885075

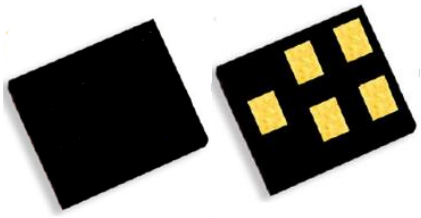
2300-2400 MHz Tx/Rx Filter

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.

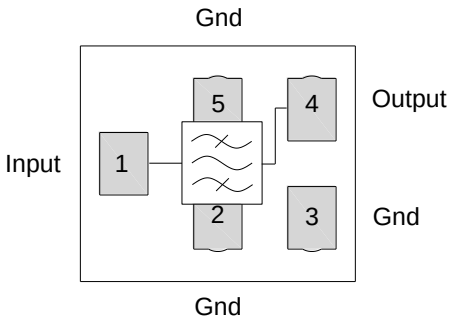


1.1 x 0.9 x 0.50 mm

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



Top View

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

Absolute Maximum Ratings

Parameter	Conditions	Rating
Operable Temperature		-20 to +90℃
Storage Temperature		-40 to +90℃
RF Input Power (Pin 1)	CW, +55℃ 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.

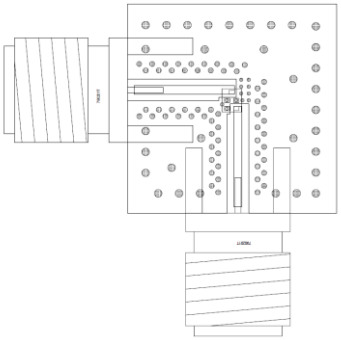
Electrical Specifications (1)

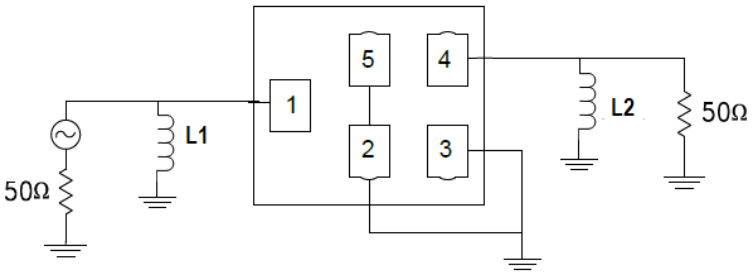
Parameter	Conditions	Min.	Typ.	Max.	Units
Insertion Loss	2300 – 2395 MHz	-	1.2 (2)	2.6	dB
	2300 – 2395 MHz Integrated over 5 MHz	-	2.2	-	dB
	2395 – 2400 MHz	-	2.0 (2)	3.0	dB
VSWR (ANT)	2300 – 2400 MHz	-	1.4:1	2.0:1	
VSWR (TX)	2300 – 2400 MHz	-	1.4:1	1.8:1	
Passband Ripple	2300 – 2400 MHz	-	1.1	1.7	dB
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 (3)	34	46	-	dB
	WiFi Channels 6 – 13 (3)	40	51	-	dB
	2422 – 7200 MHz (3)	20	-	-	dB
H2	2300 – 2400 MHz (4)	-	-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 ºC.
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





