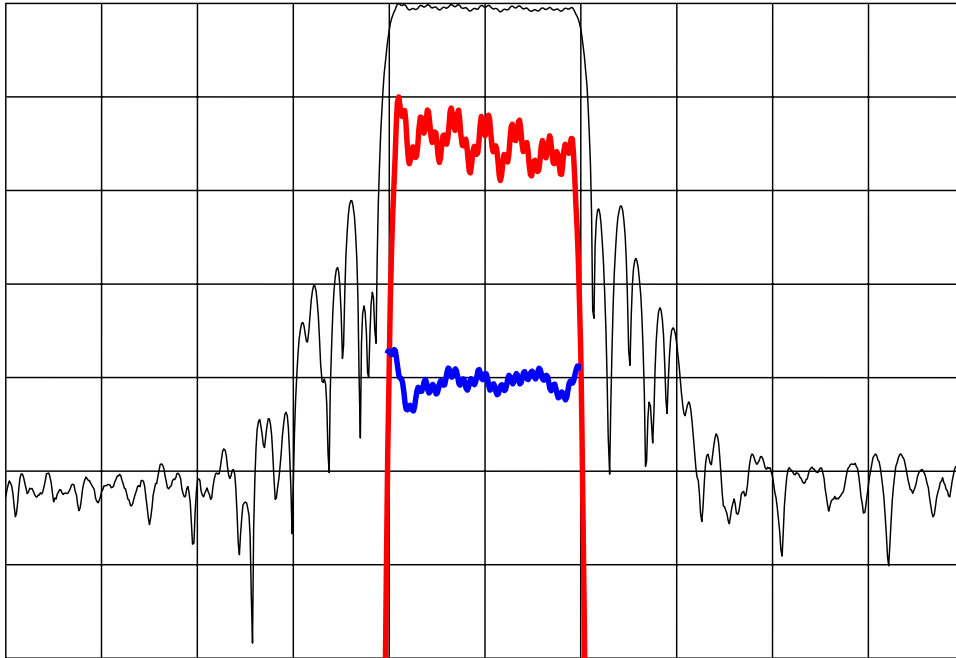


## DESCRIPTION

- 167.1 MHz SAW bandpass filter with 1.05 MHz bandwidth for cellular application.
- 73 x 20 mm DIP package.
- RoHS compliant.

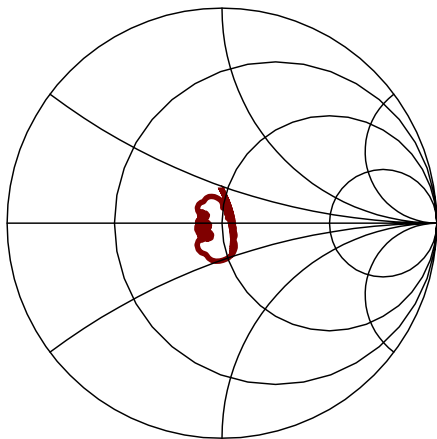
## TYPICAL PERFORMANCE



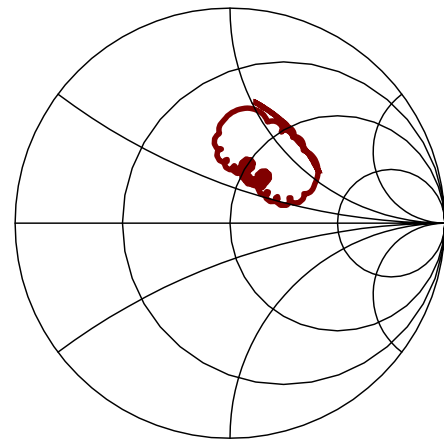
Horizontal:  
Vertical from Top:

Frequency : 1 MHz/div  
Relative Magnitude : 10 dB/div  
Relative magnitude : 1 dB/div  
Phase Linearity : 10 deg rms/div

