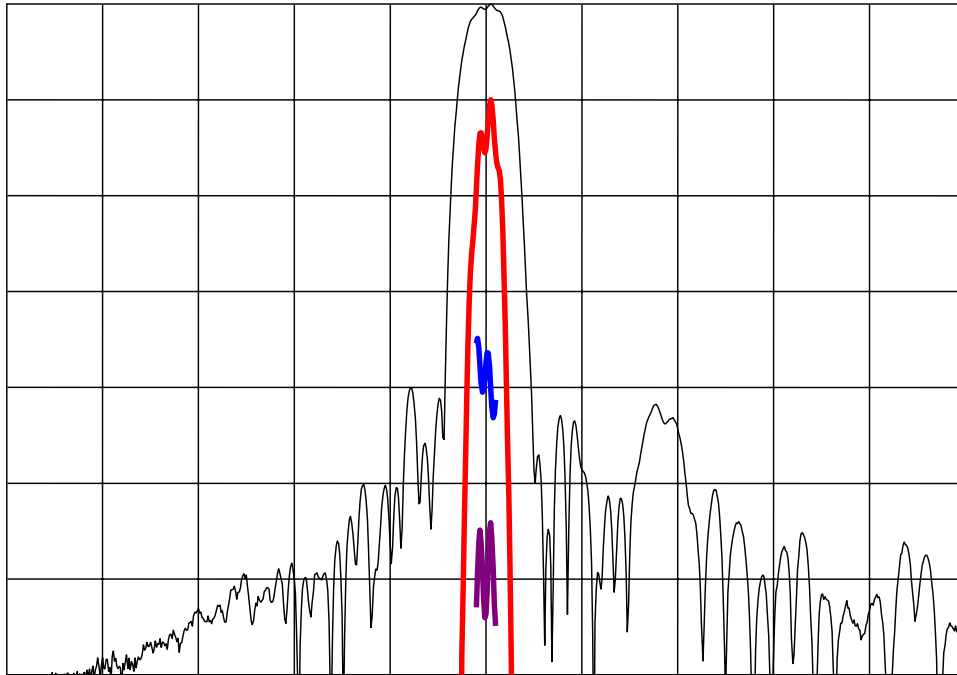


## DESCRIPTION

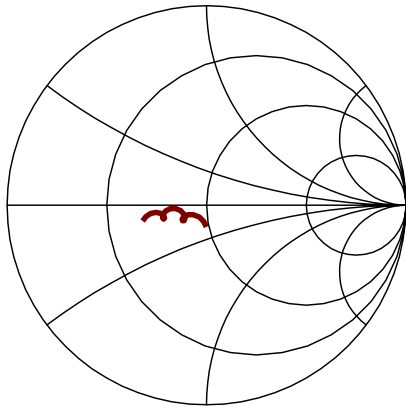
- 70 MHz SAW bandpass filter with 0.4 MHz bandwidth for Wireless Data applications.
- 19 x 6.5 mm SMP.
- RoHS compliant.

## TYPICAL PERFORMANCE

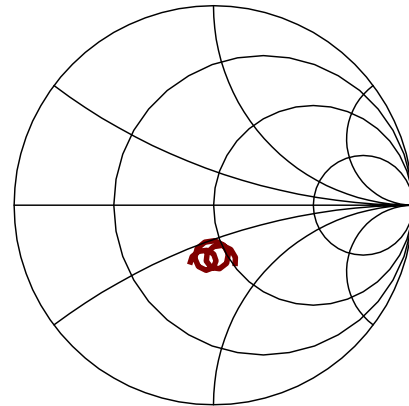


Horizontal: Frequency : 2 MHz/div  
 Vertical from top: Relative Magnitude : 10 dB/div  
 Relative magnitude : 1 dB/div  
 Phase Linearity : 5 deg/div  
 Group Delay : 100 ns/div

**S11 (69.7 to 70.3 MHz)**



**S22 (69.7 to 70.3 MHz)**



## SPECIFICATION

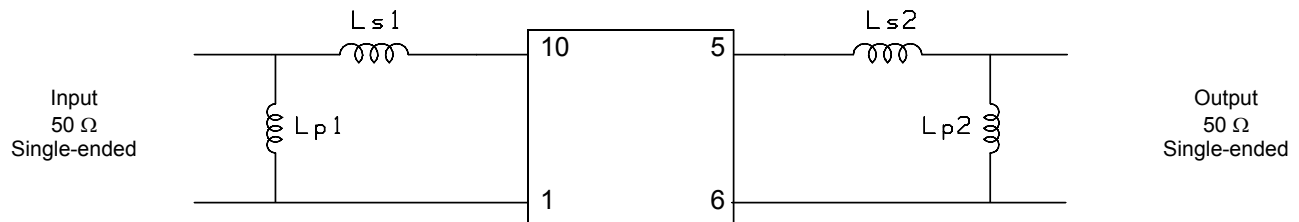
Parameter	Min	Typ	Max	Units
Center Frequency (Fc) <sup>1</sup>	-	70.00	-	MHz
Minimum Insertion Loss <sup>2</sup>	-	11.5	13.0	dB
Lower 1 dB Frequency	-	69.69	69.80	MHz
Upper 1 dB Frequency	70.20	70.32	-	MHz
3 dB Bandwidth	0.60	0.85	-	MHz
Lower 25 dB Frequency	69.10	69.21	-	MHz
Upper 25 dB Frequency	-	70.79	70.90	MHz
Lower 35 dB Frequency	69.00	69.16	-	MHz
Upper 35 dB Frequency	-	70.90	71.00	MHz
Passband Variation (69.80 to 70.20 MHz)	-	0.7	1	dB p-p
Device Delay	-	2.15	2.40	us
Group Delay Variation (69.80 to 70.20 MHz)	-	200	250	ns p-p
Rejection (47.8 to 49.8 MHz) <sup>3</sup>	45	60	-	dB
Source and Load Impedance	-	50	-	$\Omega$
Ambient Temperature	20	25	30	$^{\circ}$ C

