



# 885075

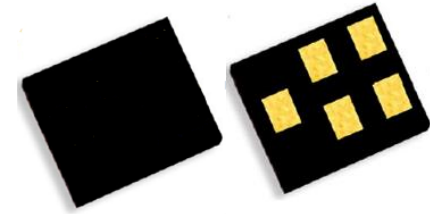
## 2300-2400 MHz Tx/Rx Filter

### Product Overview

The 885075 is a high-performance, high power Bulk Acoustic Wave (BAW) Tx/Rx filter designed to meet the strict LTE rejection requirements for use in B40.

The 885075 is specifically designed to meet the high performance expectations of insertion loss and rejection for LTE transmit systems under all operating conditions.

The 885075 uses common module packaging techniques to achieve the industry standard 1.1 x 0.9 x 0.50 mm footprint. The filter exhibits excellent power handling capabilities.

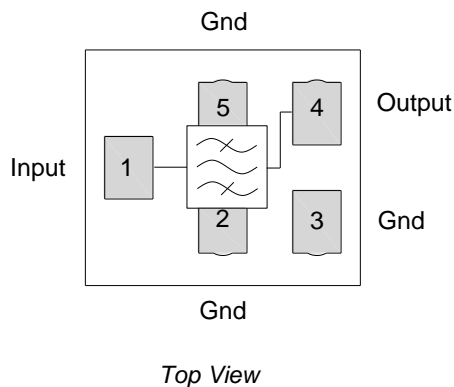


1.1 x 0.9 x 0.50 mm

### Key Features

- Highly selective BAW filter achieving low insertion loss over full bandwidth and operating conditions
- Excellent WiFi Rejection
- Performance -20 to +90 °C
- RoHS Compliant, Pb-free Module Package

### Functional Block Diagram



### Applications

- For Band 40 TD-LTE applications

### Ordering Information

| Part Number | Description      |
|-------------|------------------|
| 885075      | Packaged part    |
| 885075-EVB  | Evaluation board |

Standard T/R size = 15,000 units/reel

# 885075

## 2300-2400 MHz Tx/Rx Filter

### Absolute Maximum Ratings

| Parameter                   | Conditions              | Rating       |
|-----------------------------|-------------------------|--------------|
| Operable Temperature        |                         | -20 to +90°C |
| Storage Temperature         |                         | -40 to +90°C |
| RF Input Power (Pin 1)      | CW, +55°C for 5K hours  | +29dBm       |
| Peak RF Input Power (Pin 1) | Max duration of 0.5sec. | +37dBm       |
|                             |                         |              |

Operation of this device outside the parameter ranges given above may cause permanent damage.

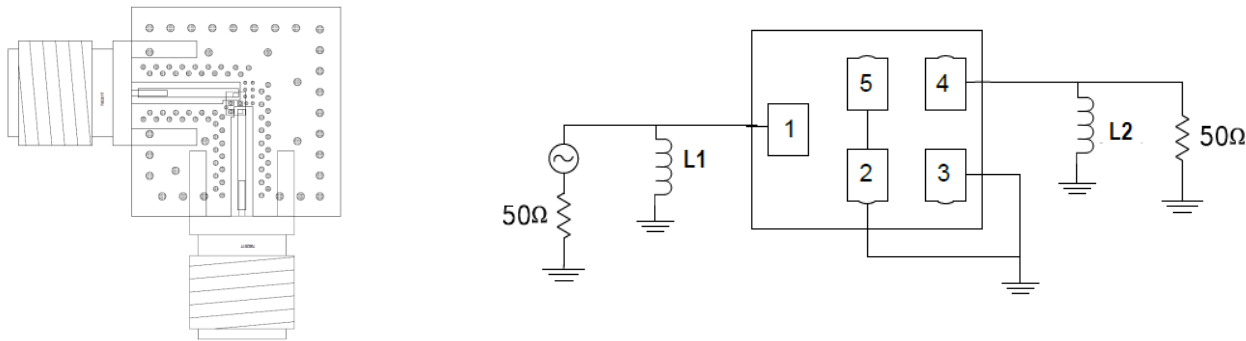
### Electrical Specifications <sup>(1)</sup>

