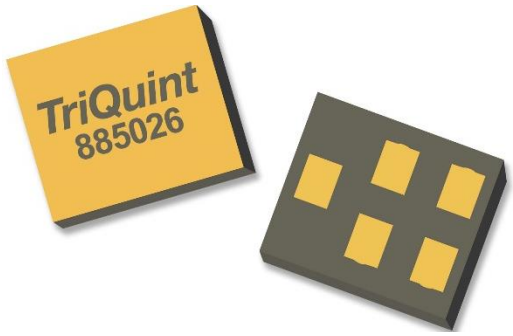
885026
2595 MHz BAW Filter

Product Overview

The 885026 is a high-performance Bulk Acoustic Wave (BAW) filter designed to meet the strict LTE rejection requirements for use in B38.

885026 is specifically designed to meet the high performance expectations of insertion loss and rejection for LTE transmit systems under all operating conditions.

The 885026 uses common module packaging techniques to achieve the industry standard 1.4 x 1.2 x 0.46 mm footprint.

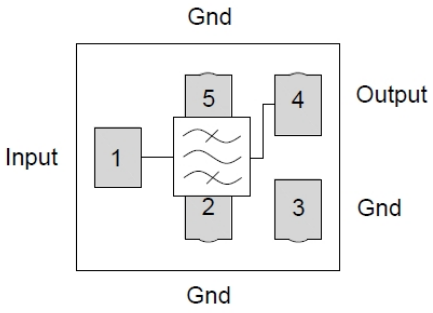


CSP-5BT, 1.4 x 1.2 x 0.46 mm

Key Features

- Highly selective BAW filter achieving low insertion loss over full bandwidth and operating conditions
- Rejection in WLAN band of 40dB minimum
- Rejection in Band 7 Rx band of 10dB minimum
- Performance −20 to +90 ºC
- Ceramic chip-scale Package (CSP)
- Small Size: 1.4 x 1.2 x 0.46 mm
- Hermetically Sealed
- RoHS Compliant, Pb-free

Functional Block Diagram



Top View

Applications

- For Band 38 TD-LTE applications
- B7/B38/B40 LTE handset, data cards, mobile routers

Pin Configuration - Single Ended

Pin No.	Label
1	Input
4	Output
2,3,5	Ground

Ordering Information

Part No.	Description
885026	10,000 pieces on a reel (standard)
885026-EVB	Evaluation Board

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	−40 to +125 °C
Operating Temperature	−20 to +90 °C
RF Input Power, CW, 50 Ω, T=25 °C	+29 dBm

Note: Operation of this device outside the parameter ranges given may cause permanent damage

Life Time Rating

Parameter	Min
RF Input Power +29dBm, CW, In band at 55°C	10,000 hours

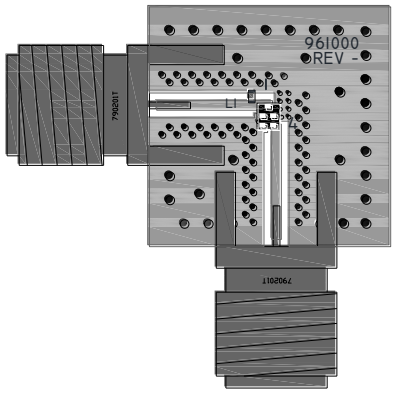
Electrical Specifications (1) (2)

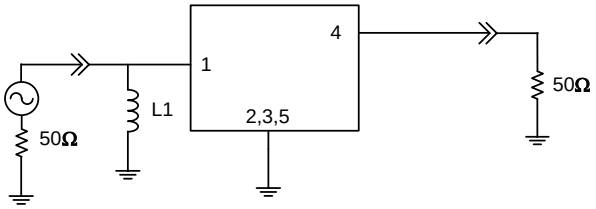
Test conditions unless otherwise noted: (3) Temperature Range − 20 to + 90 °C

