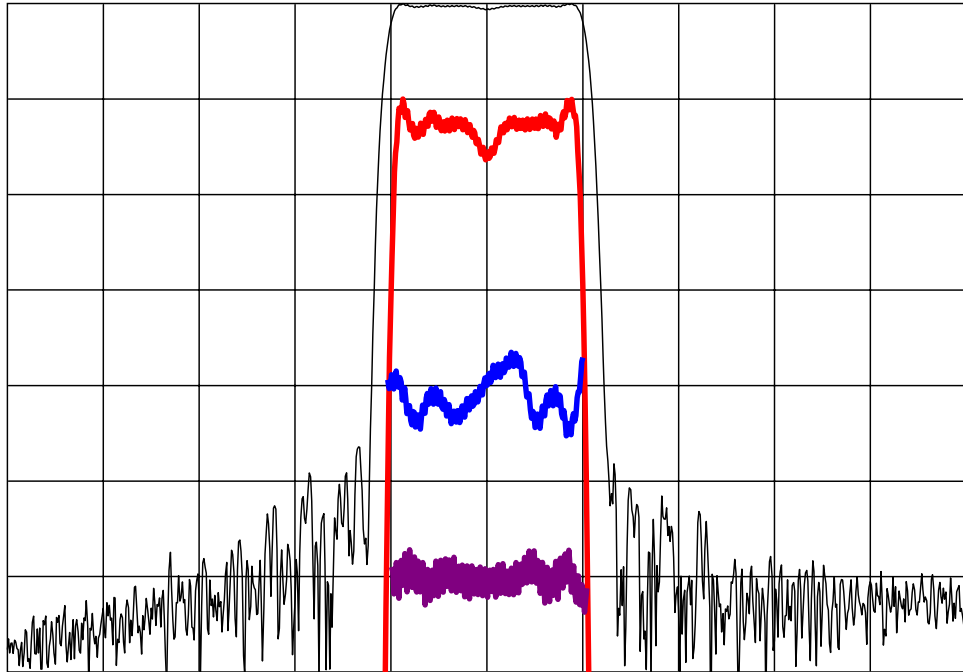


DESCRIPTION

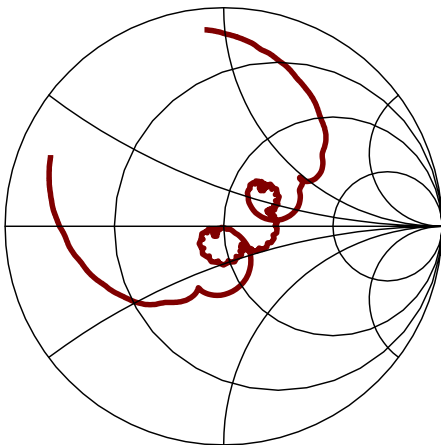
- 156 MHz SAW bandpass filter with 9.4 MHz bandwidth.
- 13.3 x 6.5 mm LCC package.
- RoHS compliant.

TYPICAL PERFORMANCE

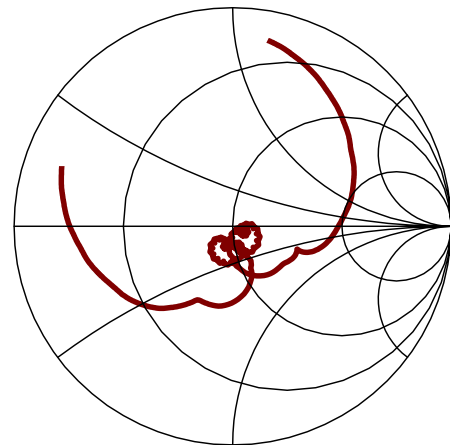


Horizontal: Frequency : 5 MHz/div
 Vertical from Top: Relative Magnitude : 10 dB/div
 Relative magnitude : 1 dB/div
 Phase Linearity : 5 deg/div
 Group Delay Deviation : 100 ns/div

S11 (131 to 181 MHz)



S22 (131 to 181 MHz)



SPECIFICATION

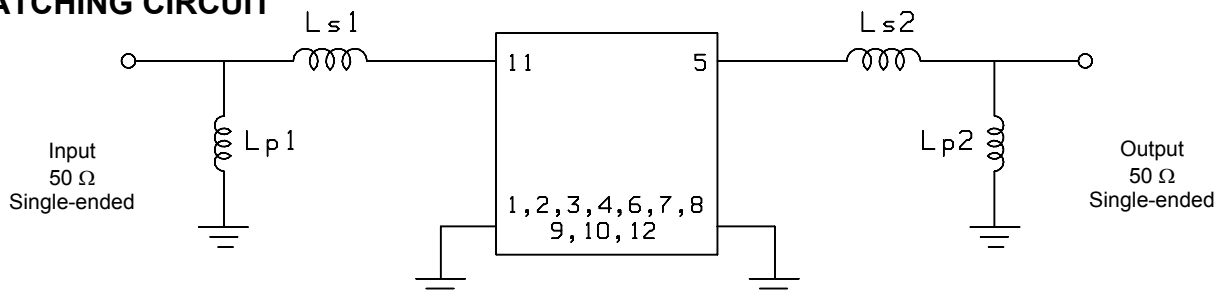
Parameter	Min	Typ	Max	Units
Center Frequency (Fc) ¹	-	156.00	-	MHz
Minimum Insertion Loss ²	-	20.6	22.0	dB
1 dB Bandwidth	9.40	9.80	-	MHz
Amplitude Variation (151.3 to 160.7 MHz)	-	0.6	1.0	dB p-p
Group Delay Ripple (151.3 to 160.7 MHz)	-	80	150	ns p-p
Relative Attenuation at 141.0 MHz	45	48	-	dB
Relative Attenuation at 149.7 MHz	40	45	-	dB
Relative Attenuation at 162.3 MHz	40	45	-	dB
Relative Attenuation at 171.0 MHz	45	48	-	dB
Ultimate Rejection	50	54	-	dB
Ambient Temperature (Tref)	-	25	-	°C
Source and Load Impedance	50			Ω