| Parameter       | Conditions                            | Min. | Typ.               | Max.  | Units |
|-----------------|---------------------------------------|------|--------------------|-------|-------|
| Insertion Loss  | 2300 – 2395 MHz                       | -    | 1.2 <sup>(2)</sup> | 2.6   | dB    |
|                 | 2300 – 2395 MHz Integrated over 5 MHz | -    | 2.2                | -     | dB    |
|                 | 2395 – 2400 MHz                       | -    | 2.0 <sup>(2)</sup> | 3.0   | dB    |
| VSWR (ANT)      | 2300 – 2400 MHz                       | -    | 1.4:1              | 2.0:1 |       |
| VSWR (TX)       | 2300 – 2400 MHz                       | -    | 1.4:1              | 1.8:1 |       |
| Passband Ripple | 2300 – 2400 MHz                       | -    | 1.1                | 1.7   | dB    |
| Attenuation     | 10 – 1574 MHz                         | 31   | 34                 | -     | dB    |
|                 | 703 – 748 MHz                         | 40   | -                  | -     |       |
|                 | 1574 – 1577 MHz                       | 31   | 36                 | -     | dB    |
|                 | 1577 – 1680 MHz                       | 31   | 30                 | -     | dB    |
|                 | 1710 – 1785 MHz                       | 29   | -                  | -     |       |
|                 | 1805 – 2170 MHz                       | 25   | -                  | -     |       |
|                 | 1845 – 1880 MHz                       | 27   | 29.5               | -     | dB    |
|                 | 2110 – 2170 MHz                       | 25   | 26                 | -     | dB    |
|                 | 2427 – 2460 MHz                       | 45   | -                  | -     |       |
|                 | 2460 – 2500 MHz                       | 36   | 46                 | -     | dB    |
|                 | 4600 – 4800 MHz                       | 30   | 34                 | -     | dB    |
|                 | 6900 – 7200 MHz                       | 30   | 39                 | -     | dB    |
|                 | WiFi Channels 5 <sup>(3)</sup>        | 34   | 46                 | -     | dB    |
|                 | WiFi Channels 6 – 13 <sup>(3)</sup>   | 40   | 51                 | -     | dB    |
|                 | 2422 – 7200 MHz <sup>(3)</sup>        | 20   | -                  | -     | dB    |
| H2              | 2300 – 2400 MHz <sup>(4)</sup>        | -    | -35                | -     | dBm   |

Notes:

1. All specifications are based on the TriQuint schematic for the main reference design shown on page 3. Min/max is being specified over -20 to +90 °C.
2. Typical values are derived through integration of the linear s-parameter over the indicated band at +25 °C.
3. Integration of linear s-parameters over an 18MHz sliding frequency span.
4. H2 is measured for Pin=28 dBm (CW) at room temperature.

