

Avago FBAR Filter All-Silicon MEMS Duplexer

REVERSE COSTING ANALYSIS



*The highest volume production MEMS using TSV
Technology based on AlN piezoelectric active layer*

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

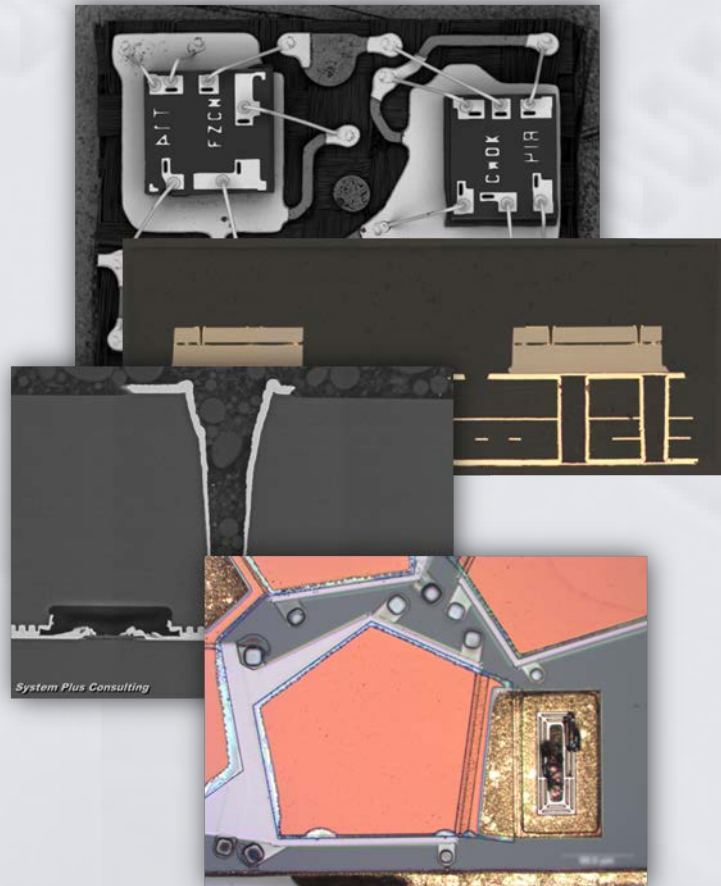


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Estimated Price Analysis

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- ✓ **On demand Reverse Costing studies** are performed on ICs, ASICs, MEMs, Power Devices, ECUs, electronic boards and full electronic systems
- ✓ **The catalog of available reports** includes cost analyzes on MEMS, LEDs, Modules and Electronic systems

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- ✓ Power Price+ for any power component or module
- ✓ SYS.Cost

- ✓ PCB Price+ for printed circuit boards
- for electronic boards and systems

Cost Simulation Tools, process flow based

- ✓ MEMS CoSim+
- ✓ LED CoSim+
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