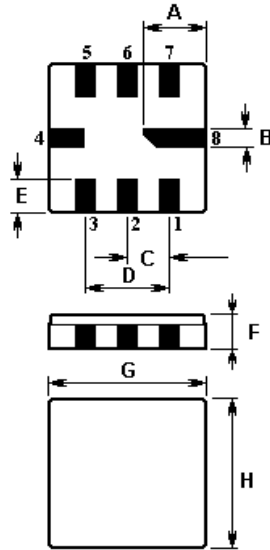


The **ACTF1459/914.0-959.0/QCC8C** is a low-loss, compact and economical surface-acoustic-wave (**SAW**) filter in a surface-mount ceramic **QCC8C** case. It is designed as RF duplexer for cordless telephone CT1. Centre frequency is **914.500/959.500** MHz.

### 1.Package Dimension (QCC8C)

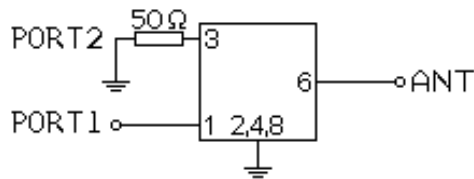


### 2.

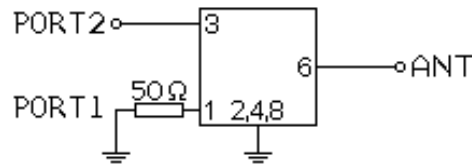
| Pin | Configuration        |
|-----|----------------------|
| 6   | Ant                  |
| 1   | Port 1 (Rx/Tx)       |
| 3   | Port 2 (Tx/Rx)       |
| 5,7 | Ant - Ground         |
| 2   | Port 1 - Ground      |
| 4,8 | Case / Port 2-Ground |

| Sign | Data (unit: mm) | Sign | Data (unit: mm) |
|------|-----------------|------|-----------------|
| A    | 2.08            | E    | 1.20            |
| B    | 0.60            | F    | 1.35            |
| C    | 1.27            | G    | 5.00            |
| D    | 2.54            | H    | 5.00            |

### 3. Test Circuit



Between Port1 and Antenna



Between Port2 and Antenna

### 4.Features

- I Compact RF duplexer for cordless telephone CT1
- I No matching network required for operation at 50.
- I Ceramic package for Surface Mounted Technology (SMT)

In keeping with our ongoing policy of product evolution and improvement, the above specification is subject to change without notice.

**ISO9001: 2000 Registered - Registration number 6830/2**

**For quotations or further information please contact us at:**

**3 The Business Centre, Molly Millars Lane, Wokingham, Berks, RG41 2EY, UK**

<http://www.actcrystals.com>

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## 5.Performance

### 5-1.Maximum Ratings

| ITEM                        | SYMBOL    | RATING    | UNIT |
|-----------------------------|-----------|-----------|------|
| Input Power                 | $P_{in}$  | 15        | dBm  |
| DC Voltage                  | $V_{DC}$  | 3         | V    |
| Operating Temperature Range | $T_{opr}$ | -10 ~ +55 | °C   |
| Storage Temperature Range   | $T_{stg}$ | -40 ~ +85 | °C   |

### 5-2.Electronic Characteristics

| Characteristic                       |                | Minimum | Typical | Maximum | Units |
|--------------------------------------|----------------|---------|---------|---------|-------|
| Centre frequency                     | $f_c$          | —       | 959.500 | —       | MHz   |
| Port 1                               |                | —       | 914.500 | —       | MHz   |
| Port 2                               |                | —       |         | —       |       |
| Maximum Insertion attenuation        | $\alpha_{MAX}$ | —       | 3.5     | 4.5     | dB    |
| Port1: 959.000...960.000 MHz         |                | —       | 3.5     | 4.5     | dB    |
| Port2: 914.000...915.000 MHz         |                | —       |         |         |       |
| Amplitude ripple(p-p)                |                | —       | 0.7     | 2.0     | dB    |
| Port 1: 959.000...960.000 MHz        |                | —       | 0.7     | 2.0     | dB    |
| Port 2: 914.000...915.000 MHz        |                | —       |         |         |       |
| Absolute attenuation Port 1          | $\alpha$       | 30      | 35      | —       | dB    |
| 914.000...915.000 MHz                |                |         |         |         |       |
| Absolute attenuation Port 2          | $\alpha$       | 30      | 35      | —       | dB    |
| 959.000...960.000 MHz                |                |         |         |         |       |
| Temperature coefficient of frequency | $T_{Cf}$       | —       | -30     | —       | ppm/K |

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

1. Unless noted otherwise, all measurements are made with the filter installed in the specified test fixture that is connected to a 50  $\Omega$  test system with VSWR $\leq$ 1.2:1. The test fixture L and C are adjusted for minimum insertion loss at the filter centre frequency,  $f_c$ . Note that insertion loss, bandwidth, and passband shape are dependent on the impedance matching component values and quality.
2. Unless noted otherwise, specifications apply over the entire specified operating temperature range.
3. The specifications of this device are based on the test circuit shown above and subject to change or obsolescence without notice.
4. All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.
5. 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.

In keeping with our ongoing policy of product evolution and improvement, the above specification is subject to change without notice.

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