**S11 (162.1-172.1 MHz)**



**S22 (162.1-172.1 MHz)**



## SPECIFICATION

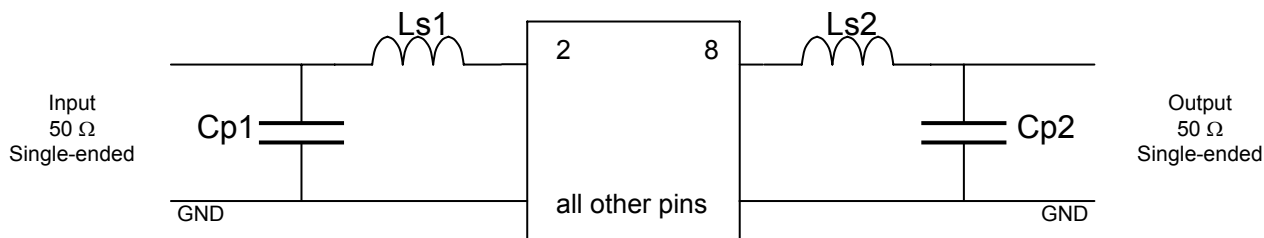
Parameter	Min	Typ	Max	Units
Center Frequency (Fc) <sup>1</sup>	-	167.1	-	MHz
Passband Width	1.05	1.09	-	MHz
Lower 5 dB Frequency	-	166.49	166.51	MHz
Upper 5 dB Frequency	167.69	167.71	-	MHz
Lower 15 dB Frequency	166.41	166.43	-	MHz
Upper 15 dB Frequency	-	167.77	167.79	MHz
Insertion Loss (at Fc)	-	18.2	20	dB
Passband Amplitude Variation <sup>2</sup>	-	0.9	1.5	dB p-p
Passband Phase Ripple <sup>2</sup>	-	3	4	deg rms
Passband Phase Ripple (over Fc+/-0.63 MHz)	-	5	6	deg rms
Group Delay Ripple <sup>2</sup>	-	1.2	1.5	us p-p
Average Group Delay (over Fc+/-0.63 MHz)	10.375	10.460	10.595	us
Ultimate Rejection <sup>3,4</sup>	-	15	-	dB
Return Loss <sup>2</sup>	8	10	-	dB
Source and Load Impedance	-	50	-	ohms
Ambient Temperature	-	25	-	° C

- Notes:
1. Fixed reference frequency. All bandwidths are centered at this frequency.
  2. Defined over the passband.
  3. Ultimate rejection is dependent on the PC board.
  4. Measured across 106.41 to 166.41 MHz and 167.79 to 227.79 MHz.

## MAXIMUM RATINGS

Parameter	Min	Typ	Max	Units
Storage Temperature Range	-40	25	85	°C
Operating Temperature Range	0	25	85	°C
Input Power Level	-	10	13	dBm

## MATCHING CIRCUIT



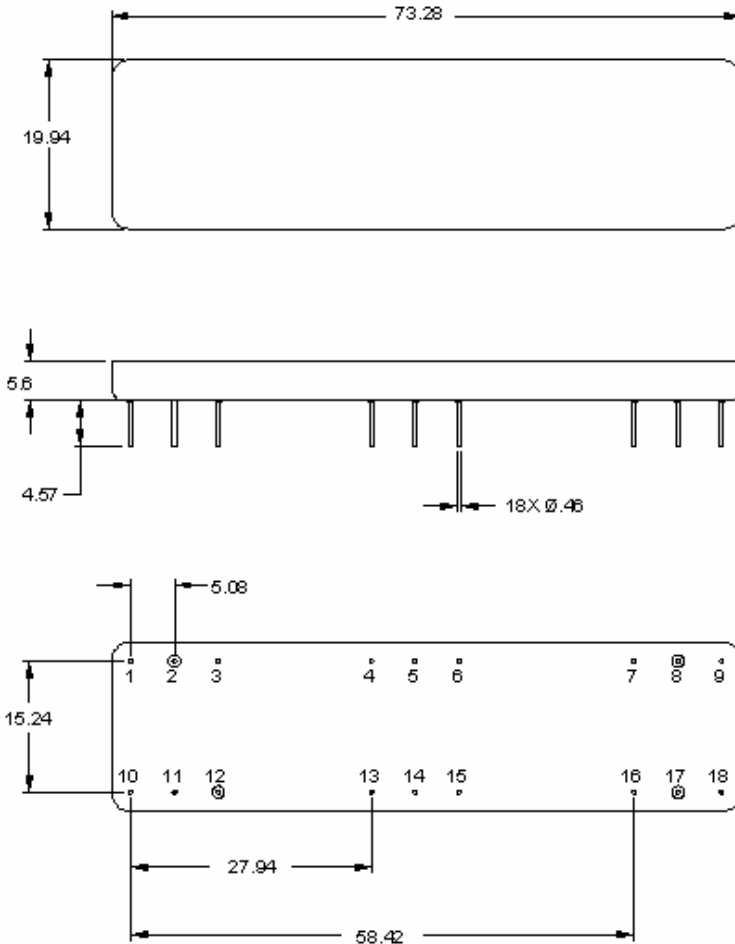
Typical component values:

$$\begin{aligned} Ls1 &= 27 \text{ nH} & Ls2 &= 43 \text{ nH} \\ Cp1 &= 53 \text{ pF} & Cp2 &= 39 \text{ pF} \end{aligned}$$

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**

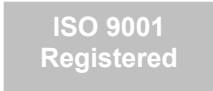


**Units:** mm

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

**Pin Configuration:**

Input: 2  
Output: 8  
Ground: all other pins



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