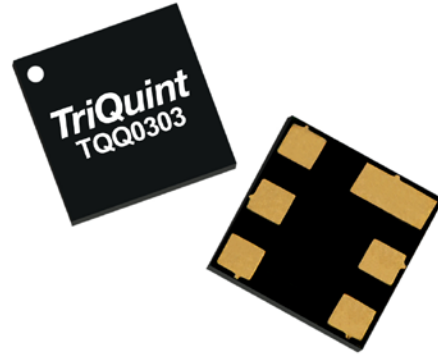


Applications

- Base Station infrastructure
- Repeaters
- General Purpose Wireless

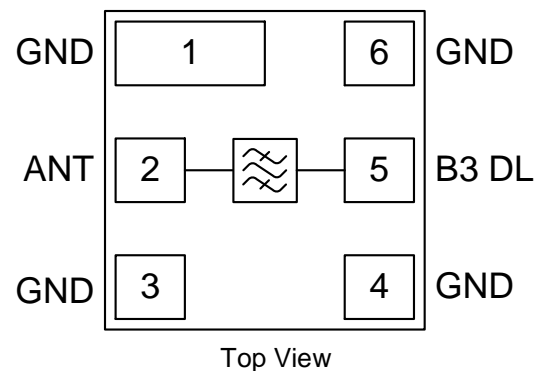


6 Pin 3x3 mm leadless SMT Package

Product Features

- Usable Bandwidth 75 MHz at 1842.5 MHz
- Internally Match for 50 Ohm Operation
- Small Size: 3.00 x 3.00 x 1.07 mm
- Surface Mount Device
- RoHS compliant, Pb-free
- High power handling of 1W

Functional Block Diagram



General Description

The TQQ0303 is an exceptionally high performance BAW filter for the LTE Band 3 downlink. This filter is housed in a compact 3x3 mm package for base station applications.

Low insertion loss, coupled with high attenuation makes this filter an ideal choice for downlink RF filtering needs.

The TQQ0303 is part of TriQuint's extensive portfolio of RF BAW and SAW filters.

Pin Configuration

Pin No.	Label
1,3,4,6	No Connect
2	ANT
5	B3 DL

Ordering Information

Part No.	Description
TQQ0303	BAW B3 DL Filter Module
TQQ0303-PCB	Evaluation board

Standard T/R size = 2500 pieces per reel

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40 to 85°C
RF Input Power ¹ (Pin 2, 5)	+30 dBm

¹ Input Power: CW, at +55 °C for 10,000 hours.

Recommended Operating Conditions

Parameter	Min	Typ	Max	Units
T _{CASE}	0	-	+70	°C

Electrical specifications are measured at specified test conditions.

Electrical Specifications – B3 DL

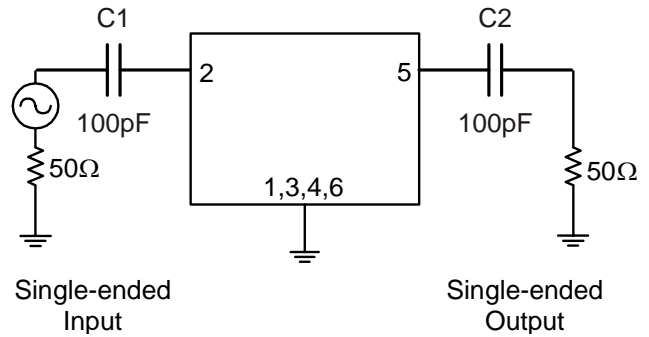
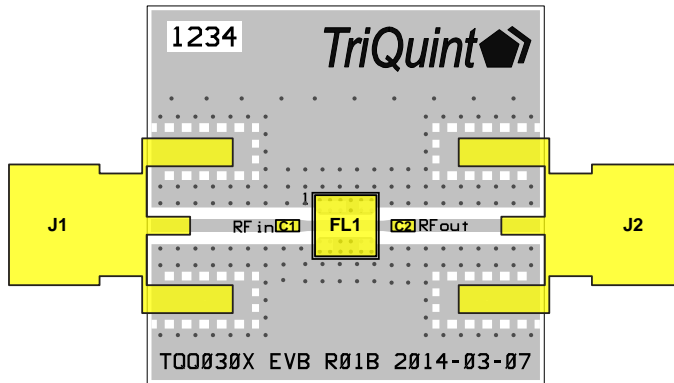
Operating Temperature Range: +0 to +70°C.