Parameter	Conditions	Min	Typ	Max	Units
Center Frequency			2595		MHz
Insertion Loss	2570 – 2620 MHz		1.5	2.5	dB
	2570 – 2620 MHz		1.5	2.1 (4)	dB
Attenuation (5)	10 – 1574 MHz	30	33		dB
	1559 – 1606 MHz	33	34		
	1607 – 2300 MHz	32	34		
	2400 – 2500 MHz	39	41		
	2645 – 2670 MHz	10	16		
	5150 – 5230 MHz	30	39		
	7725 – 7845 MHz	25	32		
Input VSWR			1.6:1	2.0:1	
Output VSWR			1.6:1	2.0:1	
Source/Load Impedance (6)			50		Ω

Notes:
1. All specifications are based on the test circuit shown on page 3
2. Electrical margin has been built into the design to account for the variations due to manufacturing tolerances
3. In production, devices will be tested at room temperature to a guard-banded specification to ensure electrical compliance over temperature
4. At 25°C only
5. Measurement made relative to zero dB
6. This is the optimum impedance in order to achieve the performance shown

Evaluation Board





Note:
1. Top, middle & bottom layers: 1 oz copper
2. Substrates: FR4 dielectric , .031" thick
3. Finish plating: Nickel: 3-8 µm
4. Hole plating: Copper min .0008 µm thick

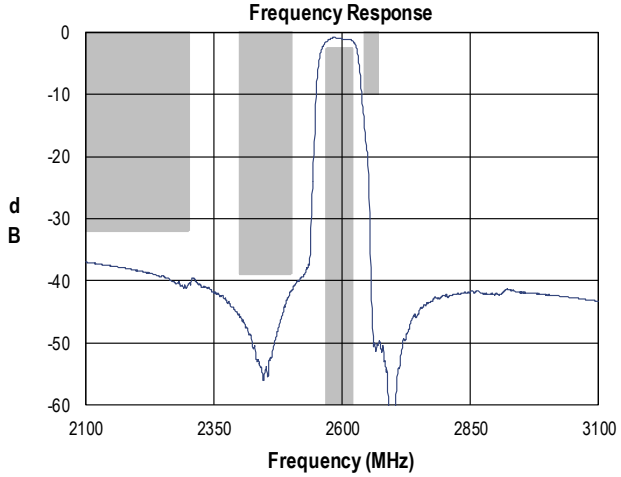
Bill of Material – 885026-EVB

Reference Des.	Value	Description	Manufacture	Part Number
L1	10 nH	Inductor, Coil Wire-wound, 0201, ±2%	Murata	LQP03TN10NH02
SMA		Connector, SMA	Johnson Components	142-0701-801
PCB		PCB, 3-layer	Multiple	961000

