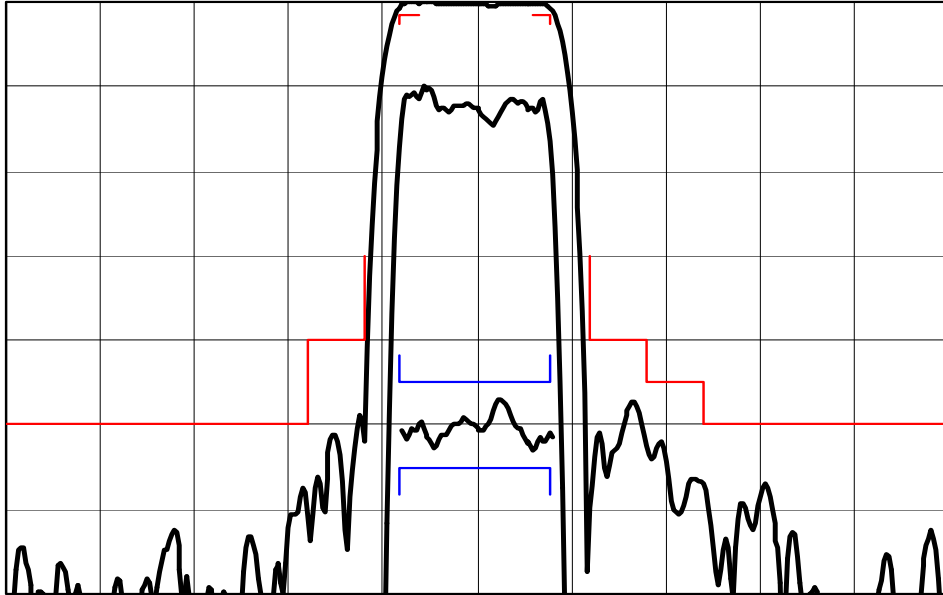


## DESCRIPTION

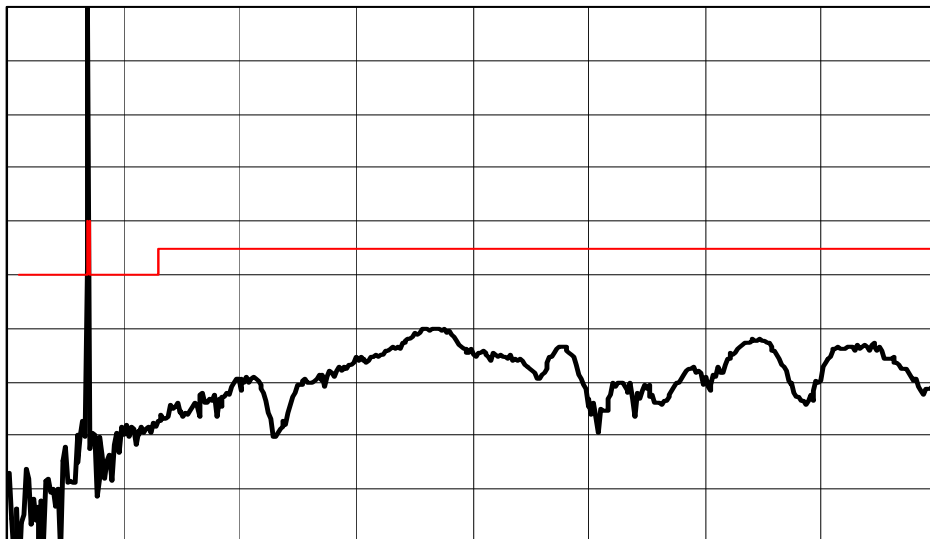
- 69.99 MHz SAW bandpass filter with 0.8 MHz bandwidth.
- 73.3 x 20 mm DIP package.
- RoHS compliant.

## TYPICAL PERFORMANCE



Horizontal:	Frequency :	0.5	MHz/div
Vertical from Top:	Relative Magnitude :	10	dB/div
	Relative magnitude :	1	dB/div
	Phase Linearity :	6	deg/div

