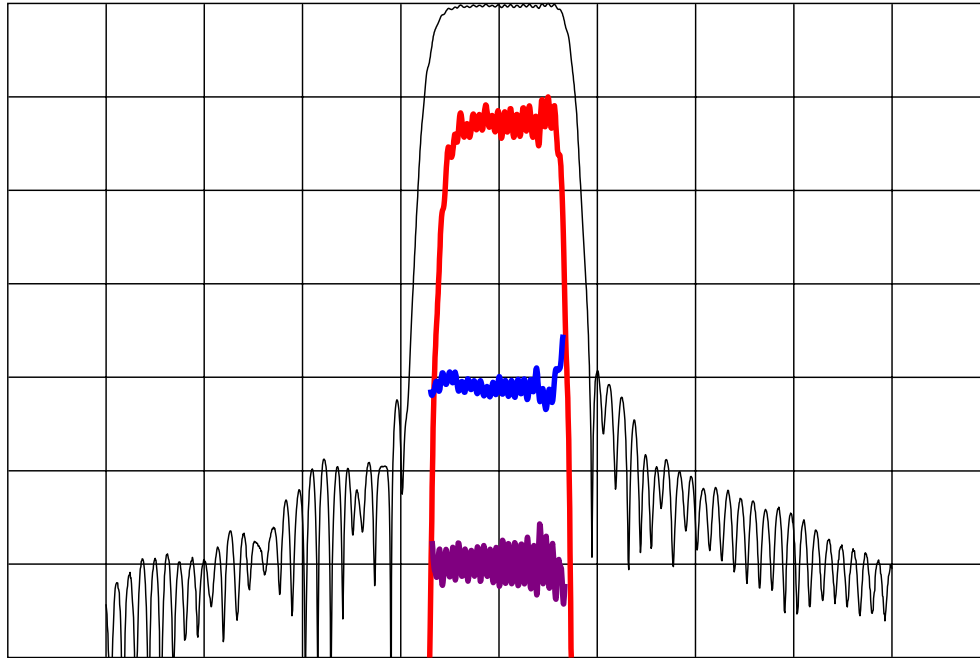


## DESCRIPTION

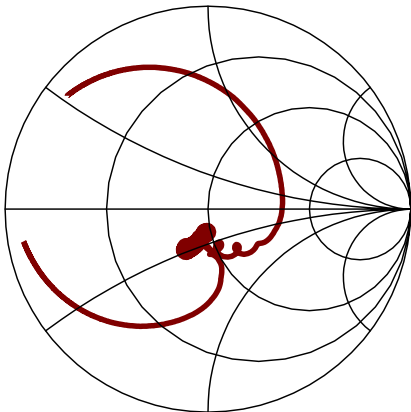
- 238.5 MHz SAW bandpass filter with 10 MHz bandwidth.
- 5 x 7 mm LCC package.
- RoHS compliant.

## TYPICAL PERFORMANCE

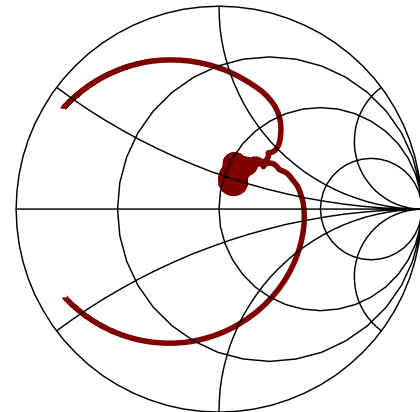


Horizontal: Frequency : 10 MHz/div  
 Vertical from Top: Relative Magnitude : 10 dB/div  
 Relative magnitude : 1 dB/div  
 Phase Linearity : 10 deg/div  
 Group Delay Deviation : 100 ns/div