- Notes:
1. Average of the lower and upper 3 dB band edge frequencies.
  2. All dB values are referenced to the insertion loss.
  3. Ultimate rejection outside of this area from 0.5\*Fc to 1.5\*Fc will be 35 dB (min).

## MAXIMUM RATINGS

Parameter	Min	Max	Units
Storage Temperature Range	-40	85	$^{\circ}$ C
Operating Temperature Range	-32	70	$^{\circ}$ C
Input Power Level	-	13	dBm

## MATCHING CIRCUIT



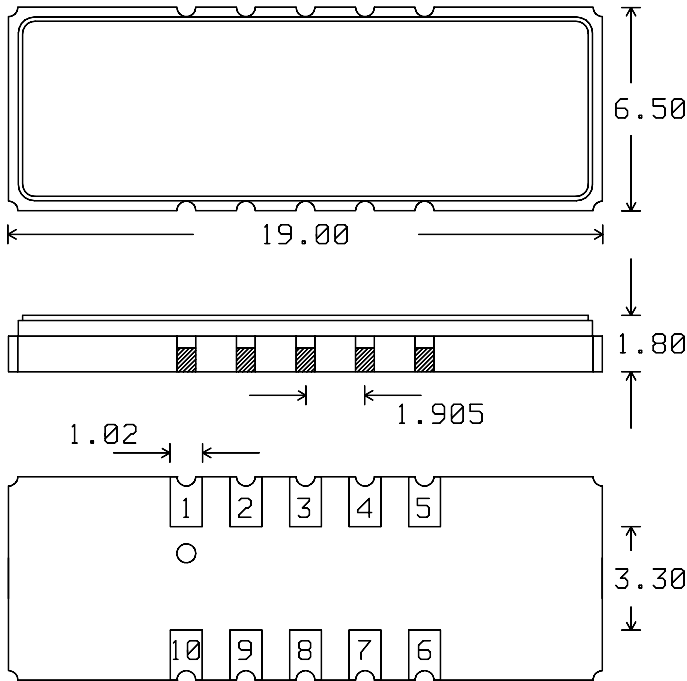
Typical component values:

$$\begin{array}{ll}
 L_{s1} = 363 \text{ nH} & L_{s2} = 497 \text{ nH} \\
 L_{p1} = 82 \text{ nH} & L_{p2} = 120 \text{ nH}
 \end{array}$$

Notes:

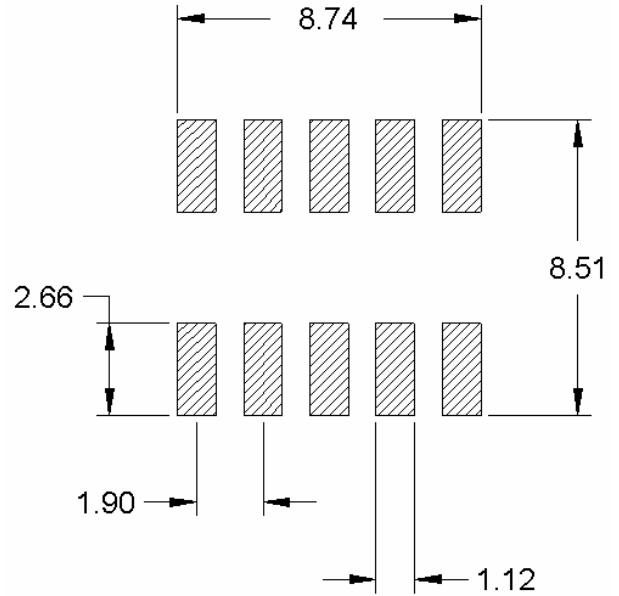
1. Recommend use of +/- 2% tolerance components. Minimum Q=40.
2. Component values are for reference only and may change depending on board layout.

**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**

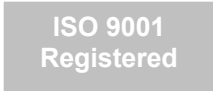


**Units:** mm

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

**Pad Configuration:**

Input:	10
Input return:	1
Output:	5
Output return:	6
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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