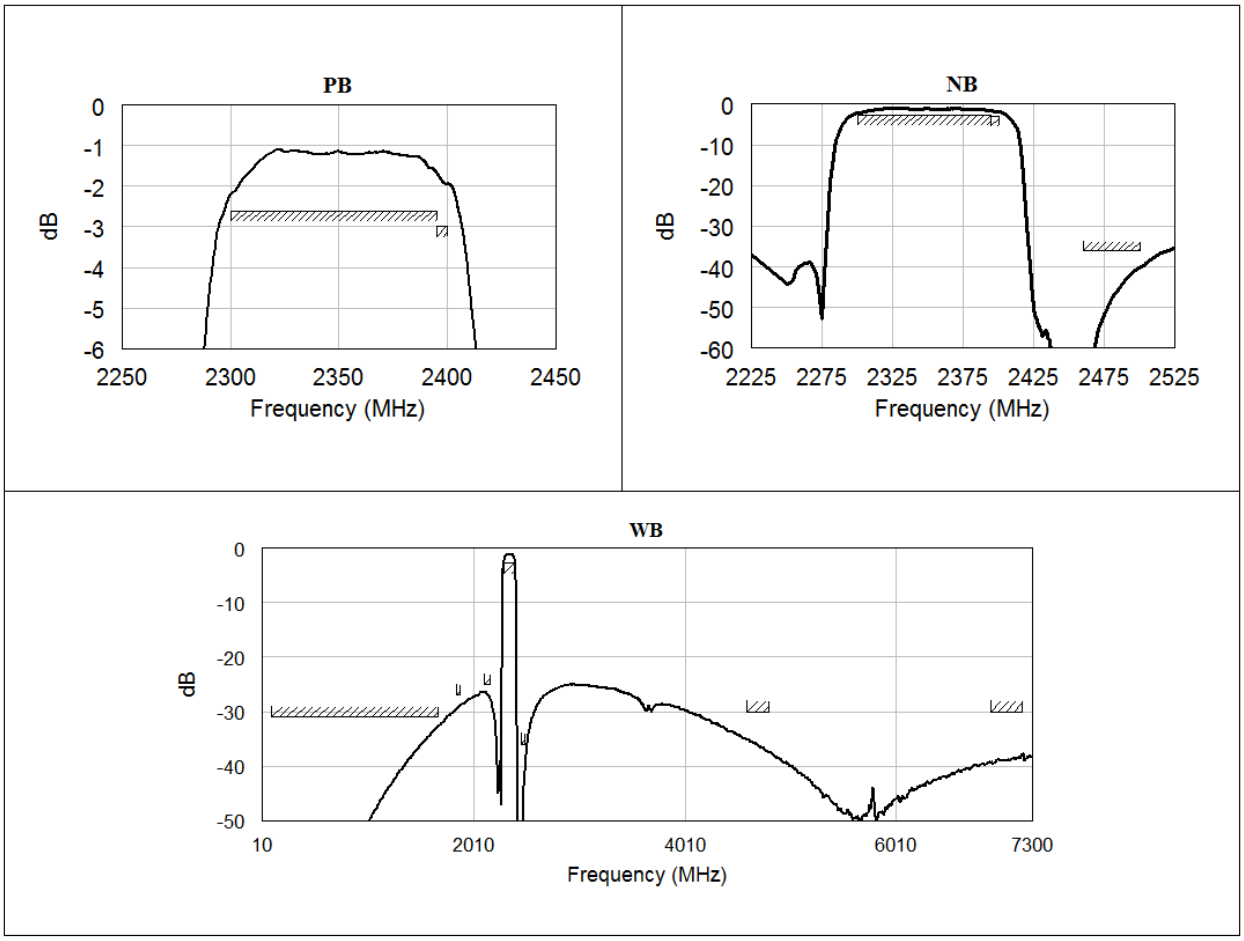
Notes: Matching component values shown are for the specified TriQuint evaluation board. Value adjustment may be required in end user product circuits depending on component manufacturer and PCB material.