**S11 (188.5-288.5 MHz)**



**S22 (188.5-288.5 MHz)**



## SPECIFICATION

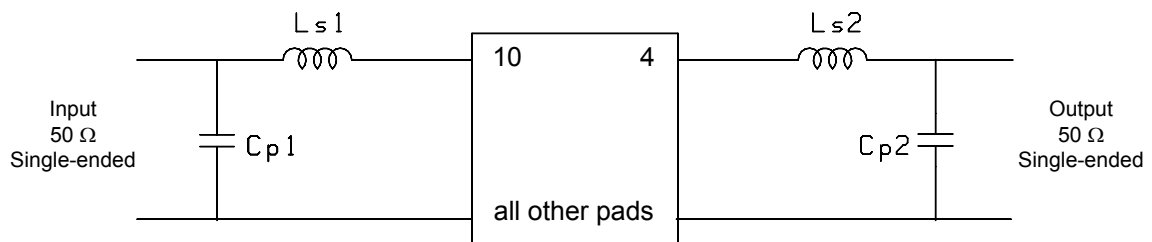
Parameter	Min	Typ	Max	Units
Center Frequency ( Fc )	-	238.5	-	MHz
Insertion Loss	-	11.5	13.5	dB
Passband Ripple <sup>1</sup>	-	0.6	1.5	dB p-p
Phase Deviation from Linear <sup>1</sup>	-	9	-	deg. p-p
1.5 dB Bandwidth	8.84	9.2	-	MHz
Rejection (138.5 to 218.5 MHz)	45	49	-	dB
Rejection (218.5 to 228.5 MHz)	30	40	-	dB
Rejection (228.5 to 230 MHz)	10	21	-	dB
Rejection (247 to 248.5 MHz)	10	25	-	dB
Rejection (248.5 to 258.5 MHz)	30	38	-	dB
VSWR over Fc ± 4.42 MHz	-	2.2	2.5	:1
System Source and Load Impedance	50			Ω
Ambient Temperature	-	25	-	°C

- Notes: 1. Evaluated over any 4 MHz contiguous bandwidth within 238.5 ± 5 MHz.  
2. Limits are met over the full operating temperature range.

## MAXIMUM RATINGS

Parameter	Min	Typ	Max	Units
Storage Temperature Range	-40	25	85	°C
Operating Temperature Range	-20	25	85	°C
Input Power Level	-	10	20	dBm

## MATCHING CIRCUIT



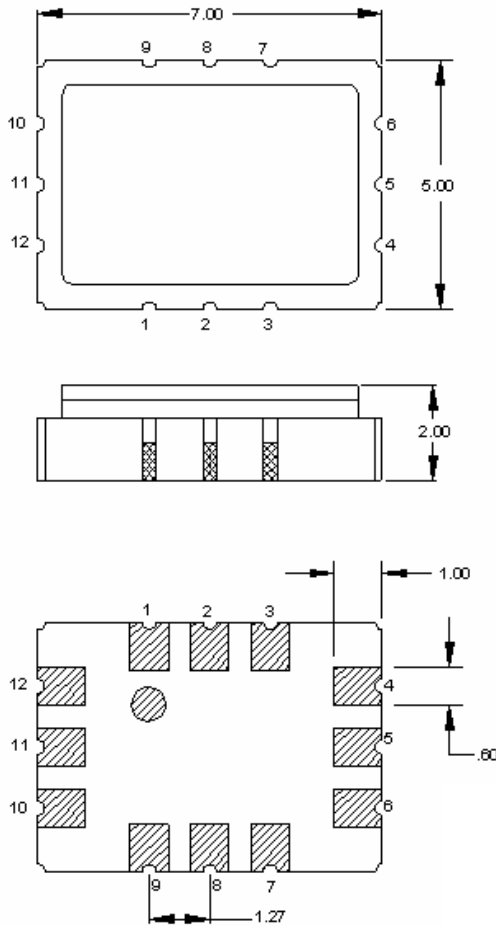
Typical component values:

$$\begin{array}{ll} Ls1 = 18 \text{ nH} & Ls2 = 22 \text{ nH} \\ Cp1 = 39 \text{ pF} & Cp2 = 33 \text{ pF} \end{array}$$

Notes:

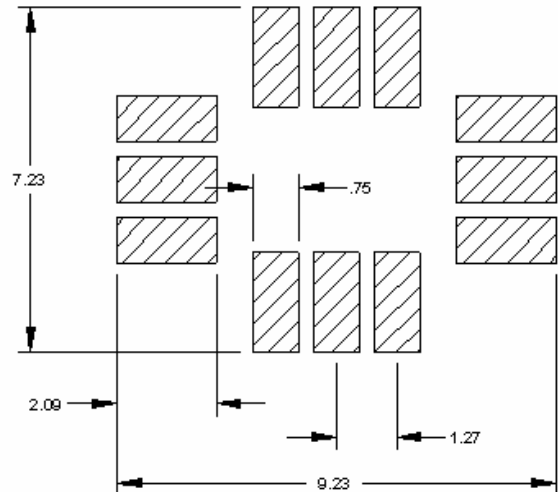
1. Recommend use of 2% tolerance matching components. Inductor Q=45.
2. Component values are for reference only and may change depending on board layout.

**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: 10  
Output: 4  
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.  
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