Parameter	Conditions	Min	Typ	Max	Units
Center Frequency [fo]		-	1842.5	-	MHz
Insertion Loss	1805 MHz – 1880 MHz	-	2.58	3.8	dB
Amplitude Variation ⁽¹⁾	1805 MHz – 1880 MHz	-	1.6	-	dB
Lower Band Edge ⁽²⁾	Insertion Loss = -15 dB	1795	1796.3	-	MHz
Upper Band Edge ⁽²⁾	Insertion Loss = -15 dB		1894.6	1900	MHz
Absolute Attenuation	500 MHz – 1200 MHz	20	23	-	dB
	1300 MHz – 1770 MHz	22	25	-	dB
	1785 MHz – 1795 MHz	15 ⁽²⁾	23.7	-	dB
	1900 MHz – 1925 MHz	15 ⁽²⁾	30	-	dB
Input Return Loss	1805 MHz – 1880 MHz	8	9.1	-	dB
Output Return Loss	1805 MHz – 1880 MHz	8	10.9	-	dB
Load/Source Impedance		-	50	-	Ω

Notes:

1. Describe the total variation over the defined frequency range
2. At +25°C only.

TQQ0303-PCB Evaluation Board



Bill of Material – TQQ0303-PCB

Reference Des.	Value	Description	Manuf.	Part Number
n/a	n/a	Printed Circuit Board	TriQuint	1124609
U1	n/a	Band 3 Downlink BAW Filter	TriQuint	TQQ0303
C1, C2	100 pF	Cap., Chip, 0402, 5%, 50V, NPO/COG	various	various
J1, J2	n/a	SMA Edge Connector	Johnson	142-0701-851

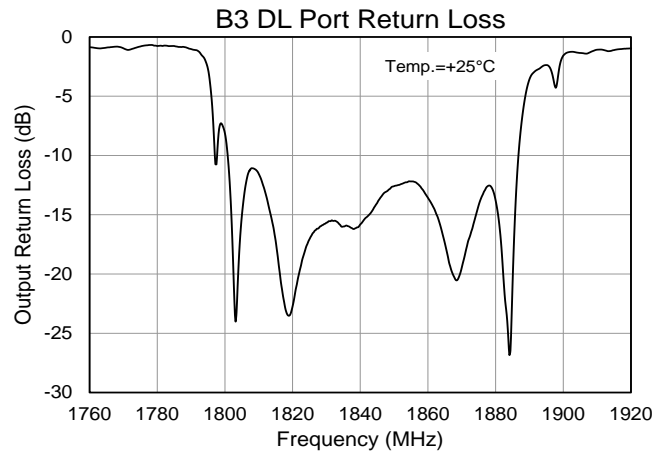
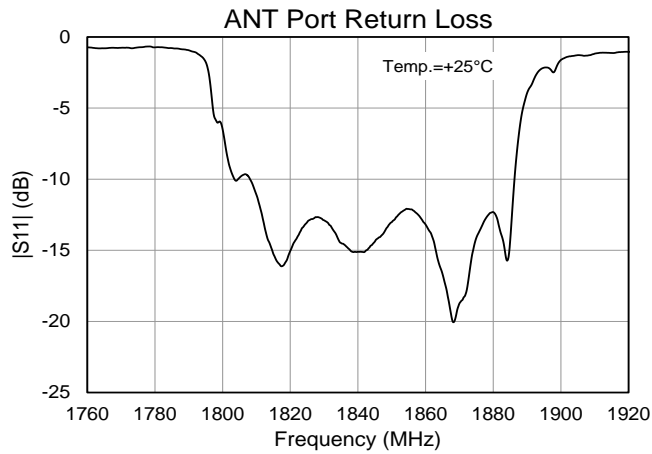
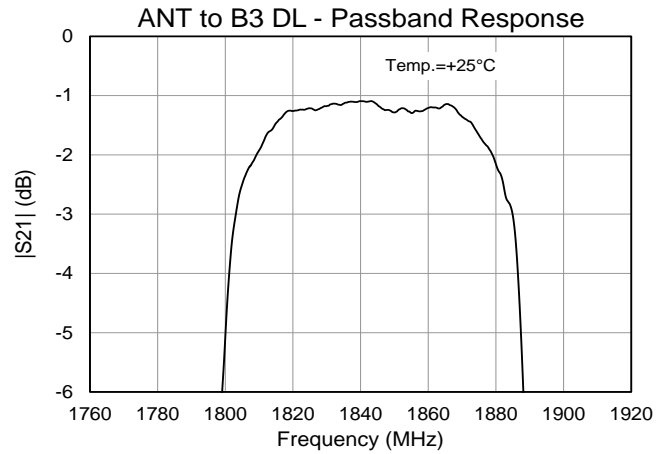
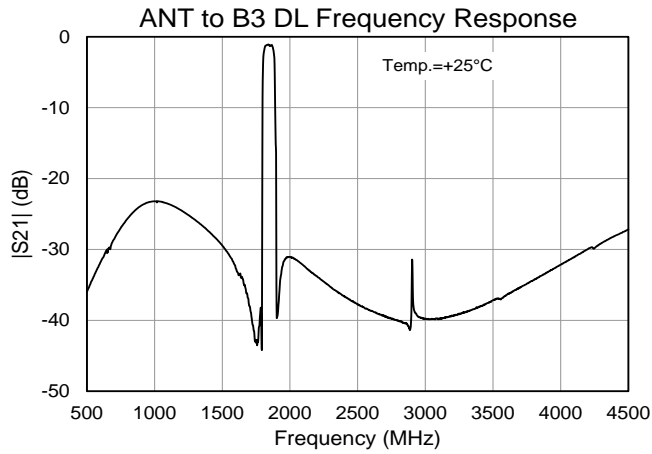
Evaluation Board PCB Information

