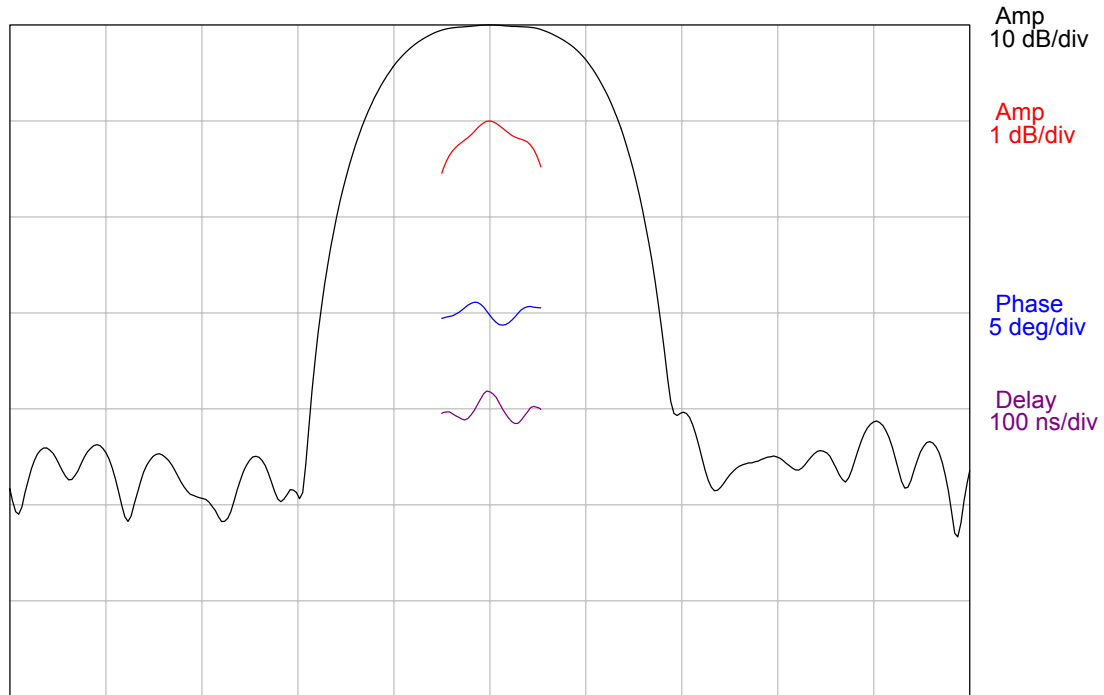


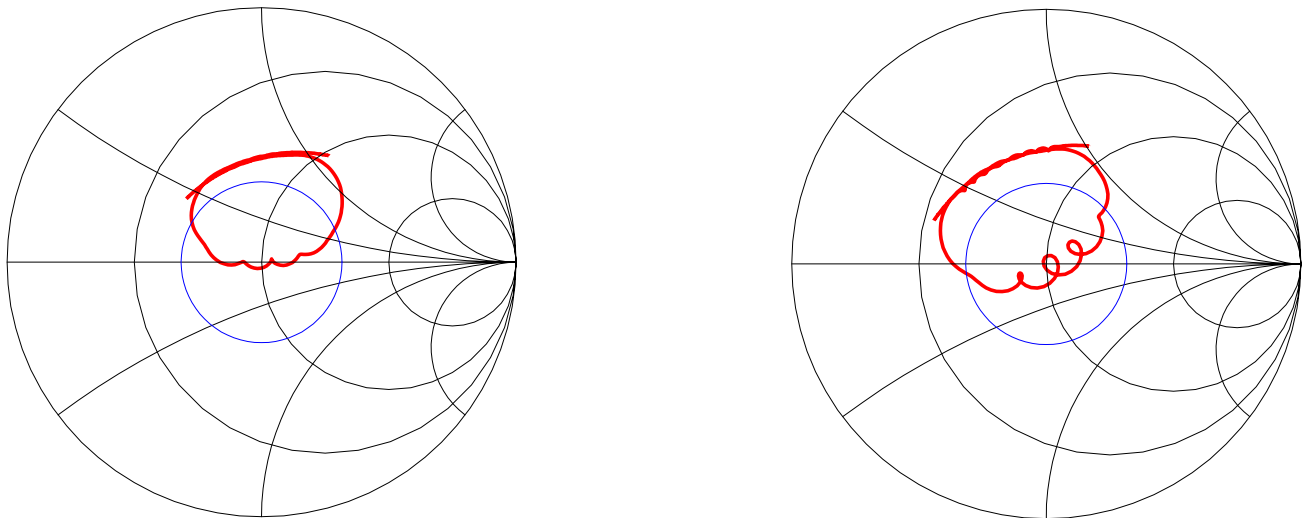
## DESCRIPTION

- 549.5 MHz SAW Filter with 1 MHz bandwidth.
- 9.1 x 7.1 mm 11-pad LCC package.
- RoHS compliant.

## TYPICAL PERFORMANCE



Center = 549.5 MHz, 1 MHz/div (32.5 kHz incr)



S<sub>11</sub> (left) and S<sub>22</sub> (right) plotted in red from 536.5 MHz to 562.5 MHz. Blue circles indicate the 10 dB return loss limits.

