

TELEFUNKEN Semiconductors

No. 1

NEWSLETTER



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Semiconductors

TELEFUNKEN Semiconductors – Increases fabrication capacity

TELEFUNKEN Semiconductors has significantly increased their capability to service the Semiconductor Foundry market with their recent acquisition of an advanced 130nm/8-inch, automotive-qualified fabrication plant in Roseville, California. This plant augments an existing 350nm/6-inch automotive-qualified fabrication facility in Heilbronn, Germany. Together, these plants can manufacture a large array of versatile processes which address analog, mixed-signal and specialty technologies with deep sub-micron for High-Voltage CDMOS processes especially designed for power management applications.

TELEFUNKEN Semiconductors will introduce an 180nm SOI technology in Q4 of 2011. Some examples of the versatility of these technologies are a set of silicon-on-insulator CMOS processes, going down to 0.35 μ m, for demanding applications such as automotive, high-temperature and other high-performance

applications. Also available from TELEFUNKEN Semiconductors are advanced bipolar SOI processes with ft up to 8 GHz targeted for the communications market. These SOI complementary bipolar processes are high speed and are targeted for operation at 24 Volts in any linear application, such as, op amps, DSL drivers and industrial applications.

In addition, TELEFUNKEN Semiconductors offers a bipolar SiGe (Power & RF) technology for specialized high-performance analog markets and most recently introduced a high-voltage CDMOS process capable of 700-Volt operation with modular signal electronics on the same chip. The 700-V technology combines very high voltage devices with standard analog and digital circuits on the same die. This technology is targeted for the next generation of LED lighting, off-line switches and gate driver applications.



Detailed information on all of the TELEFUNKEN Semiconductors processes are available on our company website at <http://www.telefunkensemi.com/foundry/technology-overview.html>

In addition to our existing semiconductor technologies, TELEFUNKEN Semiconductors offers interested customers the ability of customize existing processes to adapt to their specific needs. Our Technology Development has the necessary knowledge and experience to understand customer requirements to efficiently customize processes to suit their needs. Additionally, we have the expertise to perform detailed characterization and modelling of processes for special application. These capabilities allow customers to transfer their processes into a TELEFUNKEN Semiconductors manufacturing location in an efficient and cost-effective manner with the assurance that customer IP will be protected.

A snapshot of the new 200mm Roseville, California manufacturing facility:



This 200mm plant manufactures 0.15um automotive-qualified IC technology, including High-Voltage power management and mixed-signal products. The Roseville campus is situated on 150 acres, with 135,000 sq ft of fabrication clean room space, as well as an additional 26,000 square feet for wafer level electrical and functional testing. The fab employs a flexible manufacturing platform to address cyclical demand enabling inventory management and consistent on-time delivery. The Roseville facility has established a Zero-Defect-Culture in order to provide the highest quality product to our customers. Expertise includes best-known methods for optimizing processes, maximizing yield, on-site wafer test, reliability testing and failure analysis to help shorten time to market.

The Roseville site embraces environmental sustainability as evidenced by numerous awards by both California and US EPA, such as:

- 2009 National Partnership for Environmental Priorities (NPPF)
- 2010 Waste Wise Hall of Fame
- 2010 GEELA (California's highest environmental honor)

As the former US-based wafer manufacturing site of Renesas Electronics (NEC Electronics), the Roseville site has provided decades of manufacturing excellence to provide the highest quality parts, with consistent on-time delivery, and with unmatched customer support.

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