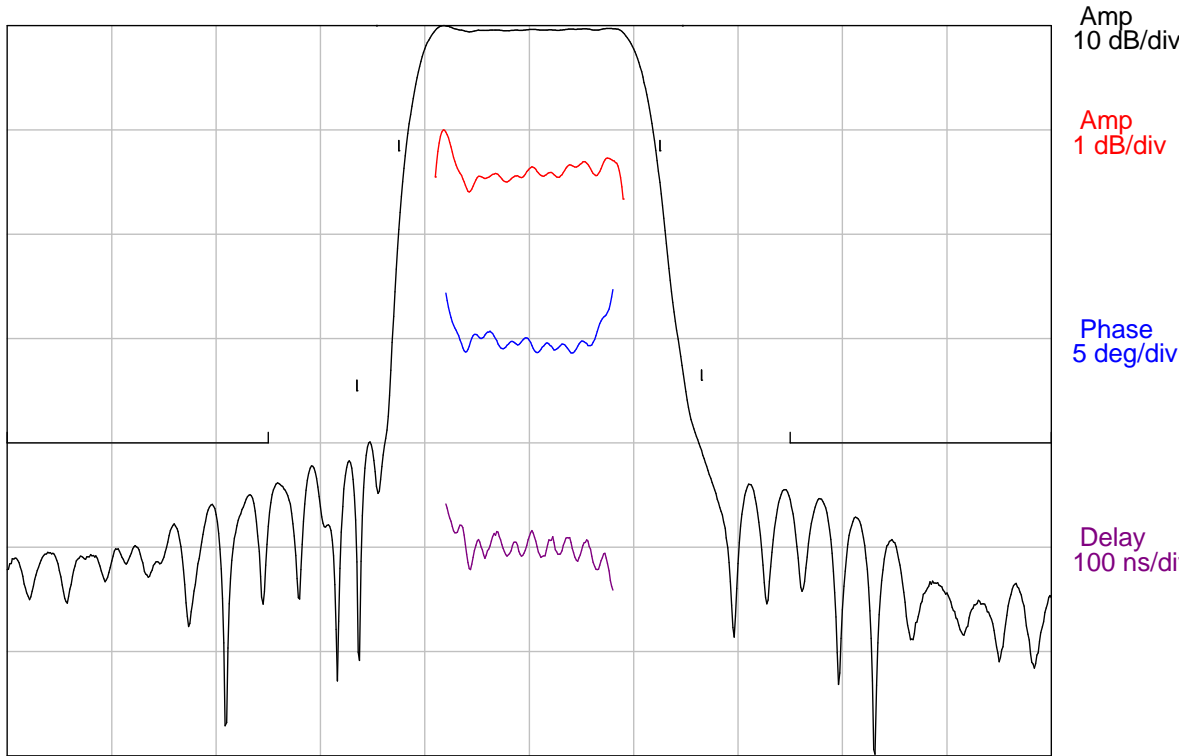


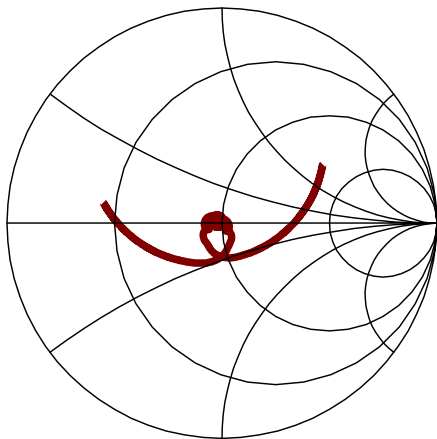
**DESCRIPTION**

- 240 MHz SAW bandpass filter with 3.6 MHz Bandwidth.
- 13.3 x 6.5 mm ceramic LCC package with 10 pads.
- RoHS compliant.

