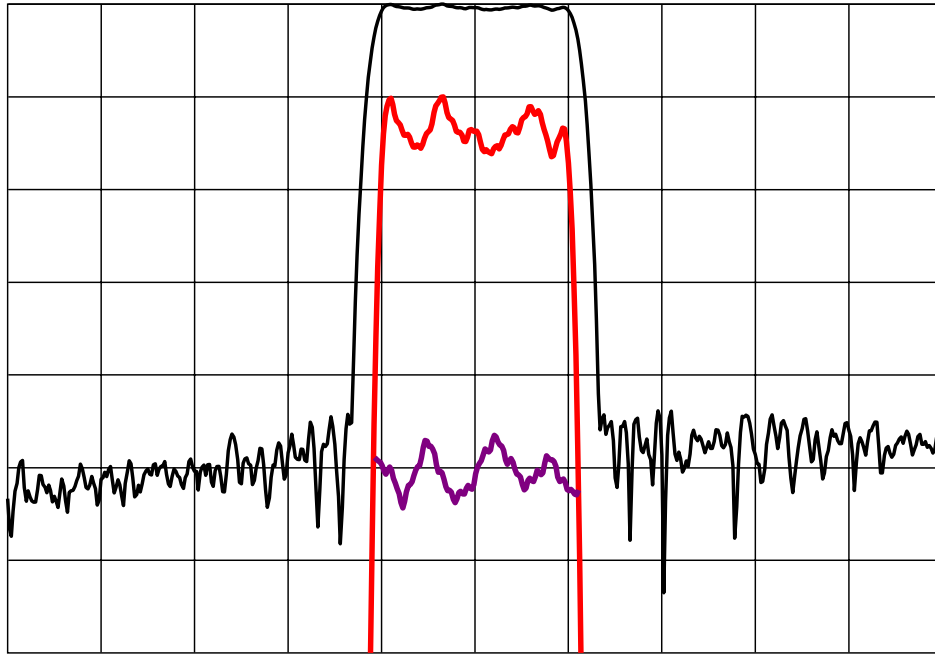


DESCRIPTION

- 96 MHz SAW bandpass filter with 4.8 MHz bandwidth for TD-SCDMA applications.
- 19 x 6.5 mm SMP.
- RoHS compliant.

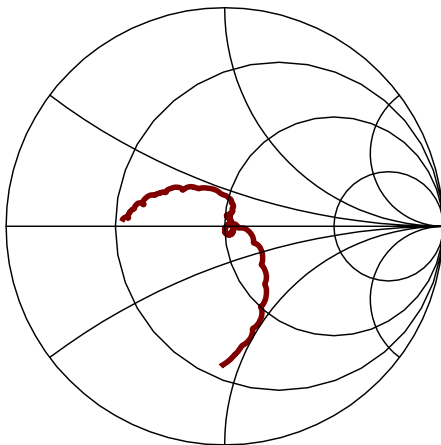
TYPICAL PERFORMANCE



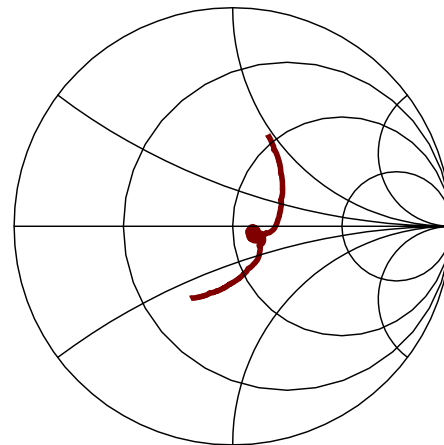
Horizontal:
Vertical from top:

Frequency : 2.5 MHz/div
Relative Magnitude : 10 dB/div
Relative magnitude : 1 dB/div
Group Delay : 50 ns/div

S11 (83.5 to 108.5 MHz)



S22 (83.5 to 108.5 MHz)



SPECIFICATION

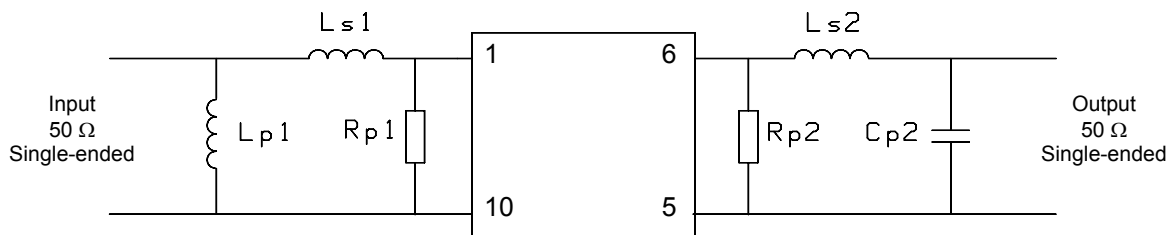
| Parameter | Min | Typ | Max | Units |
|--|--------------------|-------|-------|--------|
| Center Frequency (Fc) ¹ | 95.90 | 96.00 | 96.10 | MHz |
| Minimum Insertion Loss ² | - | 23.5 | 25 | dB |
| 1 dB Bandwidth | 4.80 | 5.00 | - | MHz |
| 35 dB bandwidth | - | 6.60 | 6.80 | MHz |
| Passband Variation (Fc +/- 2.4 MHz) | - | 0.6 | 0.8 | dB p-p |
| Group Delay Variation (Fc +/- 2.4 MHz) ³ | - | 60 | 80 | ns p-p |
| Change in Absolute Delay from unit to unit | -10 | - | 10 | ns |
| Absolute Delay Variation from -5°C to 75°C | - | 6 | 10 | ns |
| Input Return Loss (Fc +/- 1.92 MHz) | 10 | 14 | - | dB |
| Output return Loss (Fc +/- 1.92 MHz) | 10 | 14 | - | dB |
| Absolute Delay | - | 2.00 | 3.00 | us |
| Rejection (40 to 87 MHz) | 43 | 46 | - | dB |
| (111 to 150 MHz) | 43 | 46 | - | dB |
| Ambient Temperature | 20 | 25 | 30 | °C |
| Source and Load Impedance | 50 | | | Ω |
| Substrate Material | LiTaO ₃ | | | - |