Application Circuit Schematic and Layout



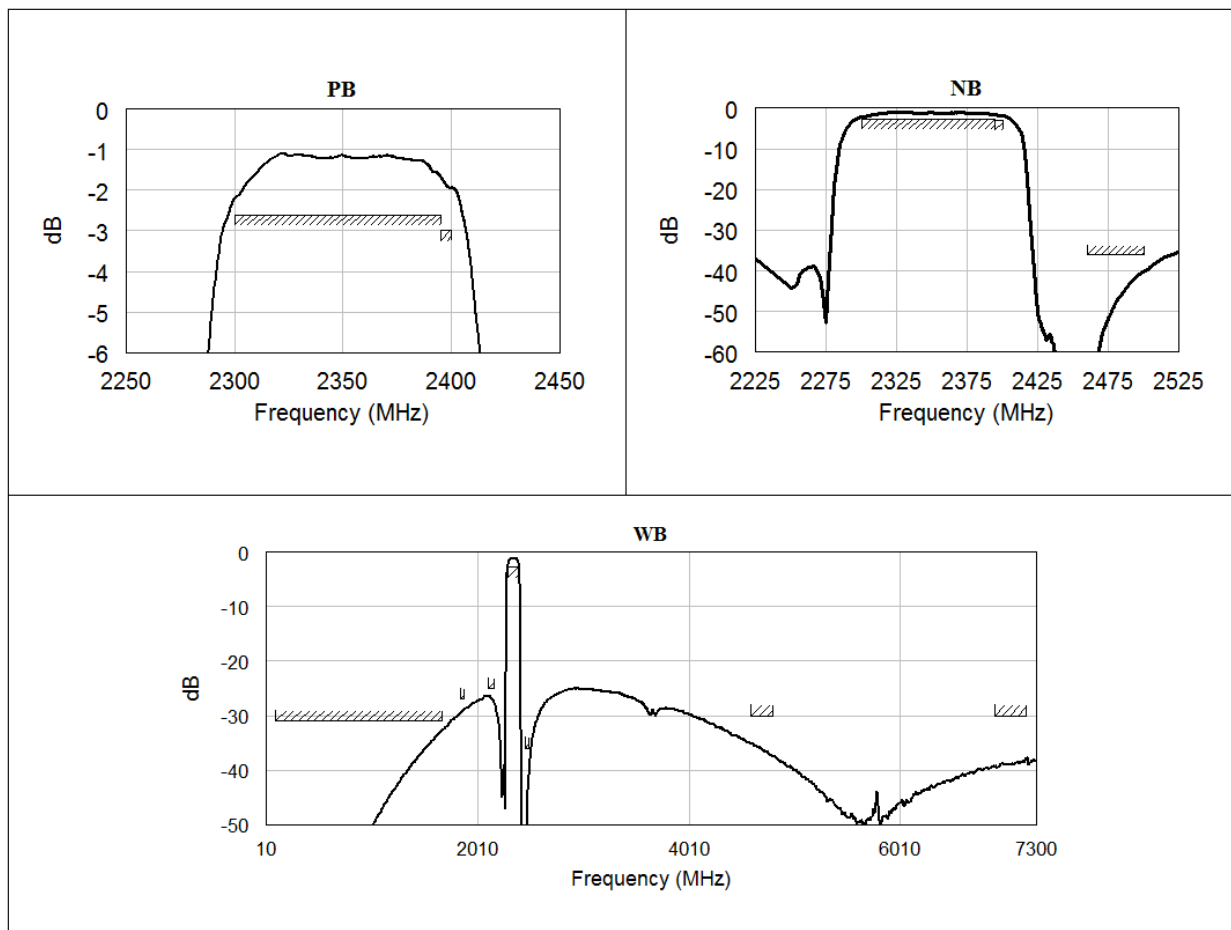
Notes: Matching component values shown are for the specified TriQuint evaluation board. Value adjustment may be required in end user product circuits depending on component manufacturer and PCB material.

Bill of Material

| Ref. Des. | Value  | Description                | Manuf.           | Part number   |
|-----------|--------|----------------------------|------------------|---------------|
| PCB       | N/A    | 3 layer                    | Multiple         |               |
| U1        | N/A    | 2300-2400 MHz Tx/Rx Filter | TriQuint         | 885075        |
| L1        | 3.4 nH | Chip Inductor, 0201, ±2%   | Murata           |               |
| L2        | 3.4 nH | Chip Inductor, 0201, ±2%   | Murata           |               |
| SMA       | N/A    | SMA connector              | Radiall USA Inc. | 9602-1111-018 |

