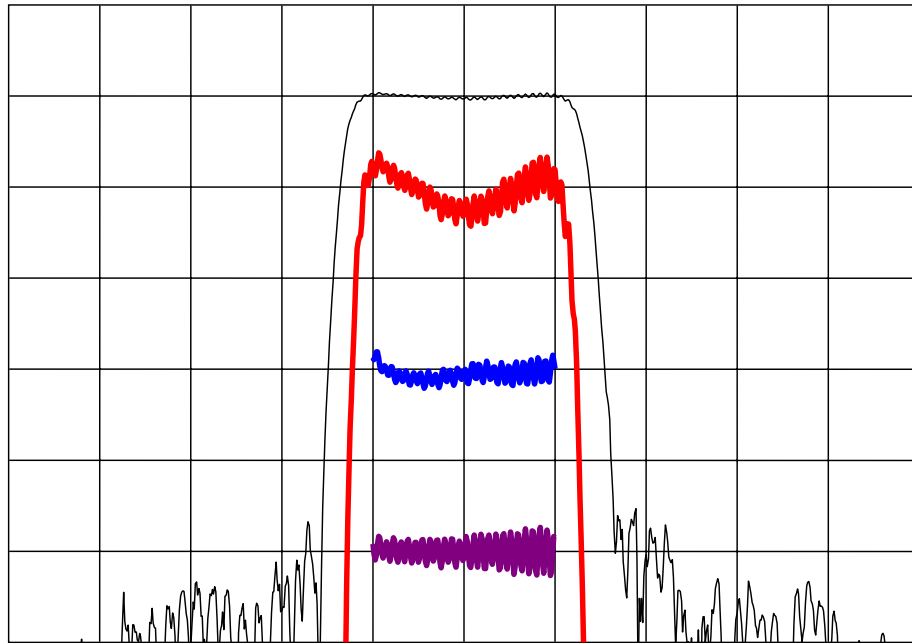


DESCRIPTION

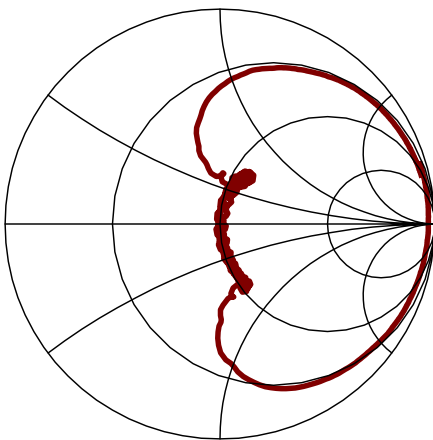
- 96 MHz SAW bandpass filter with 20 MHz bandwidth.
- 5 x 7 mm SMP.
- RoHS compliant.

TYPICAL PERFORMANCE

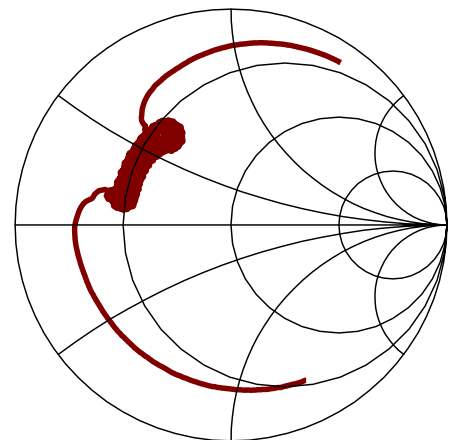


Horizontal: Frequency : 10 MHz/div
 Vertical from Top: Relative Magnitude : 10 dB/div
 Relative magnitude : 1 dB/div
 Phase Linearity : 5 deg/div
 Group Delay Deviation : 100 ns/div

S11



S22



SPECIFICATION

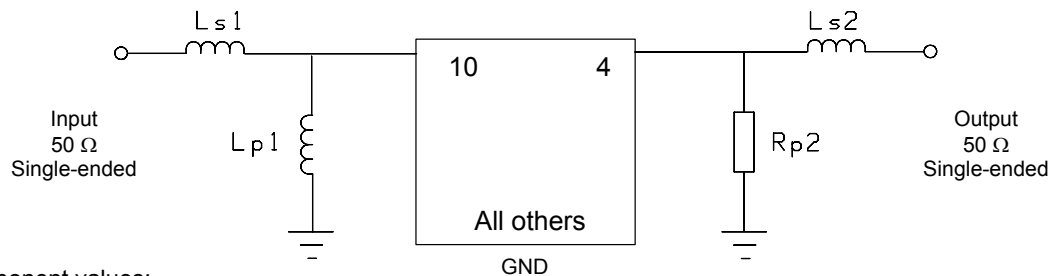
| Parameter | Min | Typ | Max | Units |
|--|------|-------|-----|--------|
| Center Frequency, F_C ¹ | - | 96.00 | - | MHz |
| Insertion Loss (86-106 MHz) ^{1,2} | - | 11.3 | 13 | dB |
| 1 dB Bandwidth | 20.0 | 23.4 | - | MHz |
| Relative Attenuation to Ins Loss (0.3-68.4 MHz) ^{1,3} | 50 | 55 | - | dB |
| Relative Attenuation to Ins Loss (at 76.8 MHz) ^{1,3} | 45 | 50 | - | dB |
| Relative Attenuation to Ins Loss (123.6 to 162.8 MHz) ^{1,3} | 40 | 48 | - | dB |
| Relative Attenuation to Ins Loss (162.8 to 240 MHz) ^{1,3} | 35 | 53 | - | dB |
| Relative Attenuation to Ins Loss (240 to 1000 MHz) ^{1,3} | 25 | 35 | - | dB |
| Amplitude Ripple (86 to 106 MHz) ^{1,4} | - | 0.75 | 1 | dB p-p |
| Group Delay Ripple (86 to 106 MHz) ^{1,5} | - | 50 | 60 | ns/div |
| 1 dB Compression Point (86 to 106 MHz) | 12 | 15 | - | dBm |
| Input IP3 ⁶ | 35 | 40 | - | dBm |
| Temperature Coefficient | - | 94 | - | ppm/°C |
| Source/Load Impedance | 50 | | | ohms |
| Ambient Temperature | - | 25 | - | °C |