Top, middle & bottom layers: 1 oz copper

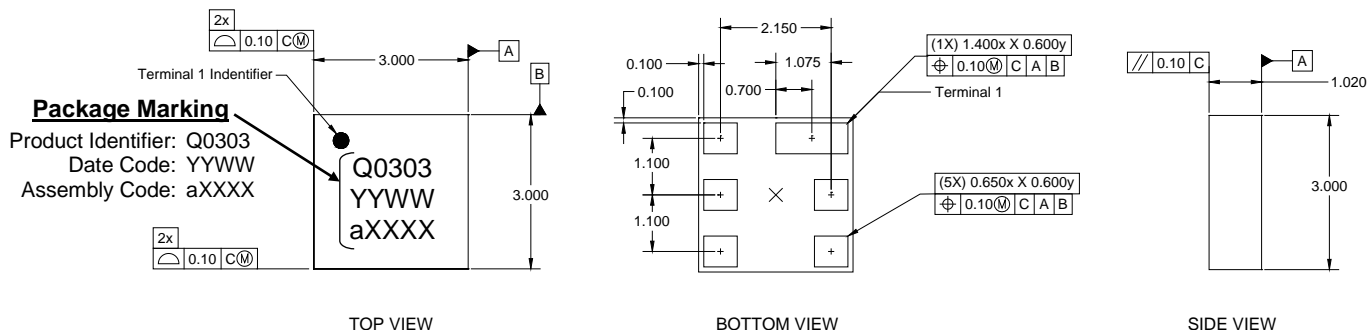
Substrates: FR4 dielectric, 0.0139", 0.028", 0.0139" thick

Performance Plots – Band 3 DL

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



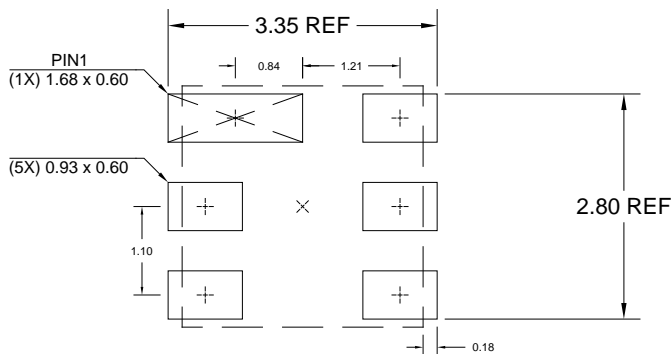
Package Marking and Dimensions



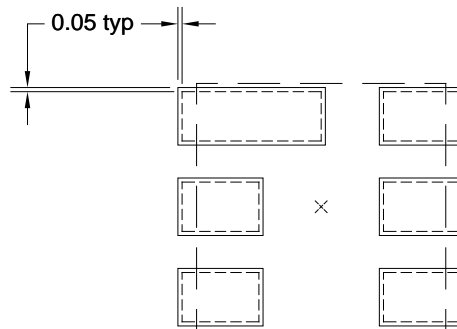
Notes:

1. All dimensions are in millimeters. Angles are in degrees.
2. Except where noted, this part outline conforms to JEDEC standard MO-229.
3. Dimension and tolerance formats conform to ASME Y14.4M-1994.
4. The terminal #1 identifier and terminal numbering conform to JESD 95-1 SPP-012.

PCB Mounting Pattern



Top view recommended land pattern metallization.



Top view recommended land pattern stencil aperture.

Notes:

1. All dimensions are in millimeters. Angles are in degrees.
2. Use 1 oz. copper minimum for top and bottom layer metal.

Product Compliance Information

ESD Sensitivity Ratings



Caution! ESD-Sensitive Device

ESD Rating: Class 1B
Value: Passes > 500 V to < 1000 V
Test: Human Body Model (HBM)
Standard: JEDEC Standard JS-001-2012

ESD Rating: Class B
Value: Passes > 200 V to < 400 V
Test: Machine Model (MM)
Standard: JEDEC Standard JESD22-C101

MSL Rating

MSL Rating: Level 3
Test: 260°C convection reflow
Standard: JEDEC Standard IPC/JEDEC J-STD-020

Solderability

Compatible with both lead-free (260°C maximum reflow temperature) and tin/lead (245°C maximum reflow temperature) soldering processes.

Contact plating: Electrolytic Ni/Au

RoHS Compliance

This part is compliant with EU 2002/95/EC RoHS directive (Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment).

This product also has the following attributes:

- Lead Free
- Halogen Free (Chlorine, Bromine)
- Antimony Free
- TBBP-A (C₁₅H₁₂Br₄O₂) Free
- PFOS Free
- SVHC Free

Contact Information

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

Web: www.triquint.com **Tel:** +1.503.615.9000
Email: info-sales@triquint.com **Fax:** +1.503.615.8902

For technical questions and application information:

Email: sjcappliations.engineering@triquint.com

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