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

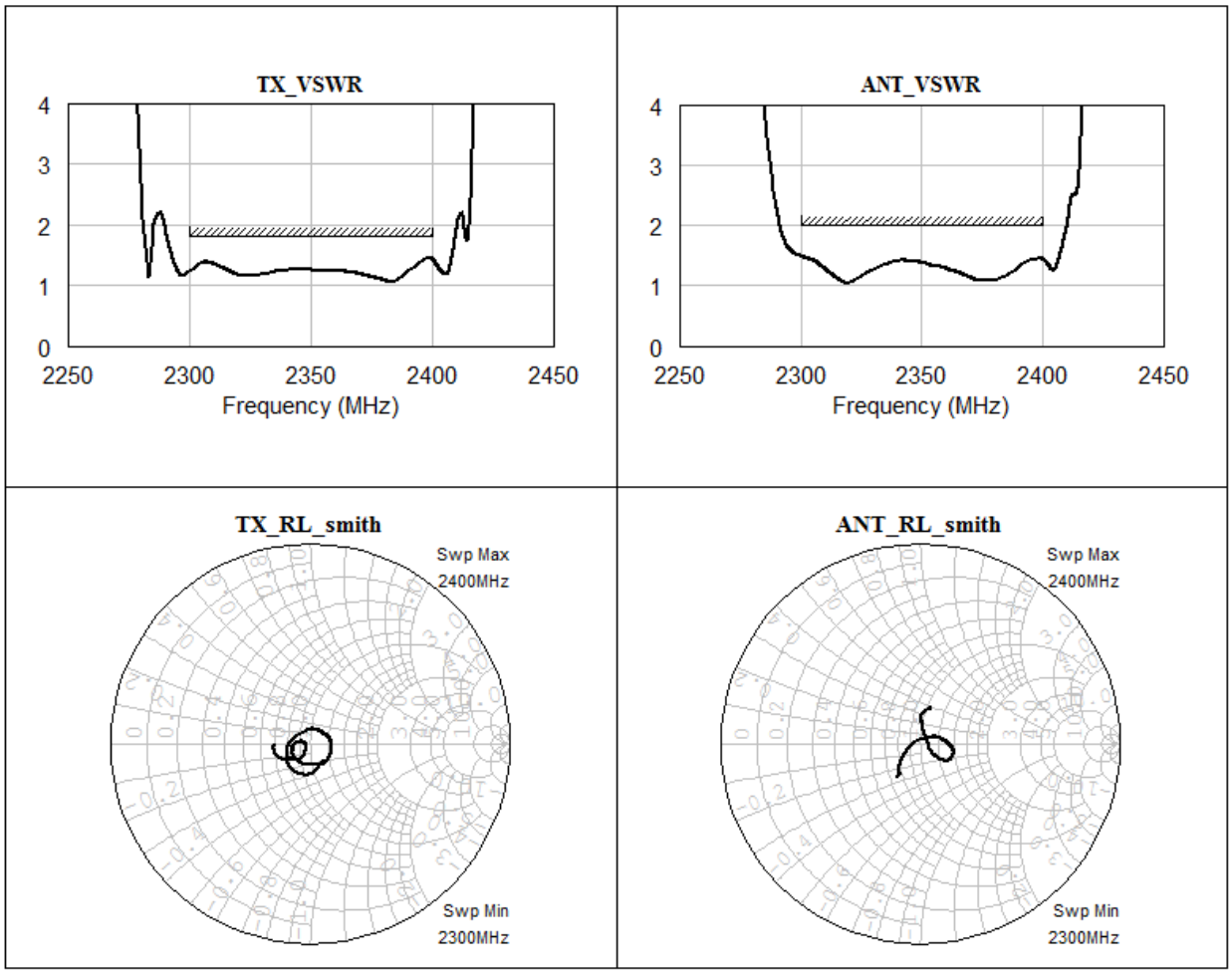
Performance Plots

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

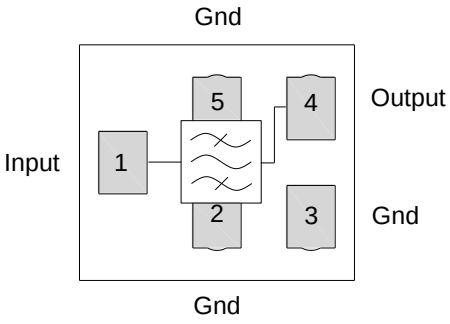


Performance Plots (cont'd)

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



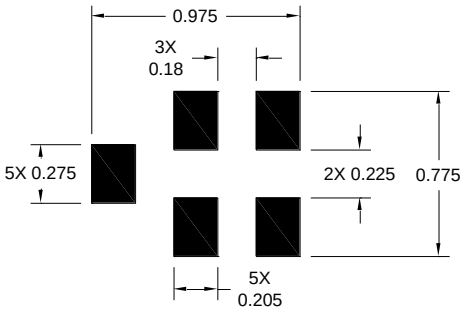
Pin Configuration and Description



Top View

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

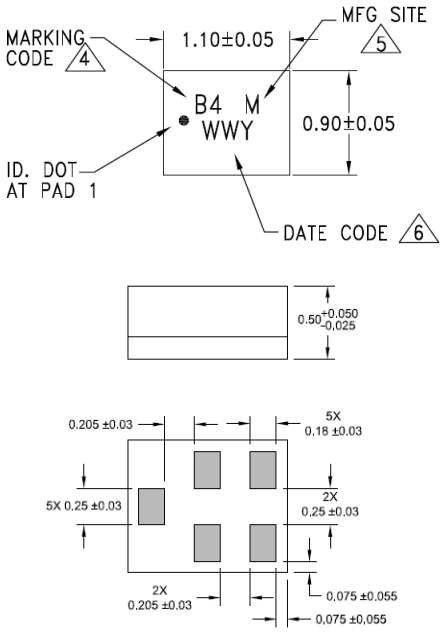
PCB Mounting Pattern



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.

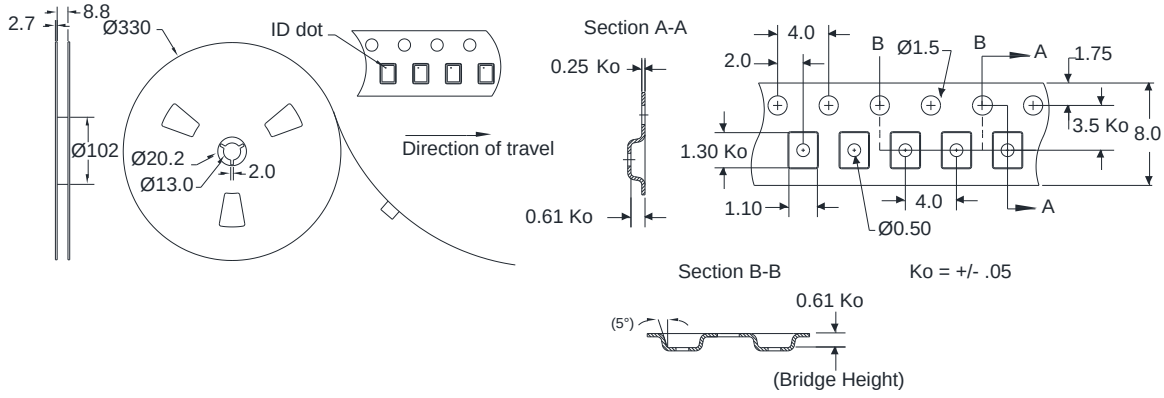
Marking Code uniquely identifies Part Number
M = Manufacturing site (Blank for Apopka, C for Costa Rica)

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 ($C_{15}H_{12}Br_40_2$) Free
- PFOS-Free
- SVHC Free

Contact Information

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

Web: www.qorvo.com

Tel: 1-844-890-8163

Email: customer.support@qorvo.com

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