## SPECIFICATION

Parameter	Min	Typ	Max	Units
Center Frequency $F_C$ <sup>1</sup>	-	549.5	-	MHz
Insertion Loss at $F_C$	-	8.6	11	dB
1 dB Bandwidth	1.0	1.27	-	MHz
3 dB Bandwidth	-	1.83	-	MHz
40 dB Bandwidth	-	3.8	4.2	MHz
Passband Phase Linearity <sup>2</sup>	-	1.2	5.0	deg p-p
Passband Amplitude Ripple <sup>3</sup>	-	0.35	0.8	dB
Absolute Delay	0.95	0.955	1.00	$\mu$ s
Passband Group Delay Ripple <sup>2</sup>	-	35	120	ns
Ultimate Rejection (274.75 MHz to 536.5 MHz and 562.5 MHz to 824.25 MHz)	45	49	-	dB
Triple Travel Suppression	30	47	-	dB
Return Loss at Input and Output <sup>2 4</sup>	10	12	-	dB

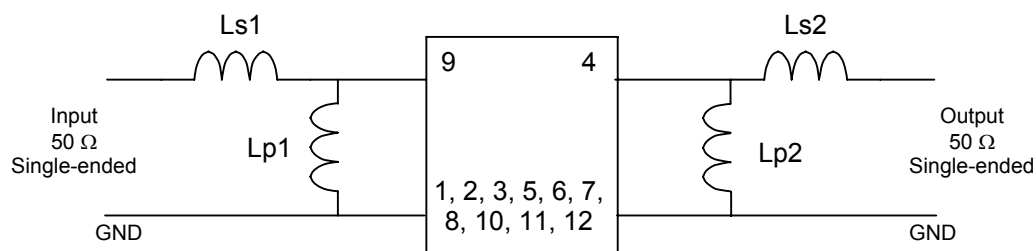
Notes:

1. Fixed reference. All specified bandwidths are centered at this frequency.
2. Over the central 1 MHz bandwidth.
3. Over any 0.2 MHz interval within the central 1 MHz bandwidth.
4. When matched using external components as described below.
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	$^{\circ}$ C
Operating Temperature Range	-10	+65	$^{\circ}$ C
Input Power Level	-	+10	dBm
DC Voltage	-	5	VDC

## MATCHING CIRCUIT



$$L_{p1} = 18 \text{ nH}$$

$$L_{s1} = 27 + 3.3 = 30.3 \text{ nH}$$

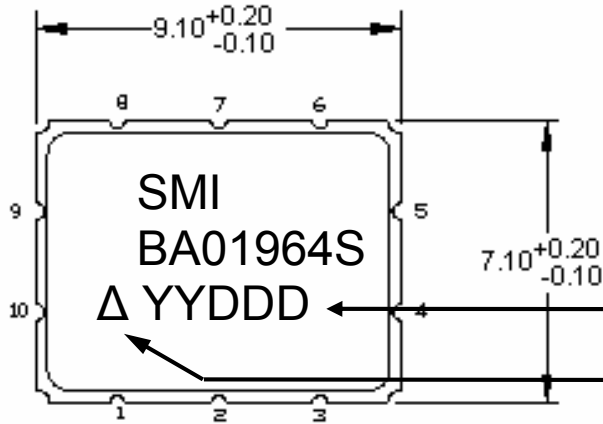
$$L_{p2} = 10 + 10 = 20 \text{ nH}$$

$$L_{s2} = 33 \text{ nH}$$

Notes:

- Recommend 2% tolerance matching components. Typical inductor  $Q=40$ .
- Matching values are for reference only. Actual values are dependent upon board layout.

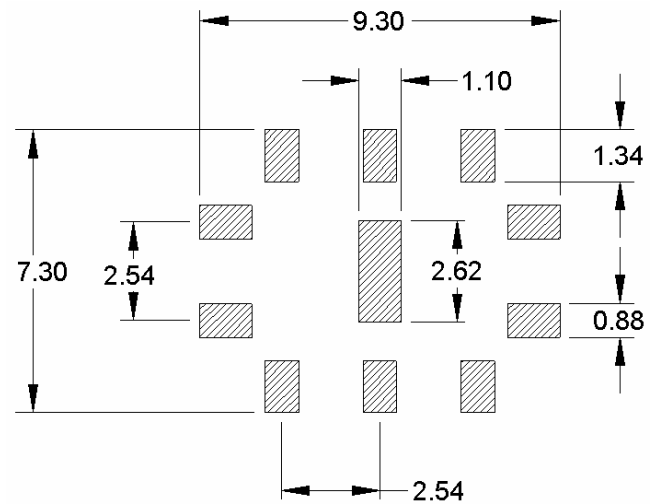
**PACKAGE OUTLINE**



Date Code (YY=year, DDD=day)

Pad 1 identifier

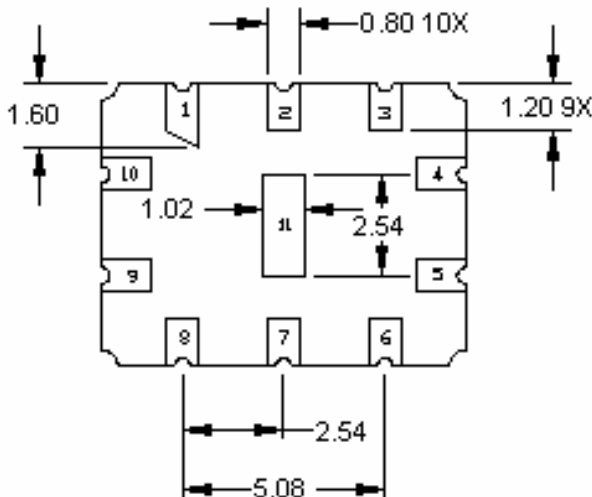
**SUGGESTED FOOTPRINT**



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

**Pad Configuration:**

Input: 9  
Output: 4  
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

ISO 9001  
Registered

All specifications are believed to be accurate and reliable. However, Spectrum Microwave reserves the right to make changes without notice.  
© 2010 All rights reserved.