- Notes:
1. Measured with terminating impedance matched to 50Ω and with 50Ω analyzer.
 2. Average Insertion Loss in indicated frequency range.
 3. Measured as attenuation below the insertion loss point (Insertion loss is reference).
 4. Amplitude ripple should be measured without smoothing.
 5. Group delay ripple may be measured with a smoothing aperture of 250 KHz .
 6. By design.

MAXIMUM RATINGS

| Parameter | Min | Max | Units |
|-----------------------------|-----|-----|-------|
| Storage Temperature Range | -40 | 85 | °C |
| Operating Temperature Range | -25 | 85 | °C |
| Input Power Level | - | 12 | dBm |

MATCHING CIRCUIT



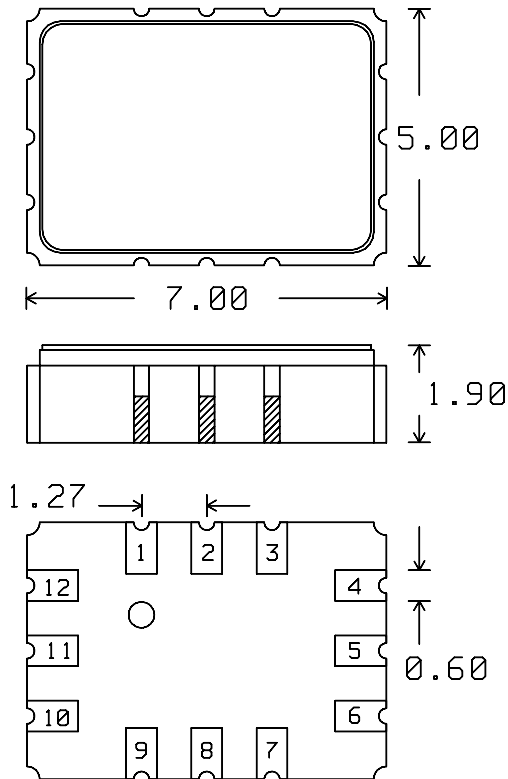
Typical component values:

$$\begin{aligned} L_{s1} &= 220 \text{ nH} & L_{s2} &= 82 \text{ nH} \\ L_{p1} &= 270 \text{ nH} & R_{p2} &= 680 \text{ } \Omega \end{aligned}$$

Notes:

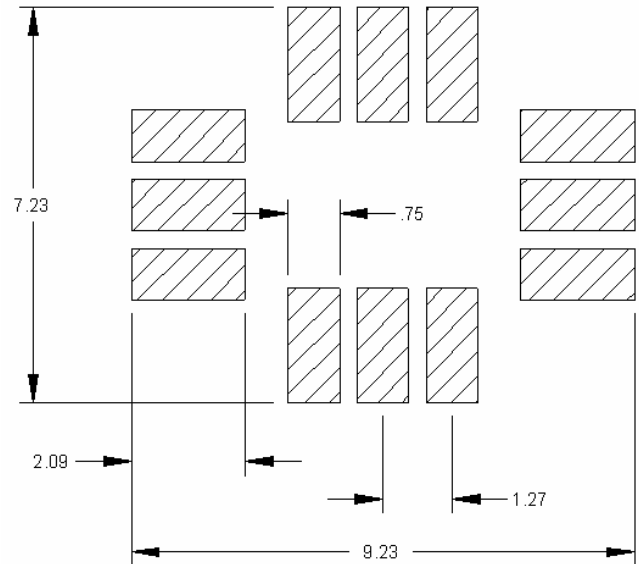
1. Recommend use of 2% tolerance matching components.
2. Component values are for reference only and may change depending on board layout.

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 for the overall length and width, which are nominal values.

Pad Configuration:

Input: 10
Output: 4
Ground: All other pads

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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