components in MNC test fixture.
  4. The above specification applies over the full operating temperature range.

## MAXIMUM RATINGS

Parameter	Min	Max	Units
Storage Temperature Range	-40	95	°C
Operating Temperature Range	-40	85	°C
Input Power Level	-	13	dBm

## MATCHING CIRCUIT



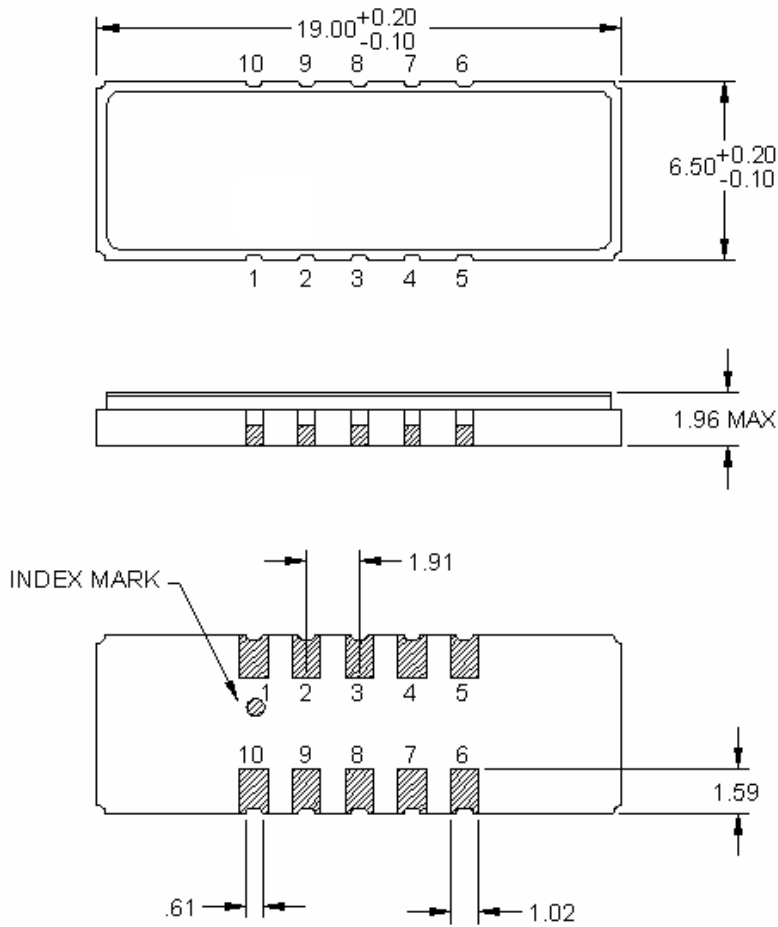
Typical component values:  
Minimum Q=45

$$\begin{aligned} Ls1 &= 128 \text{ nH} & Ls2 &= 126 \text{ nH} \\ Cp1 &= 56 \text{ pF} & Cp2 &= 567 \text{ pF} \end{aligned}$$

Notes:

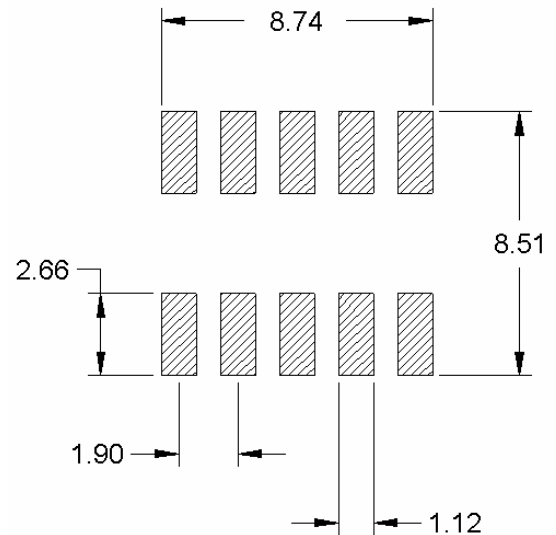
1. Recommend use of 2% tolerance matching components.
2. Component values are for reference only and may change depending on board layout.

**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**

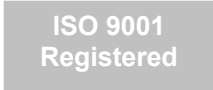


**Units:** mm

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

**Pad Configuration:**

Input: 10  
Output: 5  
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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