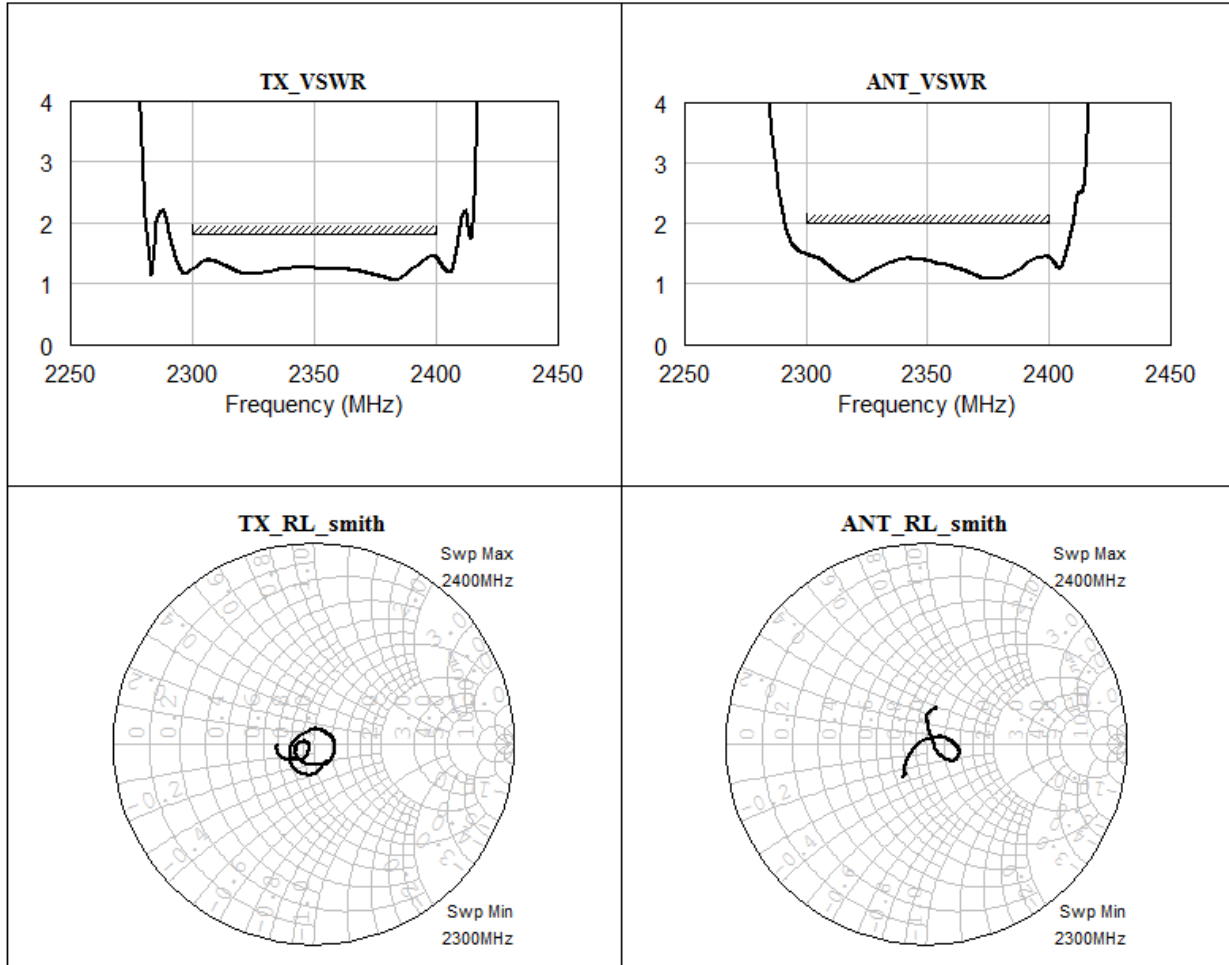
## Performance Plots

Test conditions unless otherwise noted: Temp. = +25°C

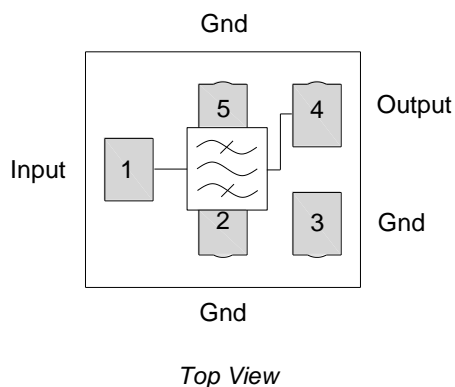


## Performance Plots (cont'd)

Test conditions unless otherwise noted: Temp. = +25°C

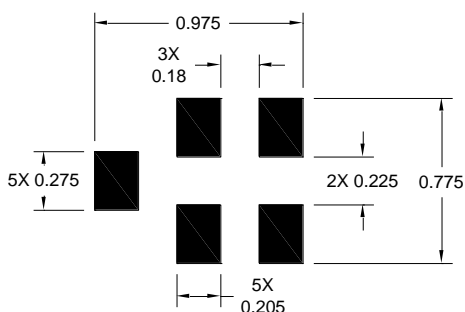


## Pin Configuration and Description



| Pin Number | Label  | Description              |
|------------|--------|--------------------------|
| 1          | Input  | B40 TX Input / Rx Output |
| 4          | Output | B40 Ant                  |
| 2,3,5      | Ground | Ground                   |

