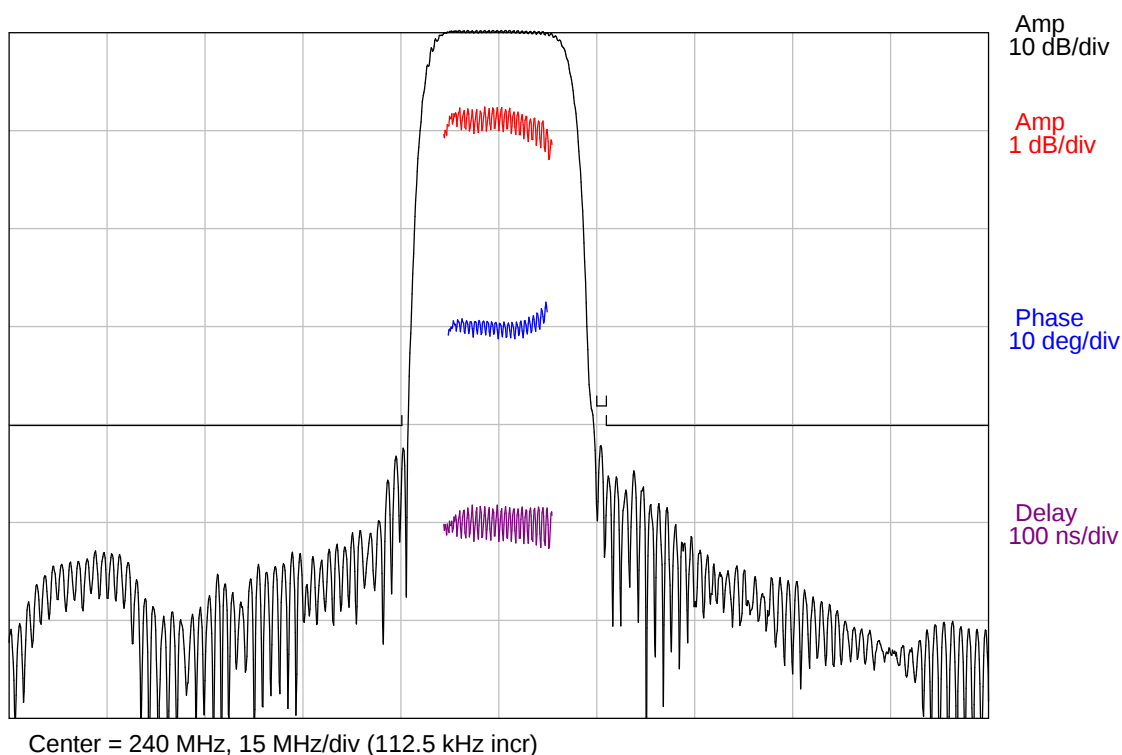


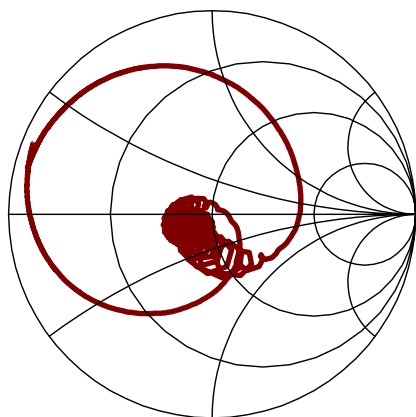
## DESCRIPTION

- 240 MHz SAW bandpass filter with 14 MHz bandwidth.
- 7 x 5 mm ceramic LCC, 12 pads.
- RoHS compliant.

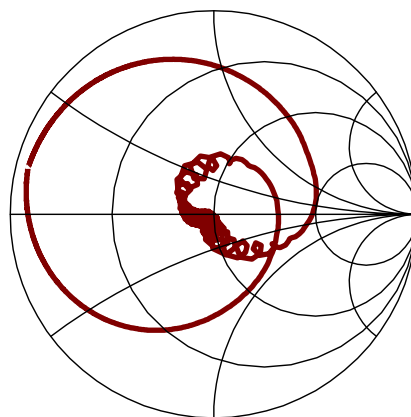
## TYPICAL PERFORMANCE



**S11 (165-315 MHz)**



**S22 (165-315 MHz)**



## SPECIFICATION

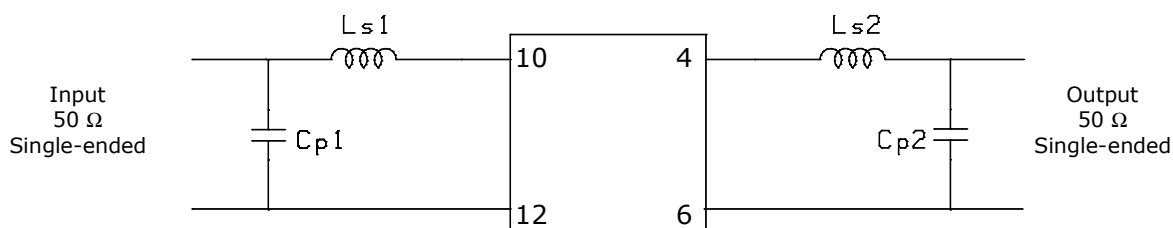
| Parameter                                                         | Min | Typ   | Max | Units              |
|-------------------------------------------------------------------|-----|-------|-----|--------------------|
| Center Frequency, $F_c$                                           | -   | 240   | -   | MHz                |
| Insertion Loss at $F_c$                                           | -   | 7.7   | 11  | dB                 |
| Amplitude Ripple <sup>1</sup>                                     | -   | 0.5   | 1.4 | dB p-p             |
| Amplitude Ripple in any 3.5 MHz interval <sup>1</sup>             | -   | 0.35  | 1.0 | dB p-p             |
| Rejection (256.5 to 258 MHz) <sup>2</sup>                         | 38  | 41    | -   | dB                 |
| Ultimate Rejection (150 to 224 MHz & 258 to 330 MHz) <sup>2</sup> | 40  | 43    | -   | dB                 |
| Phase Linearity <sup>3</sup>                                      | -   | 4     | 15  | deg p-p            |
| Group Delay Ripple <sup>1</sup>                                   | -   | 40    | 100 | ns p-p             |
| Device Delay <sup>1</sup>                                         | -   | 0.785 | 1.0 | us                 |
| Triple Transit Suppression                                        | 30  | 40    | -   | dB                 |
| Input and Output Return Loss <sup>3,4</sup>                       | 9.5 | 12    | -   | dB                 |
| Source and Load Impedance                                         | 50  |       |     | $\Omega$           |
| Ambient Temperature                                               | -   | 25    | -   | $^{\circ}\text{C}$ |

