

Epcos D7005 Closed-Loop Antenna Tuner

REVERSE COSTING ANALYSIS – FEBRUARY 2013

*The first commercially available closed-loop antenna tuner
which supports all protocols (GSM, WCDMA/UMTS, LTE 700-2600MHz)
Extracted from the Japanese 4G version of the Samsung Galaxy S III*

Epcos began development using RF MEMS technology, but switched to GaAs technology for their first antenna tuner.

With 4G being so widespread, the number of frequency bands needed becomes too large to be handled by discrete components. Tunable components are the solution and Epcos is the first to release a closed-loop antenna tuner which supports all protocols.

The D7005 antenna tuner is based on GaAs pHEMT technology, mixing Epcos and Sony devices.

It is a compact multi-chip module integrating a switchable high-Q capacitors die designed by Epcos and using Sony's JPHEMT and MIMC processes. The module also integrates a phase detector die designed by Epcos and manufactured with HBT transistors, a switch controller die and a 8-bit microcontroller.

The D7005 antenna tuner is targeted for mobile phones (especially 4G), tablets and data cards using single-feed antenna structures.

This report provides a complete teardown of the antenna tuner with:

- Detailed photos
- Material analysis
- Manufacturing Process
- In-depth manufacturing cost analysis
- Supply chain evaluation
- Selling price estimation

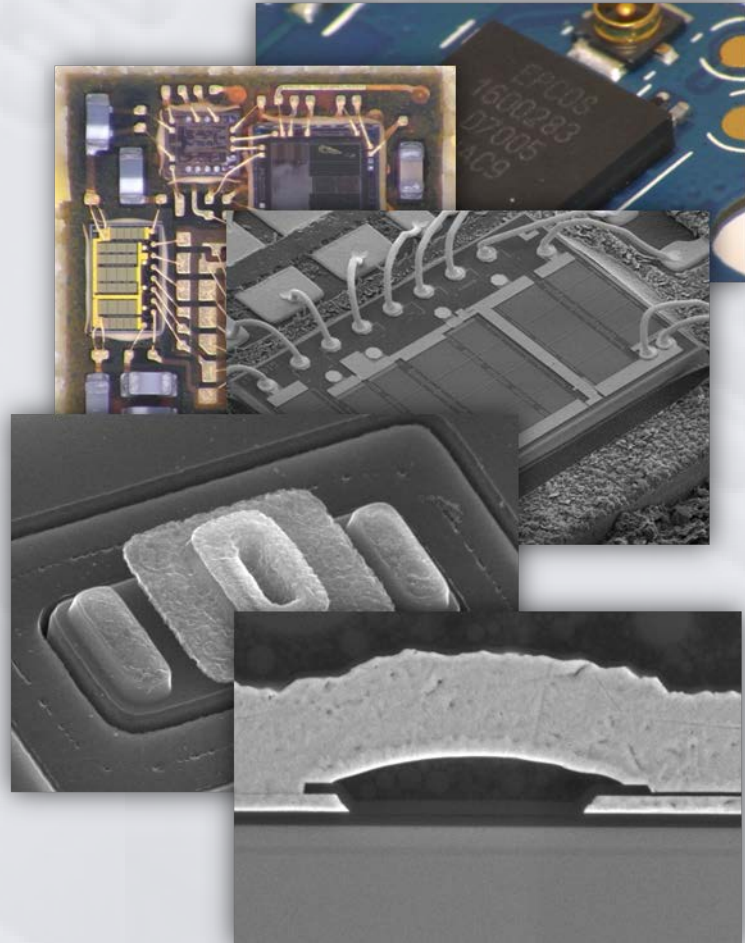


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Estimated Price Analysis

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