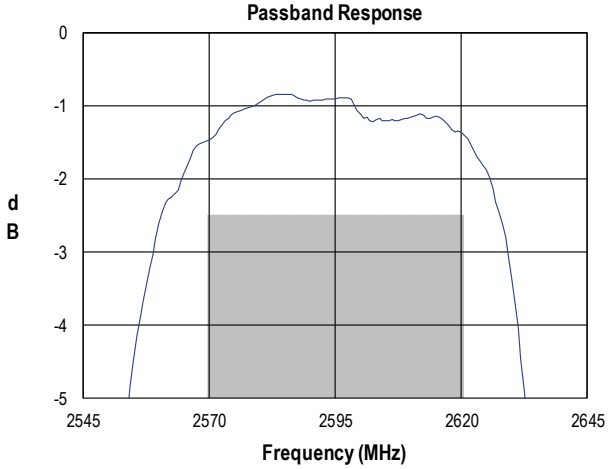
Performance Plots

Test Conditions unless otherwise noted: Temperature = +25 °C

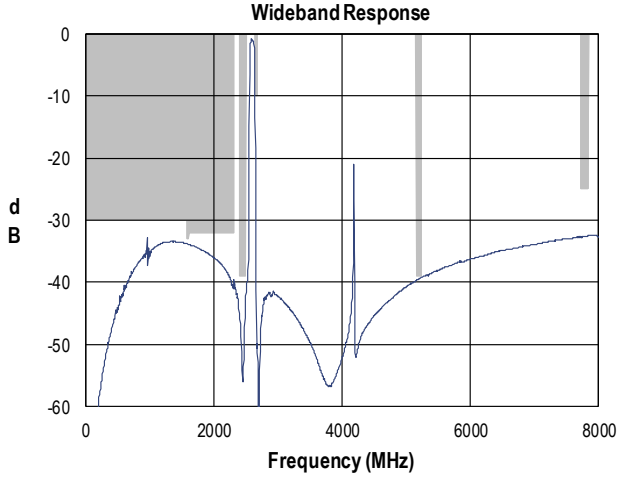
Frequency Response



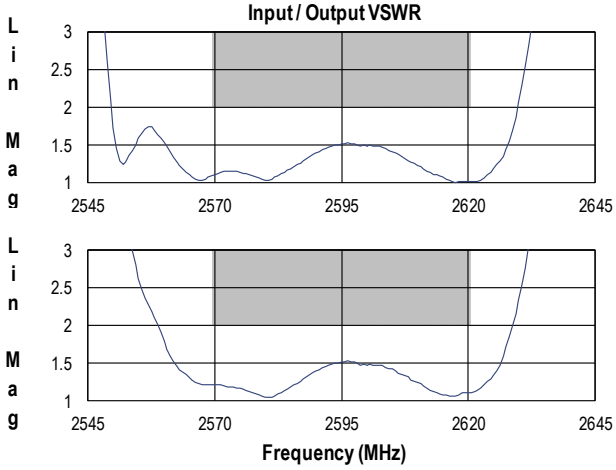
Passband Response



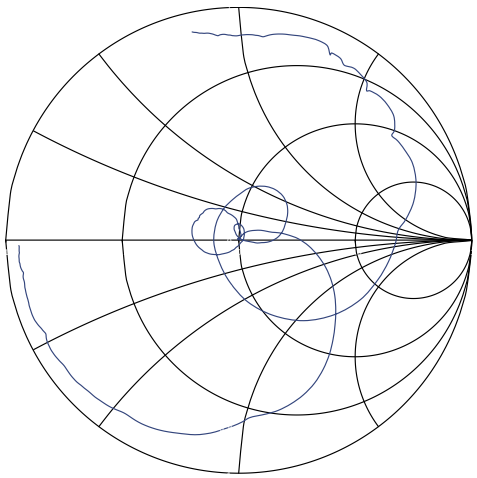
Wideband Response



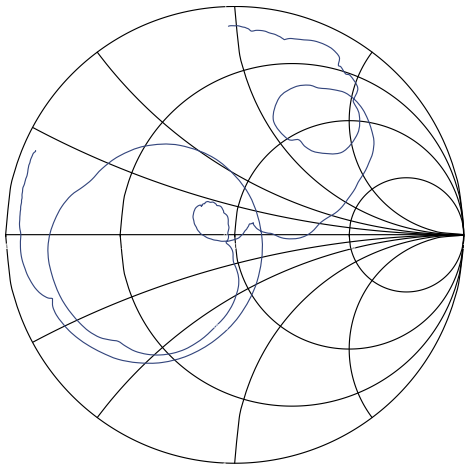
Input / Output VSWR



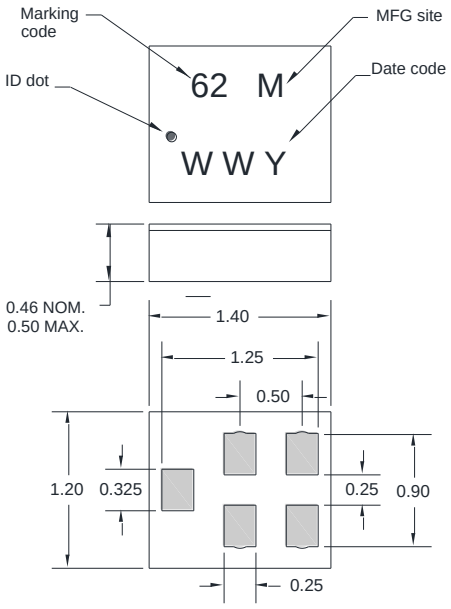
Input Smith Chart



Output Smith Chart



Package Information, Marking and Dimensions



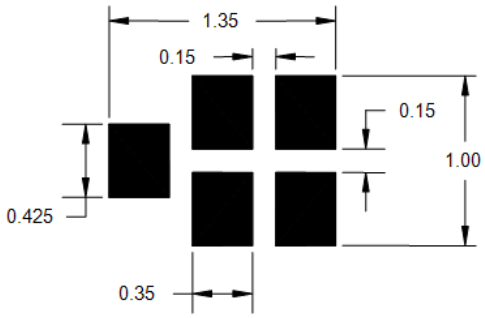
Package Style: CSP-5CT
Dimensions: 1.4 x 1.2 x 0.46 mm

Body: Al_2O_3 ceramic
Lid: *Kovar* or *Alloy 42*, *Au* over *Ni* plated
Terminations: *Au* plating 0.5 - 1.0µm, over a 2-6µm *Ni* plating

The date code consists of: WW = 2 digit week,
Y = last digit of year, M = manufacturing site code

Notes:
1. All dimensions shown are typical in millimeters.
2. All tolerances are ±0.05mm except overall length and width ±0.10mm.
3. An asterisk (*) in front of the marking code indicates prototype.

PCB Mounting Pattern

