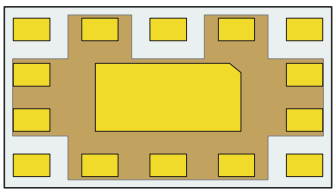
ACFM-2013

Band 1/Band 3 Quadplexer

Product Brief



Description

The Avago Technologies' ACFM-2013 is a quadplexer that combines Band 1 and Band 3 duplexers into a single, miniature package.

The ACFM-2013 features a single antenna connection, which eliminates the need for antenna switching. High isolation between bands enables the use of carrier aggregation.

The ACFM-2013 is designed with Avago Technologies' film bulk acoustic resonator (FBAR) technology. The ACFM-2013 also uses Avago Technologies' innovative microcap bonded-wafer, chip scale packaging technology. This process allows the filters to be assembled in a module with a footprint of only 3.6 mm × 2 mm with a maximum height of 0.80 mm.

Low Tx insertion loss of the ACFM-2013 reduces power amplifier current, which extends battery life. The ACFM-2013 enhances receiver sensitivity and dynamic range with low Rx insertion loss and high rejection of Tx signals at the Rx ports.

The excellent power handling capability of Avago Technologies' FBAR bulk-mode resonators supports the high power levels used in mobile communications devices while adding virtually no distortion.

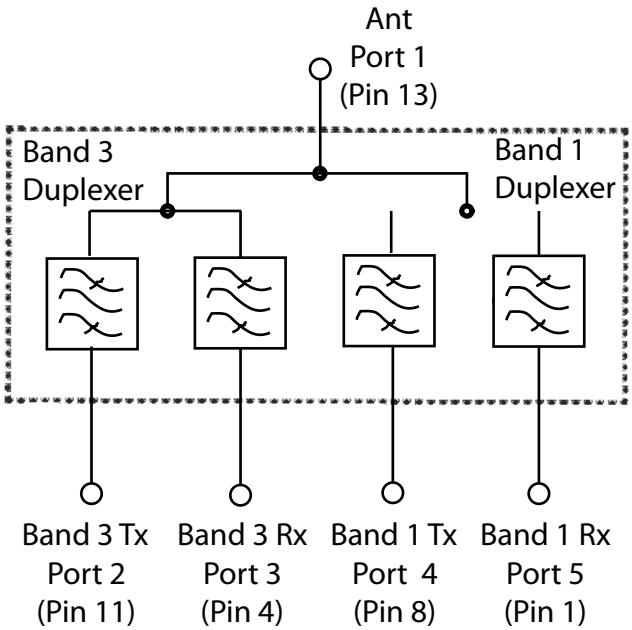
Features

- Single antenna
- Band 1 and Band 3 carrier aggregation
- High cross band isolation
  - Enables carrier aggregation
- Miniature size
  - 3.6 x 2 mm footprint
  - 0.80 mm maximum height
- Environmental
  - RoHS 6 compliant
  - Halogen free
  - TBBPA free
- High power rating
  - +31 dBm maximum Tx power

Applications

Smartphones, tablets, and mobile/portable communications devices operating in Bands 1 and 3.

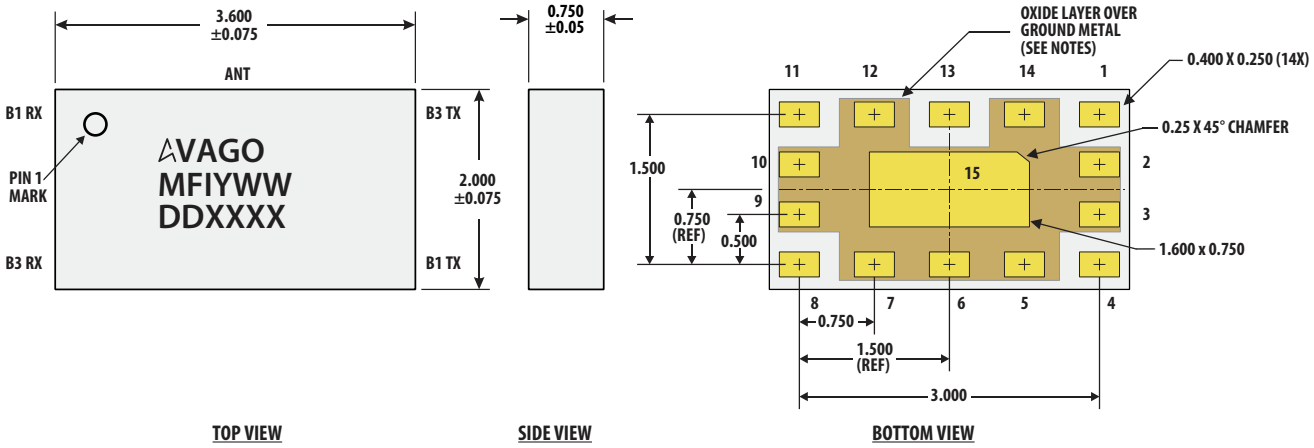
Functional Block Diagram



Ordering Information

Part Number	Number of Devices	Container
ACFM-2013-BLK	100	Tape strip or gel-pack
ACFM-2013-TR1	3000	178 mm (7-inch) reel

Package Dimensions and Marking Specification



Notes:

1. Dimensions in millimeters
2. Tolerance, unless otherwise noted:
   X.XX ± 0.05 mm
   X.XXX ± 0.025 mm
3. Dimensions nominal unless otherwise noted
4. Angles 45° nominal
5. Contact areas are gold plated
6. Ground pads on bottom metal are solder mask defined by means of a thin (< 1µm) oxide layer

Package Marking Code:

AVAGO = Avago Technologies, Inc.
M = ACFM-2013
F = Avago FBAR Technology
I = Assembly Information
Y = Year
WW = Work Week
DD = Date Code
XXXX = Assembly Lot

Pin Description

Pin	Connection
1	Band 1 Rx
4	Band 3 Rx
8	Band 1 Tx
11	Band 3 Tx
13	Ant
2, 3, 5, 6, 7, 9, 10, 12, 14, 15	GND

For product information and a complete list of distributors, please go to our web site:
www.avagotech.com

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Lead (Pb) Free
RoHS 6 fully compliant
RoHS 6 fully compliant options available;
-xxxE denotes a lead-free product