- Notes:
1. Defined over the passband frequency range  $F_c \pm 7$  MHz (i.e. 233 to 247 MHz).
  2. Attenuation Level (dB) are referenced to the level at  $F_c$ .
  3. Defined over 90% of the passband frequency range (i.e. 233.7 to 246.3 MHz).
  4. When matched using external components in MNC test fixture.

## MAXIMUM RATINGS

| Parameter                   | Min | Max | Units              |
|-----------------------------|-----|-----|--------------------|
| Storage Temperature Range   | -40 | 85  | $^{\circ}\text{C}$ |
| Operating Temperature Range | -40 | 80  | $^{\circ}\text{C}$ |
| Input Power Level           | -   | 15  | dBm                |

## MATCHING CIRCUIT

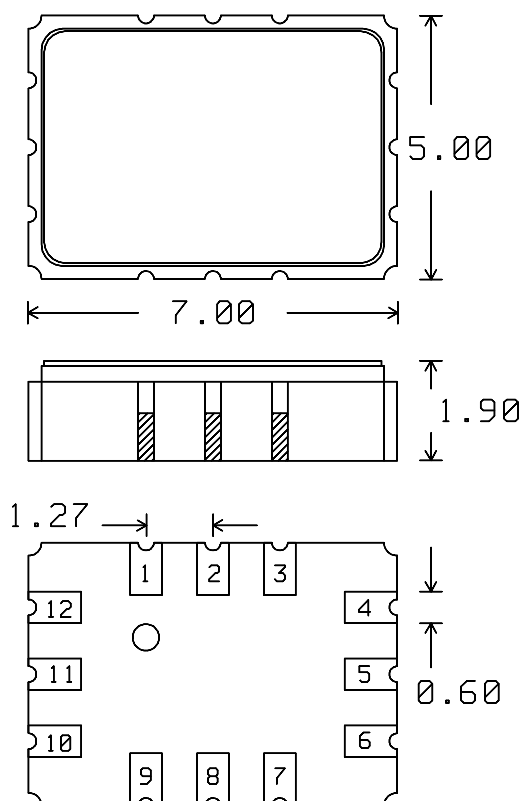


$$\begin{array}{ll} L_{s1} = 18 \text{ nH} & L_{s2} = 18 \text{ nH} \\ C_{p1} = 33 \text{ pF} & C_{p2} = 31 \text{ pF} \end{array}$$

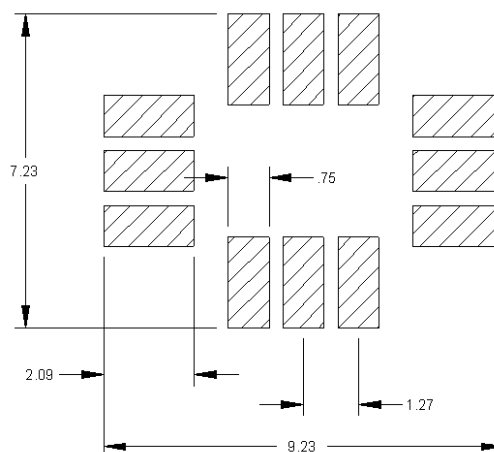
Notes:

1. Recommend use of  $\pm 2\%$  tolerance inductors,  $Q=40$ , and  $\pm 1\%$  tolerance capacitors.
2. Component values are for reference only and may change depending on board layout.

## PACKAGE OUTLINE



## SUGGESTED FOOTPRINT



Units: mm

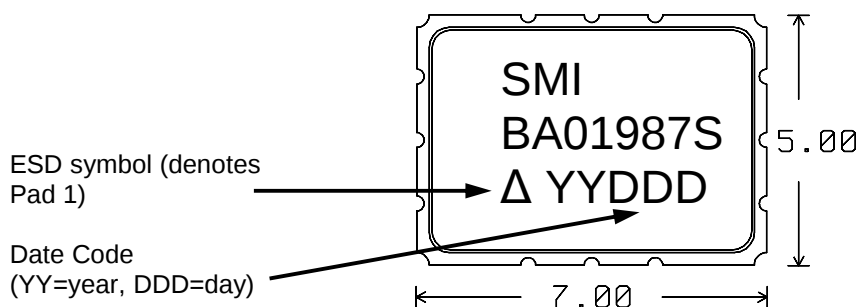
Tolerances are  $\pm 0.15$  mm except for the overall length and width, which are nominal values.

### Pad Configuration:

Input: 10  
 Input return: 12  
 Output: 4  
 Output return: 6  
 Ground: All other pads

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

## MARKING



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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