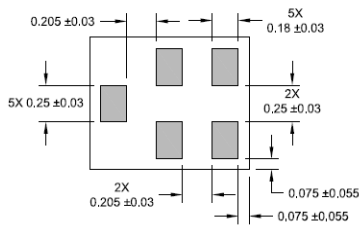
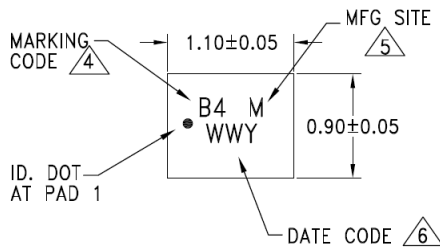
## PCB Mounting Pattern



### Notes:

1. All dimensions are in millimeters. Angles are in degrees.
2. This drawing specifies the mounting pattern used on the Qorvo evaluation board for this product. Some modification may be necessary to suit end user assembly materials and processes.

## Mechanical Information



Package Style: CSP

Dimensions: 1.1 x 0.9 x 0.50 mm

Package for Surface Mount Technology

Terminations: Au plating 0.5 - 1.0µm, over a 2- 6µm Ni Plating

Approximate weight 1.37mg.

Marking Code uniquely identifies Part Number

M = Manufacturing site (Blank for Apopka, C for Costa Rica)

Date code consists of:

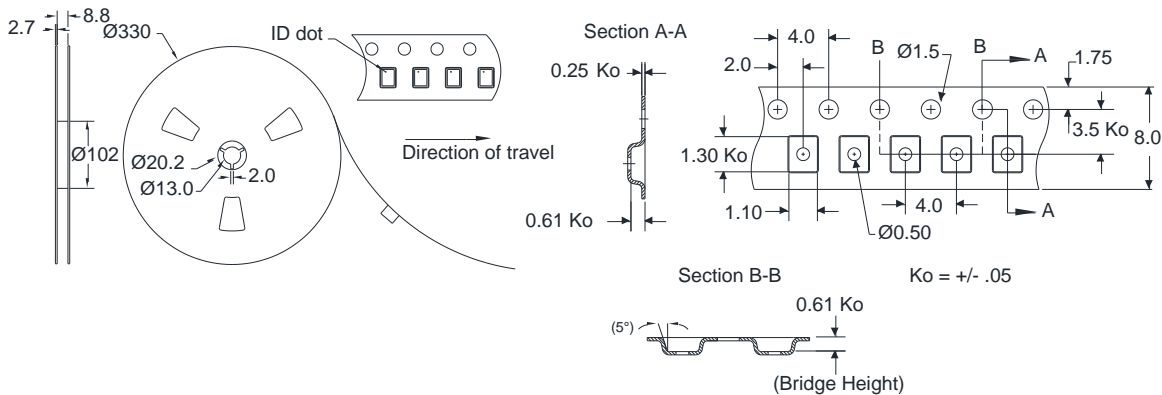
WW = 2 digit week,

Y = last digit of year

An asterisk (\*) in front of the marking code indicates prototype

Note: All dimensions are in millimeters. Angles are in degrees

## Tape and Reel Information



Standard T/R size=15,000 units/reel. All dimensions are in millimeters.

## Handling Precautions

| Parameter                        | Rating   | Standard               |
|----------------------------------|----------|------------------------|
| ESD – Human Body Model (HBM)     | Class 1C | ESDA/JEDEC JS-001-2012 |
| ESD – Charged Device Model (CDM) | Class C3 | JEDEC JESD22-C101F     |
| MSL – Moisture Sensitivity Level | Level 3  | IPC/JEDEC J-STD-020    |



Caution!

ESD sensitive device

## Solderability

Compatible with the latest version of J-STD-020, lead free solder, 260°C.

Refer to [Soldering Profile](#) for recommended guidelines.

## RoHS Compliance

This part is compliant with the 2011/65/EU RoHS directive (Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment), as amended by Directive 2015/863/EU.

This product also has the following attributes:

- Halogen Free (Chlorine, Bromine)
- Antimony Free
- TBBP-A (C<sub>15</sub>H<sub>12</sub>Br<sub>4</sub>O<sub>2</sub>) Free
- PFOS-Free
- SVHC Free

## Contact Information

For the latest specifications, additional product information, worldwide sales and distribution locations:

**Web:** [www.qorvo.com](http://www.qorvo.com)

**Tel:** 1-844-890-8163

**Email:** [customer.support@qorvo.com](mailto:customer.support@qorvo.com)

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