

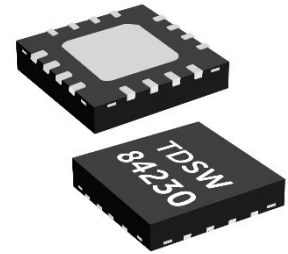
Press Release

Teledyne HiRel Semiconductors Releases High-Power RF GaN Switch (30 MHz to 5 GHz)

Off-the-shelf 20W Reflective Single Pole Double Throw RF Switch for Aerospace and Defense high-reliability applications

MILPITAS, CA – January 9, 2025 – [Teledyne HiRel Semiconductors](#) announces the availability of its Gallium Nitride (GaN) high-power RF switch, model [TDSW84230EP](#). This switch offers high peak power and is designed to replace Positive-Intrinsic-Negative (PIN) diode-based RF Switches commonly used in RF front ends of many of today's tactical and military communication radio systems. Developed using a wide-bandgap GaN High Electron Mobility Transistor (HEMT) process, this switch offers a very high breakdown voltage and high saturation current capabilities and is available in a 16-pin quad-flat no-lead (QFN) 3 mm x 3 mm x 0.8 mm plastic surface mount package and qualified to a military temperature range of -55°C to 125°C.

The TDSW84230EP SPDT GaN reflective switch leverages monolithic microwave integrated circuit (MMIC) design techniques and supports a high 20 watts CW power handling, operating from 30 MHz to 5 GHz. It has a low 0.2 dB insertion loss and a high 45 dB port isolation offering significant efficiency and board area savings compared to PIN diode architectures.



“Today, we’re releasing our latest RF GaN Switch, optimized for Aerospace and Defense applications,” said Mont Taylor, Vice President, and Business Development Manager at Teledyne HiRel. “To meet the multiple wideband continuous operation demand in today’s military and defense software defined radio architectures, this high-power GaN switch delivers an ideal solution for replacing traditional PIN diode switches, tolerating up to 900mA/mm saturation currents and high voltage RF-power handling capabilities. The inherent high breakdown voltage and carrier density of GaN technology enable higher operating power capabilities while delivering high linearity to better support harmonic and spurious signal requirements associated with traditional PIN diode switches.”

The TDSW84230EP devices are available for order and shipment today, from Teledyne HiRel Semiconductors or an [authorized distributor](#), in commercial versions. They are shipped from our DoD Trusted Facility in Milpitas, California.

For more information on all of Teledyne HiRel’s offerings, review our portfolio of semiconductors, converters, processors, and related services [here](#) on the Teledyne HiRel Semiconductors website.

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ABOUT TELEDYNE HIREL SEMICONDUCTORS

Teledyne HiRel’s innovations lead developments in space, transportation, defense and industrial markets. Teledyne 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

ABOUT TELEDYNE AEROSPACE & DEFENSE ELECTRONICS

Teledyne Aerospace & Defense Electronics offers a comprehensive portfolio of highly engineered solutions that meet the most demanding requirements, in the harshest environments. Manufacturing both custom and off-the-shelf product offerings, our diverse product lines meet the current and emerging needs of key applications for avionics, energetics, electronic warfare, missiles, radar and surveillance, satellite communications, air and space, and test and measurement. www.teledynedefenseelectronics.com

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