- Notes:
1. Average of the lower and upper 3 dB band edge frequencies.
 2. All dB values are referenced to the insertion loss.
 3. Specifications are valid for a temperature of 23°C.
 4. Typical change of filter frequency response with temperature is $\Delta f = (T - T_{ref}) * T_c * F_c$, in ppm.

MAXIMUM RATINGS

Parameter	Min	Typ	Max	Units
Storage Temperature Range	-40	25	85	°C
Operating Temperature Range	-10	25	65	°C
Temperature Coefficient of Frequency (Tc) ⁴	-	-23	-	ppm/°C
Input Power Level	-	10	13	dBm

MATCHING CIRCUIT



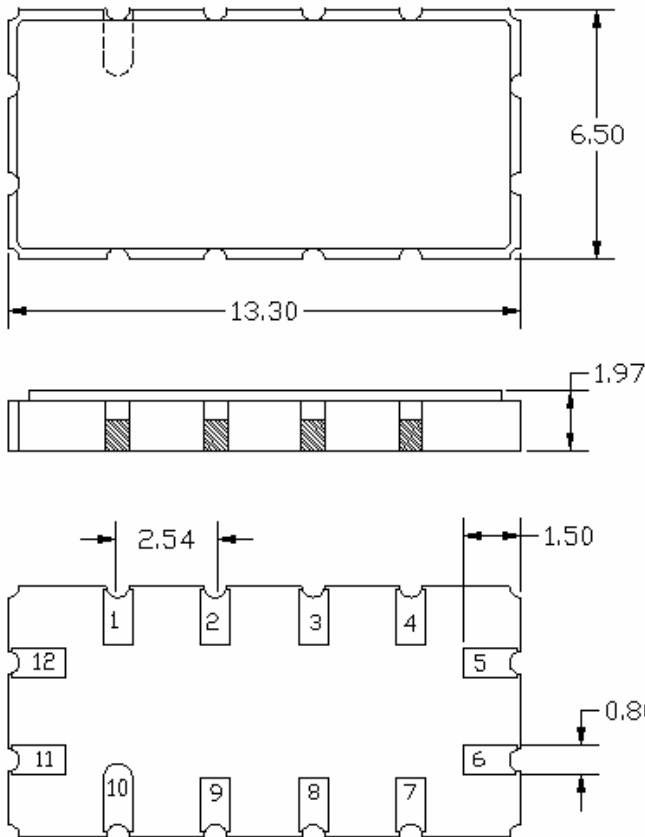
Typical component values:

$$\begin{aligned} L_{s1} &= 33 \text{ nH} & L_{s2} &= 18 \text{ nH} \\ L_{p1} &= 33 \text{ nH} & L_{p2} &= 22 \text{ nH} \end{aligned}$$

Notes:

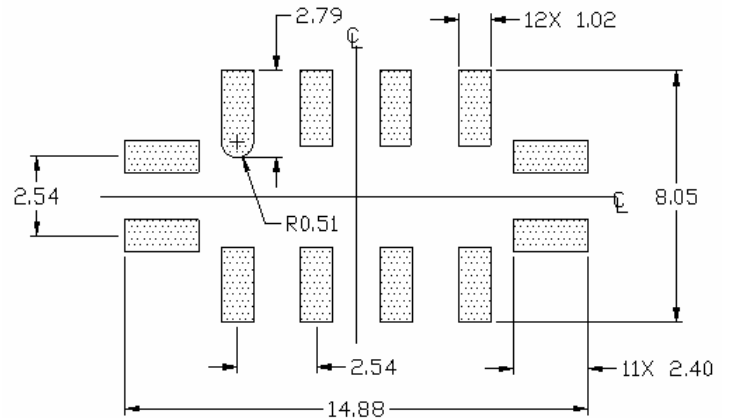
1. Recommend use of 2% tolerance matching components.
2. Component values are for reference only and may change depending on board layout.

PACKAGE OUTLINE



Package Material:
Body: Al_2O_3 ceramic
Lid: Kovar, Ni plated
Terminations: Au plating 1 μ m min,
over a 1.3-8.9 μ m Ni plating

SUGGESTED FOOTPRINT

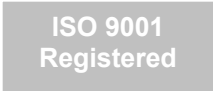


Units: mm

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

Pad Configuration:

Input: 11
Output: 5
Ground: All other pads



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