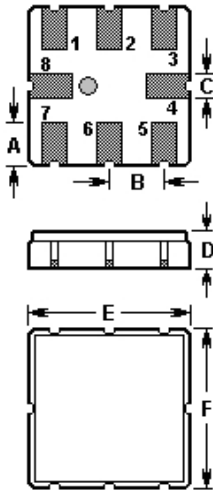


SAW FILTER

Part Number: VTF10906

The **VTF10906** is a low-loss, compact, and economical surface-acoustic-wave (**SAW**) RF filter in a surface-mount ceramic **QCC8B** case for digital set top box.

1. Package Dimension (QCC8B)



| Pin | Configuration |
|------|----------------|
| 1, 2 | Input |
| 5, 6 | Output |
| 3, 7 | To be grounded |
| 4, 8 | Case Ground |

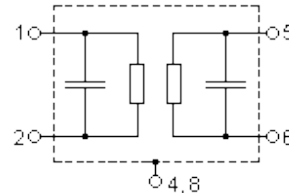
| Sign | Data (unit: mm) | Sign | Data (unit: mm) |
|------|-----------------|------|-----------------|
| A | 1.00 | D | 1.50 |
| B | 1.27 | E | 3.80 |
| C | 0.60 | F | 3.80 |

2. Marking

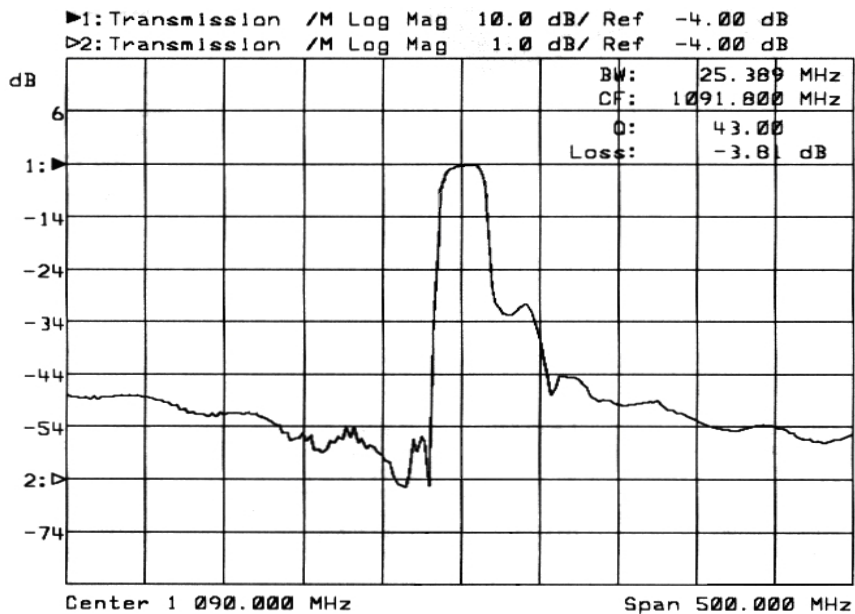
VTF
10906

Laser Marking

3. Equivalent LC Model



4. Typical Frequency Response



5. Performance

5-1. Maximum Ratings

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

5-2. Electronic Characteristics

| Characteristic | | Min. | Typ. | Max. | Unit |
|---|--|--------------------------------------|--------------------------------------|------|----------|
| Center Frequency | f_C | | 1090.0 | | MHz |
| Minimum Insertion Loss | IL_{min} 1084.00 1096.00 MHz | 3.5 | 4.0 | 5.5 | dB |
| Ripple in passband | $\Delta\alpha$ 1084.00 1096.00 MHz | | 1.0 | 3.0 | dB |
| Relative attenuation (relative to IL_{min}) | α_{rel} 840.00 $f_C - 75.00$ MHz $f_C - 75.00$ $f_C - 30.00$ MHz $f_C + 30.00$ $f_C + 60.00$ MHz $f_C + 60.00$ $f_C + 175.00$ MHz $f_C + 175.00$ 1340.00 MHz | 36.0 44.0 22.0 35.0 42.0 | 42.0 50.0 27.0 40.0 50.0 | | dB |
| Input / Output Impedance (Nominal) | | -- | 50 | -- | Ω |

⚠ 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 50 Ω test system with VSWR \leq 1.2:1.
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@vtorch.ca