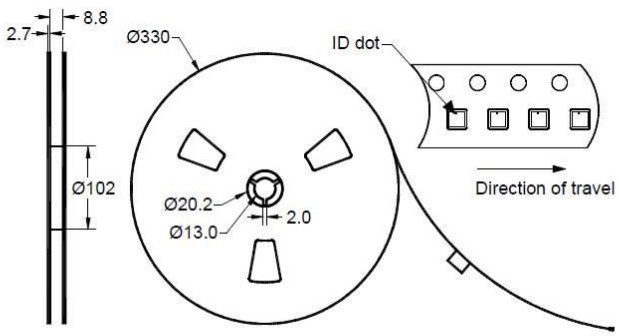


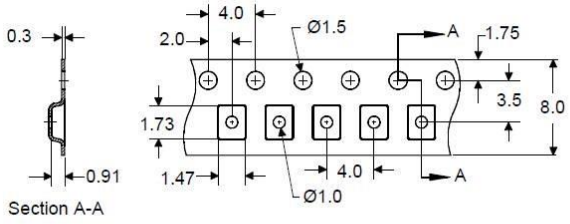
Notes:
1. All dimensions are in millimeters. Angles are in degrees.

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.

Tape and Reel Information

Standard T/R size = 10,000 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 C1	JEDEC JESD22-C101F
MSL – Moisture Sensitivity Level	N/A*	IPC/JEDEC J-STD-020

*Hermetically sealed ceramic package

Caution!
ESD-Sensitive Device

Solderability

Compatible with both lead-free (260°C max. reflow temp.) and tin/lead (245°C max. reflow temp.) soldering processes.
Solder profiles available upon request.

Contact plating: *Au* over *Ni*

RoHS Compliance

This part is compliant with 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:

- Lead Free
- Halogen Free (Chlorine, Bromine)
- Antimony Free
- TBBP-A ($C_{15}H_{12}Br_4O_2$) 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

For technical questions and application information:

Email: appsupport@qorvo.com

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