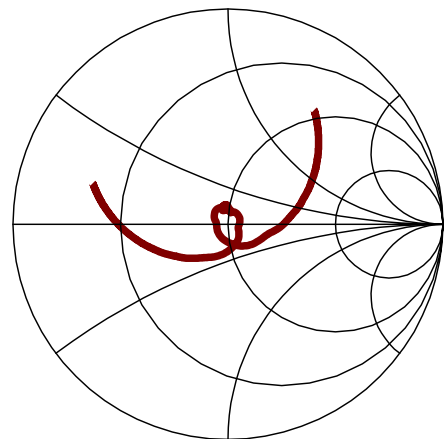
**TYPICAL PERFORMANCE**



**S11 (230-250 MHz)**



**S22 (230-250 MHz)**



## SPECIFICATION

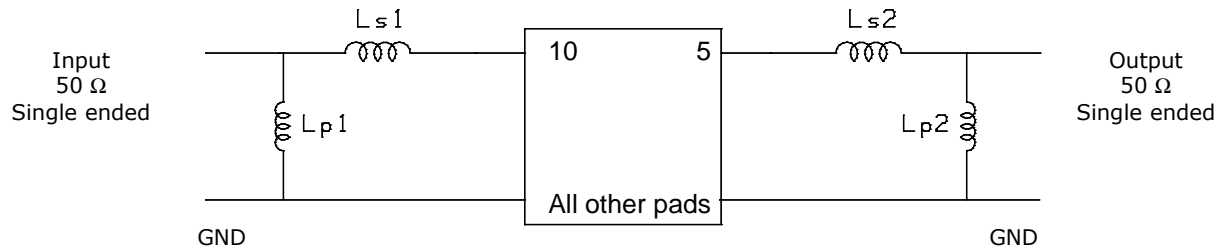
Parameter	Min	Typ	Max	Units
Center Frequency, ( $F_c$ ) <sup>1,3</sup>	-	240	-	MHz
Minimum Insertion Loss	-	15	16	dB
1 dB bandwidth <sup>2</sup>	3.6	3.74	-	MHz
Passband Amplitude Ripple ( $F_c \pm 1.8$ MHz)	-	0.75	1	dB p-p
Phase Variation ( $F_c \pm 1.6$ MHz)	-	3	5	dB p-p
Group Delay Ripple ( $F_c \pm 1.6$ MHz)	-	80	150	ns p-p
Attenuation at $F_c \pm 2.5$ MHz <sup>2</sup>	12	15	-	dB
Attenuation at $F_c \pm 2.93$ MHz <sup>2</sup>	-	30	-	dB
Attenuation $F_c \pm 3.3$ MHz <sup>2</sup>	35	37	-	dB
Attenuation (170-235 MHz) <sup>2</sup>	40	45	-	dB
Attenuation (245-310 MHz) <sup>2</sup>	40	42	-	dB
Input Return Loss ( $F_c \pm 1.6$ MHz)	12	20	-	dB
Output Return Loss ( $F_c \pm 1.6$ MHz)	12	20	-	dB
Source and Load Impedance	50			ohms
Turnover Temperature ( $T_c$ )	-	35	-	°C

- Notes:
1. Fixed Reference. All specified bandwidths and attenuation frequencies are relative to  $F_c = 240$  MHz.
  2. Taken at the peak of the response.
  3. All attenuation levels are taken to be relative to the level at the response peak.
  4. All electrical specifications apply over the whole of the operating temperature range (see below).

## MAXIMUM RATINGS

Parameter	Min	Max	Units
Storage Temperature Range	-40	85	°C
Operating Temperature Range (T)	-10	85	°C
Input Power Level	-	+20	dBm
DC Voltage	-	+5	VDC