- Notes:
1. Average of lower and upper 3 dB frequencies (3 dB measured from peak).
 2. All dB values are referenced to the insertion loss.
 3. A smoothing aperture of 0.125 MHz may be applied to this measurement.

MAXIMUM RATINGS

| Parameter | Min | Max | Units |
|-----------------------------|-----|-----|-------|
| Storage Temperature Range | -40 | 85 | °C |
| Operating Temperature Range | -5 | 75 | °C |
| Operating Input Power Level | - | +10 | dBm |

MATCHING CIRCUIT



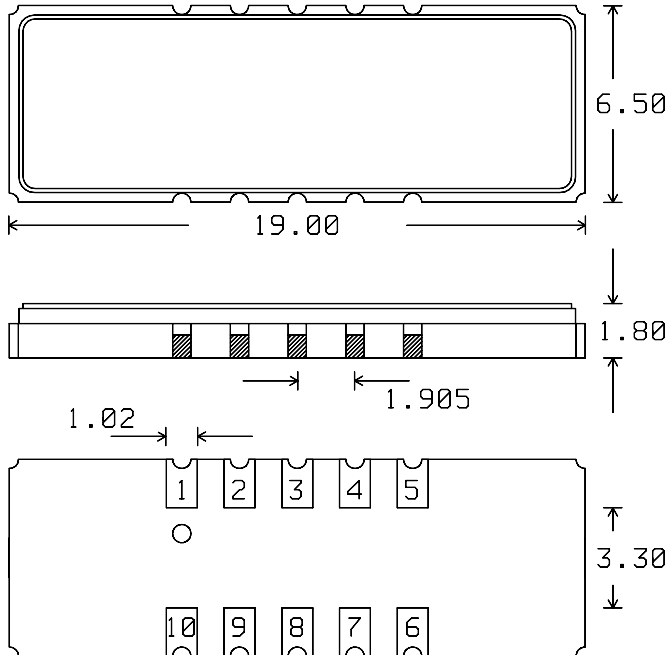
Typical component values:

$$\begin{array}{ll}
 L_{s1} = 6.8 \text{ nH} & L_{s2} = 91 \text{ nH} \\
 L_{p1} = 56 \text{ nH} & L_{p2} = 47 \text{ nH} \\
 R_{p1} = 100 \text{ } \Omega & R_{p2} = 120 \text{ } \Omega
 \end{array}$$

Notes:

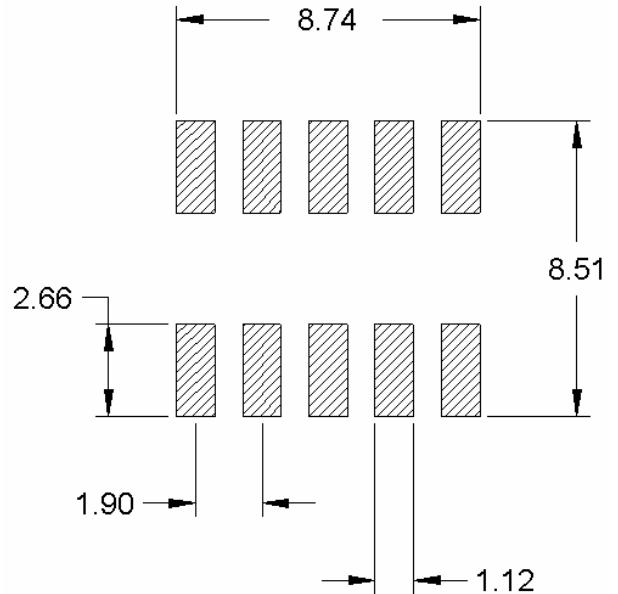
1. Recommend use of +/- 2% tolerance components. Minimum Q=40.
2. Component values are for reference only and may change depending on board layout.

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, width and pad dimensions, which are nominal values.

Pad Configuration:

| | |
|----------------|----------------|
| Input: | 1 |
| Input return: | 10 |
| Output: | 6 |
| Output return: | 5 |
| 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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