

Teledyne e2v HiRel Releases RF and Power Devices for New Space

New Space product offerings provides RF and Power engineering and design communities with plastic package solutions for the most challenging high-reliability space applications.

MILPITAS, CA – March 19, 2024 – [Teledyne e2v HiRel](#) announces the availability of radiation tolerant RF and Power products for the evolving New Space market. Qualified based on the EEE-INST-002 space grade standard, these plastic packaged products are qualified for the harsh environment of space with -55°C to $+125^{\circ}\text{C}$ temperature operating ratings, and are radiation tolerant for use in LEO, MEO, and GEO missions.

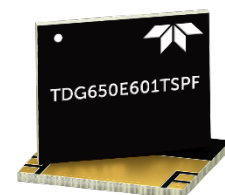
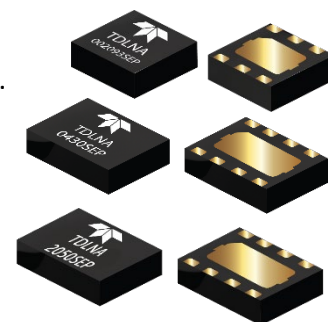
The RF products include several low noise amplifiers (LNA) and are ideal for demanding high-reliability space applications where low noise figure, minimal power consumption, and small footprint are critical to mission success. They are ideally suited for satellite communication systems that are increasing the power of radio signals so utilizing components with minimal noise and distortion help minimizing the degradation of digital signals. These LNAs are developed in the radiation tolerant pHEMT technology semiconductor process technology. The monolithic microwave integrated circuit (MMIC) products are available in dual-flat no-lead (DFN) plastic over molded SMT packages and are biased over single positive V_{DD} supply voltages, eliminating the need for negative power rail voltages.

The [TDLNA002093SEP](#) delivers a low noise figure of less than 0.37 dB, I_{DDQ} from 30 mA to 100mA, and exceptional performance from 1 GHz (L-band) to 6 GHz (S-band) frequencies.

The [TDLNA0430SEP](#) delivers an industry leading low noise figure of less than 0.35 dB, I_{DDQ} of 60mA and exceptional performance from 0.3 GHz (UHF) to 3 GHz (S-band) frequencies.

The [TDLNA2050SEP](#) delivers an industry leading low noise figure of less than 0.4 dB, I_{DDQ} of 60mA and exceptional performance from 2.0 GHz (S-band) to 5 GHz (C-band) frequencies.

The Power products offerings include Gallium Nitride (GaN) technology High Electron Mobility Transistors up to 650V, currents up to 90 Amp, high switching frequencies, and low $R_{\text{DS(ON)}}$. These GaN solutions have easy gate-drive requirements and enable high power density designs with four times less space requirements than traditional MOSFETs. The [TDG650E60xSP](#) parts are available in extremely small non-hermetic packages with either top-side and bottom-side thermal pads and are ideally suited for satellite power supply systems with space production screening.



“Today we’re announcing our New Space products offering of RF and Power products optimized for space applications,” said Mont Taylor, Vice President and Business Development Manager at Teledyne e2v HiRel. “These LNAs with their ultra low noise figures coupled with the high power density capabilities of GaN transistors, we believe these products will enable system designers with superior solutions for space-based satellite communication applications.” For more information on all of Teledyne e2v HiRel’s space offerings, review our portfolio of semiconductors, converters, processors, and related services [here](#).

Devices are available for ordering and shipment today, from Teledyne e2v HiRel or an [authorized distributor](#), in commercial versions and with the option of Classes H and K-equivalent screening. They are shipped from our DoD Trusted Facility in Milpitas, California.

ABOUT TELEDYNE e2v HIREL ELECTRONICS

Teledyne e2v HiRel's innovations lead developments in space, transportation, defense and industrial markets. e2V HiRel's unique approach involves listening to the market and application challenges of customers and partnering with them to provide innovative standard, semi-custom or fully custom solutions, bringing increased value to their systems. For more information, visit www.tdehirel.com

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Media Contact:

Sharon Fletcher

Teledyne Defense Electronics

+1 323-241-1623 sharon.fletcher@teledyne.com