## MATCHING CIRCUIT



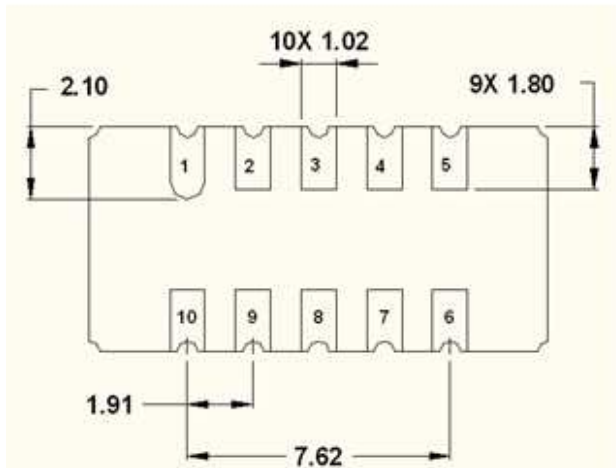
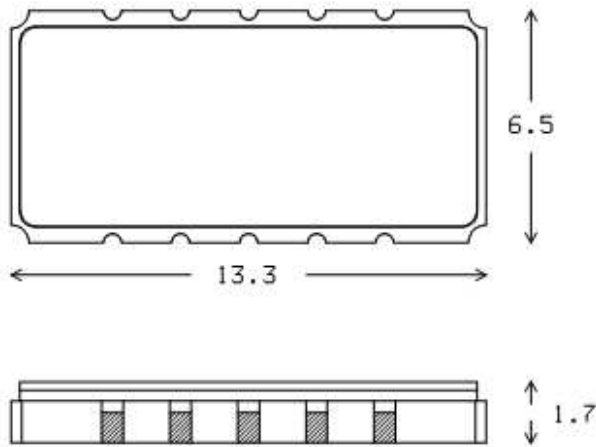
$$L_{s1} = 39 \text{ nH}, L_{p1} = 12 \text{ nH}$$

$$L_{s2} = 63 \text{ nH}, L_{p2} = 12 \text{ nH}$$

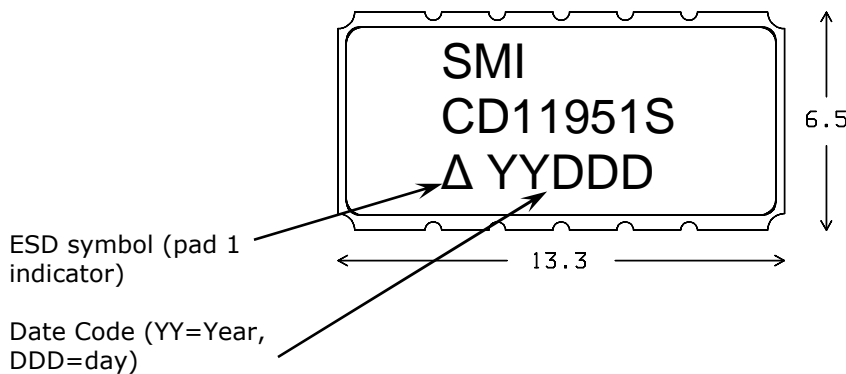
Notes:

- Recommend 2% or better tolerance matching components. Typical inductor  $Q=40$ .
- Optimum values may change depending on board layout. Values shown are intended as a guide only.

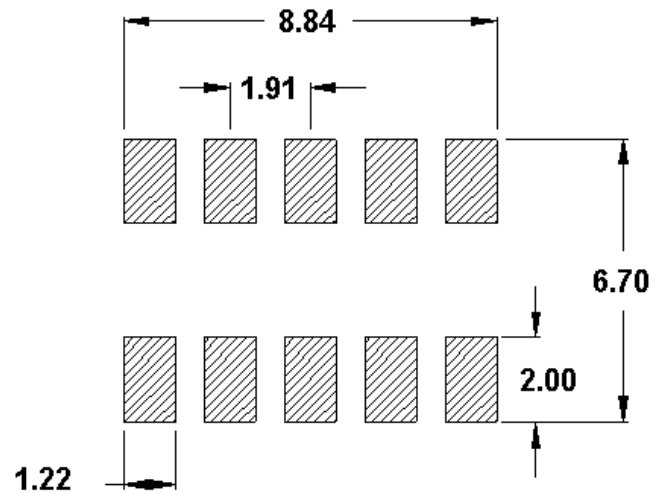
**PACKAGE OUTLINE**



**MARKING**



**SUGGESTED FOOTPRINT**



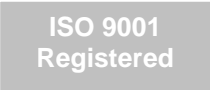
**Units:** mm

Tolerances are typically  $\pm 0.15$  mm except where indicated.

**Pad Configuration:**

Input: 10  
 Output: 5  
 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



All specifications are believed to be accurate and reliable. However, Spectrum Microwave reserves the right to make changes without notice.  
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