**Wideband Response (0- 800 MHz, 10 dB/div)**



## SPECIFICATION

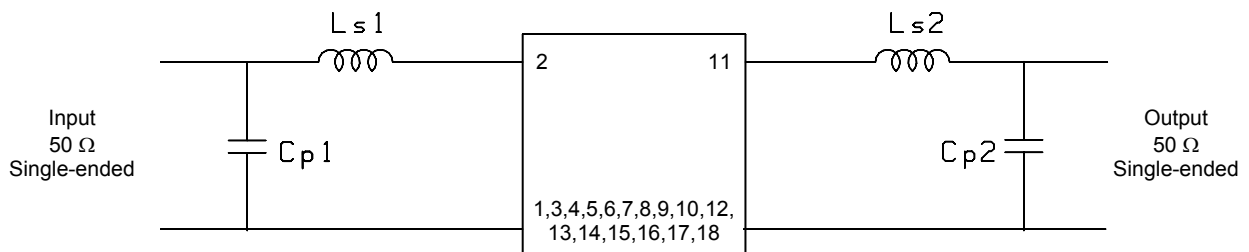
Parameter	Min	Typ	Max	Units
Center Frequency <sup>1</sup>	69.94	69.99	70.04	MHz
Insertion Loss <sup>2</sup>	-	17.5	19	dB
1.5 dB Bandwidth <sup>3</sup>	0.8	0.84	-	MHz
40 dB Bandwidth <sup>3</sup>	-	1.15	1.2	MHz
Amplitude Ripple <sup>4,5</sup>	-	0.4	1.0	dB p-p
Absolute Delay	-	8.82	-	μs
Phase Linearity <sup>4</sup>	-	3.5	6	deg p-p
Rejection, 10 MHz to 69.09 MHz <sup>3</sup>	50	56	-	dB
Rejection, 70.89 MHz to 71.19 MHz <sup>3</sup>	45	51	-	dB
Rejection, 71.19 MHz to 130 MHz <sup>3</sup>	50	57	-	dB
Rejection, 130 MHz to 800 MHz <sup>3</sup>	45	56	-	dB
Input Return Loss <sup>4,6</sup>	10	15	-	dB
Output Return Loss <sup>4,6</sup>	10	15	-	dB
Source and Load Impedance	-	50	-	Ω
Ambient Temperature	-	25	-	°C

- Notes:
1. Average of lower and upper 3dB points (3dB is relative to the insertion loss).
  2. Measured at the point in the passband where the loss is a minimum.
  3. All stated dB levels are relative to the insertion loss.
  4. Over 0.8 MHz bandwidth.
  5. Defined as maximum level – minimum level over the given bandwidth, excluding the band edges.
  6. When matched externally, as shown below.

## MAXIMUM RATINGS

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

## MATCHING CIRCUIT



Typical component values:  
(Minimum inductor Q = 40)

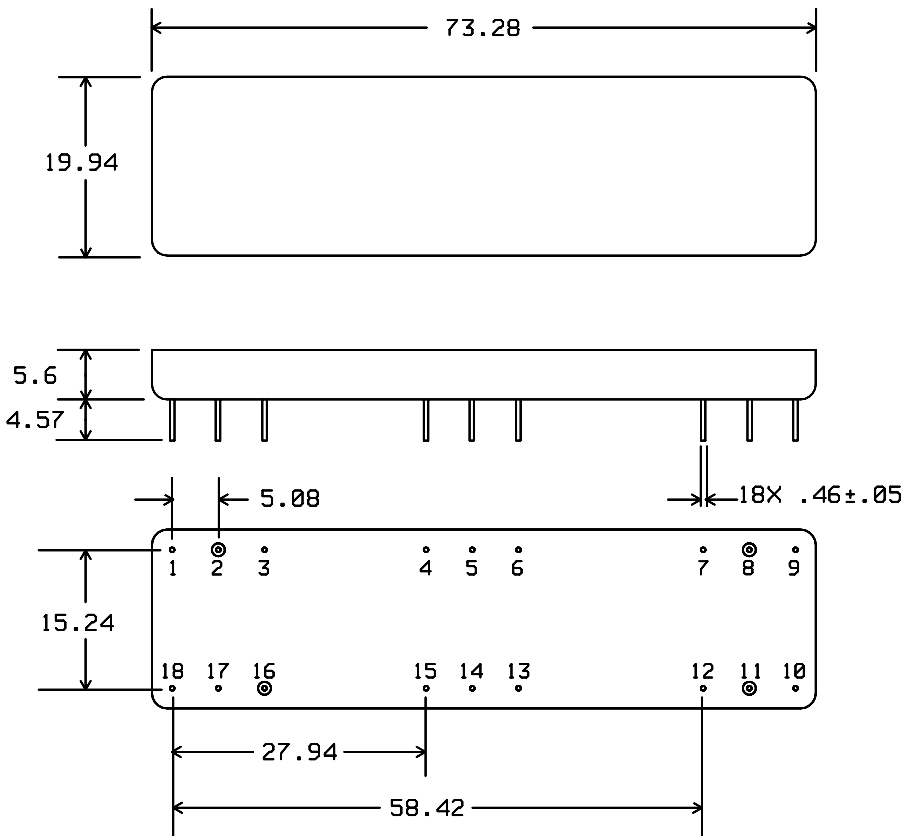
$$\begin{aligned} L_{s1} &= 150 \text{ nH} \\ C_{p1} &= 100 \text{ pF} \end{aligned}$$

$$\begin{aligned} L_{s2} &= 150 \text{ nH} \\ C_{p2} &= 120 \text{ pF} \end{aligned}$$

Notes:

1. Required component tolerances: inductors +/-2%, capacitors +/-5%.
2. Component values shown are for guidance only and may change depending on board layout.

**PACKAGE OUTLINE**



**Units:** mm

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

**Pad Configuration:**

Input: 2  
Output: 11  
Ground: All other pins

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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**Spectrum Microwave**  
400 Nickerson Road, Marlborough, MA 01752, USA • Phone 1-508-251-6400 • Fax 1-508-251-6401  
www.SpectrumMicrowave.com