mCube MC3635: Technology and Cost Comparison

Description:
With its market share increasing every year, mCube is seeking to become a leader in the MEMS accelerometer business using its monolithic single-chip MEMS design approach. With the MC3635, mCube has released the industry's smallest ultra-low power accelerometer for wearables, enabling significantly extended battery life and very small form factors.

Unlike its main competitors, Bosch Sensortec and STMicroelectronics, mCube provides monolithic sensor integration for consumer electronics – the only company to do this for accelerometers.

mCube's approach fabricates MEMS sensors directly on top of IC electronics, connected using Through-Silicon Vias (TSVs), in a standard CMOS fabrication facility. The MC3635 is shipped in 1.6×1.6mm LGA packaging, which is a 36% footprint reduction compared to traditional 2x2mm LGA packages. Among the third generation of mCube accelerometers, the MC3635's package is smaller than the MC3400 series, but the die size is slightly larger due to the ultra-low power capability.

The MC3635 is targeted at the ultra-low power and the high-resolution marketplace for applications requiring up to 14-bit resolution.

The report includes a complete overview of mCube's MEMS accelerometer evolution since its second generation. It also features a detailed technology and cost comparison with leading edge accelerometers from Bosch Sensortec, STMicroelectronics and Analog Devices.

Contents:
Overview / Introduction
mCube Company Profile
Physical Analysis
- Physical Analysis Methodology
- Package
- Package Characteristics Marking & Pin-out
- Package Opening & Wire Bonding Process
- Package Cross-Section
- Die
- Dimensions & Markings
- Bond Pad Opening
- MEMS Cap Removed
- MEMS Cap Details
- MEMS Sensing Area
- MEMS Sensing Area Removed
- Delayering (Metal Layers Removed)
- IC Process
- Die Cross-Section

mCube MEMS Accelerometer Evolution

Technology comparison with Bosch Sensortec and STMicroelectronics 3-Axis Accelerometers

Technology comparison with Analog Devices Ultra-Low Power 3-Axis Accelerometers

Manufacturing Process Flow
- Global Overview
- IC Front-End Process
- MEMS Process Flow
- Wafer Fabrication Unit
Packaging Process Flow & Assembly Unit

Cost Analysis

- Main steps of economic analysis
- Yield Hypotheses
- CMOS Front-End Cost
- MEMS Front-End Cost
- MEMS Front-End Cost per process steps
- Total Front-end Cost
- Back-End 0: Probe Test & Dicing
- Wafer & Die Cost
- Back-End: Packaging Cost
- Back-End: Packaging Cost per Process Steps
- Back-End: Final Test Cost
- MC3635 Component Cost & Price

Cost & Price comparison with Bosch Sensortec and STMicroelectronics 3-Axis Accelerometers

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