With more than 1 Billion units produced per year and a market share of 65%, Avago Technologies clearly dominates the BAW filter market.

The ACMD-7612 is an UMTS Duplexer manufactured with Avago's film bulk acoustic resonator (FBAR) technology which uses AlN piezoelectric material for resonating layers.

The filters are hermetically wafer-level packaged with Avago's Microcap bonded-wafer CSP technology, allowing the filters to be assembled in a molded chip-on-board module of less than 1.2 mm high.

TSVs are etched in the cap in order to report electrical contacts and thus reduce filter dies size.

The ACMD-7612 is targeted for handsets or data terminals operating in the UMTS Band I frequency range and features a Maximum RF Input Power to Tx Port of ±33 dBm.

This report provides complete teardown of the FBAR duplexer with:

- Detailed photos
- Material analysis
- Schematic assembly description
- Manufacturing Process Flow (including AlN process, wafer capping and TSV manufacturing)
- In-depth manufacturing cost analysis
- Supply chain evaluation
- Selling price estimation

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