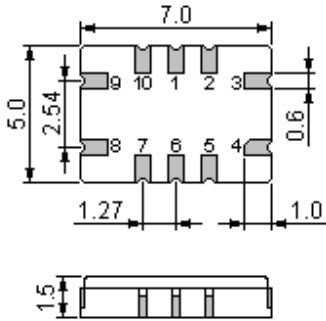


SAW FILTER

Part Number: VTF11059

The **VTF11059** is a low-loss, compact, and economical surface-acoustic-wave (SAW) IF filter in a surface-mount ceramic SMP-03 case with center frequency **110.592 MHz**.

1. Package Dimension (SMP-03)



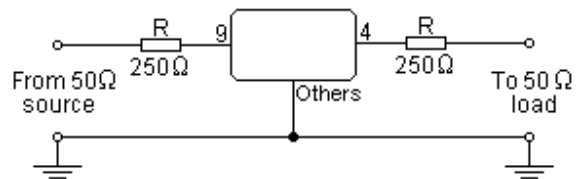
| Pin | Configuration |
|--------|---------------|
| 9 | Input |
| 4 | Output |
| Others | Ground |

2. Marking

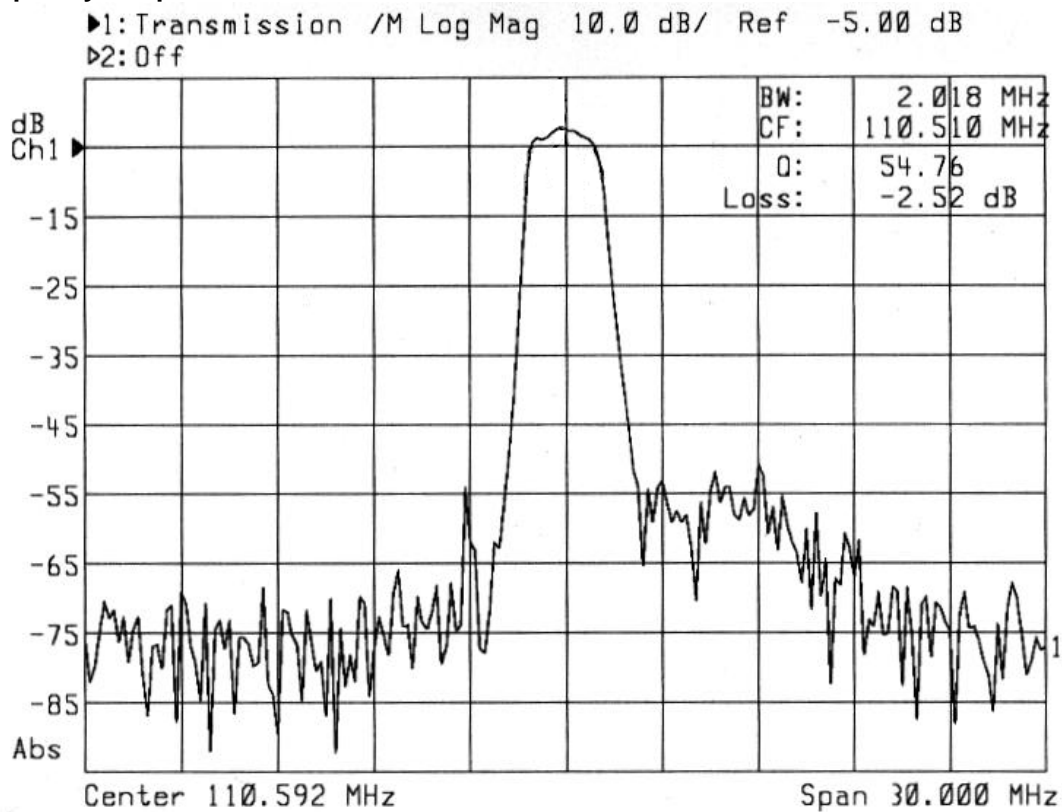
VTF11059

Laser Marking

3. Test Circuit



4. Frequency Response



5. Performance

5-1. Maximum Ratings

| Rating | | Value | Unit |
|----------------------------|-----------|------------|------|
| Input Power Level | P | 0 | dBm |
| DC Voltage | V_{DC} | 3 | V |
| Storage Temperature Range | T_{stg} | -40 to +85 | °C |
| Operable Temperature Range | T_A | -20 to +70 | °C |

5-2. Electronic Characteristics

| Characteristic | | Minimum | Typical | Maximum | Unit |
|---|----------------|---------------|---------|---------|------|
| Nominal Center Frequency | f_C | -- | 110.592 | -- | MHz |
| User Signal Band | BW | -- | ±576 | -- | kHz |
| Insertion Loss | IL | -- | 3.5 | 4.5 | dB |
| Relative Attenuation (relative to IL) | α_{rel} | | | | |
| 1) $f_C - 5.0\text{MHz}$ | | 50 | 62 | -- | dB |
| 2) $f_C - 3.5\text{MHz}$ | | 42 | 50 | -- | dB |
| 3) $f_C \pm 2.0\text{MHz}$ | | 30 | 40 | -- | dB |
| 4) $f_C + 3.5\text{MHz}$ | | 40 | 52 | -- | dB |
| 5) $f_C + 5.0\text{MHz}$ | | 40 | 50 | -- | dB |
| Group delay ripple (p-p) $f_C - 576\text{ kHz} \dots f_C + 576\text{ kHz}$ | $\Delta \tau$ | -- | 0.4 | 0.7 | μs |
| Input / Output Impedance (Nominal) | | 300Ω // 1.2μH | | | |

ⓘ CAUTION: Electrostatic Sensitive Device. Observe precautions for handling!

1. The frequency f_C is defined as the midpoint between the 3dB frequencies.
2. Unless noted otherwise, all measurements are made with the filter installed in the specified test fixture that is connected to a 50Ω test system with VSWR≤1.2:1. The test fixture L and C are adjusted for minimum insertion loss at the filter center frequency, f_C . Note that insertion loss, bandwidth, and passband shape are dependent on the impedance matching component values and quality.
3. Unless noted otherwise, specifications apply over the entire specified operating temperature range.
4. The specifications of this device are based on the test circuit shown above and subject to change or obsolescence without notice.
5. All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.
6. Our liability is only assumed for the Surface Acoustic Wave (SAW) component(s) per se, not for applications, processes and circuits implemented within components or assemblies.
7. For questions on technology, prices and delivery, please contact our sales offices or e-mail info@v-torch.com