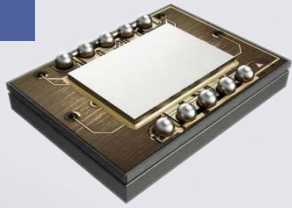


VTI CMR3000 3-Axis MEMS Gyroscope

Reverse Costing Analysis – July 2011



Physical Analysis of the Devices Step by Step Reconstruction of the Process Flow Cost of Manufacturing and Estimation of Selling Price

System Plus Consulting is proud to publish the reverse costing report of the new 3-axis consumer MEMS gyroscope supplied by VTI Technologies.

Featuring a 4.1x3.1x0.83mm size, the CMR3000 is the smallest 3-axis consumer gyroscope. Manufactured with VTI 3D-MEMS technology, this tuning fork capacitive gyroscope is bulk micromachined in a c-SOI wafer (SOI with buried cavities) and wafer-level packaged. The ASIC chip is flip-chipped under the MEMS sensor (VTI Chip-on-MEMS technology) allowing a very small package height.

The CMR3000 is targeted for battery operated devices like mobile phones, gaming devices, computer peripheral and remote controllers.

This report provides complete teardown of the MEMS gyroscope with:

- Detailed photos
- Material analysis
- Schematic assembly description
- Manufacturing Process Flow
- In-depth economical analysis
- Manufacturing cost breakdown
- Selling price estimation

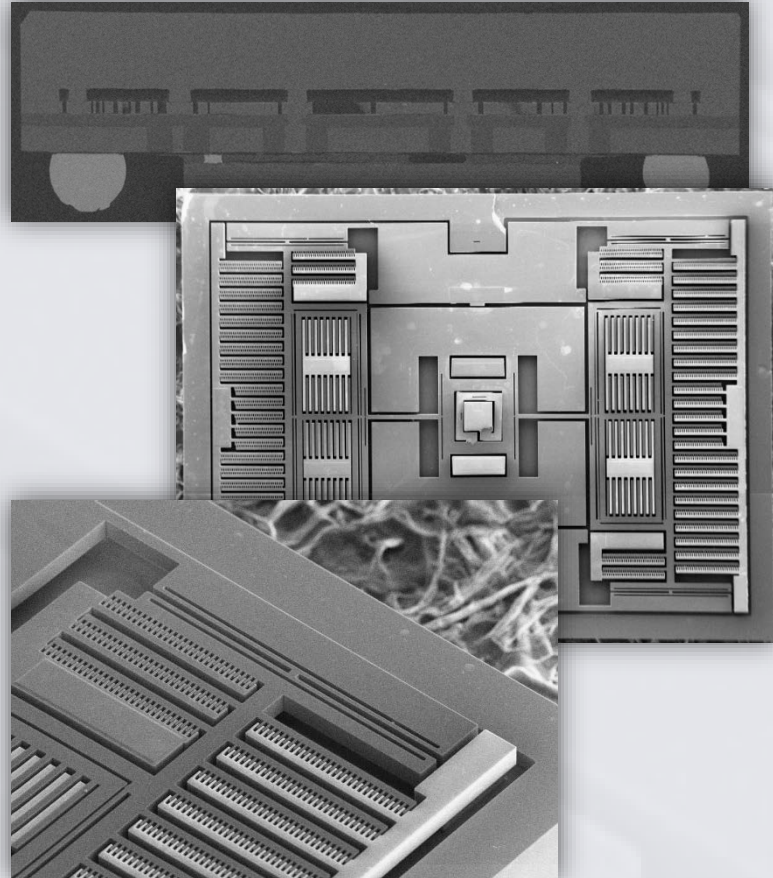


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System Plus Consulting is specialized in the **cost analysis** of electronics from **semiconductor devices** to **electronic systems**. Around this main line System Plus Consulting developed a complete range of services and costing tools to provide **in-depth production cost studies** and estimation of the **objective selling price** of the product.

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