

Teledyne e2v HiRel announces availability of a new family of high reliability X-band Gain Blocks.

New gain blocks extend the performance of space-qualified InGaP amplifier technology to the X-band where previous generations were limited to C-band functionality.

MILPITAS, CA – January 9, 2019 – [Teledyne e2v HiRel](#), part of the [Teledyne Defense Electronics Group](#), announces the availability of the new 14 GHz family of RF gain blocks spearheaded by an 18.4 dB amplifier (TDGB014-003). The Gain Blocks are based on an indium gallium phosphide (InGaP) technology that is suitable for use in aerospace and defense applications because of its ceramic packaging and space qualification.

These gain blocks also come in gain configurations of 13.6 and 16.5dB which allow the design engineer to exactly configure the signal gain without incurring unwanted parasitic effects.

With this new family of X-band Gain Blocks, Teledyne e2v HiRel customers now have a standard amplifier solution that covers L-band through X-band. This standard amplifier enables a reduction in the number of new qualified components required for flight programs, and thereby simplifies the component procurement process.

The TDGB014-003 50-ohm gain block utilizes a mature and reliable heterojunction bipolar transistor (HBT), InGaP process and incorporates proprietary Monolithic Microwave Integrated Circuit (MMIC) design techniques. The process has space-flight heritage and has shown to be radiation tolerant to 100 krad, making it a viable choice for satellites and other high-altitude applications. For more information on these new X-band Gain Blocks for space, [visit the New Products webpage](#) on our website.

“Teledyne e2v HiRel has developed a broad portfolio of Analog, Digital, Power and RF semiconductors targeted at Aerospace & Defense applications,” said Mont Taylor, VP of Business Development. “We’re pleased to be able to incorporate InGaP technology into our current A&D product offerings. Additionally, we are excited to provide a growing portfolio of standard RF building blocks such as amplifiers, LNAs, PAs, DSAs, limiters, mixers, pre-scalers, PLLs, switches, and more to help customers design RF signal chains that meet the high-reliability requirements of defense and space.”

Teledyne e2v’s Hi-Rel X-band Gain Blocks offer excellent gain flatness and high P1dB. This Gain Block family is available now and is packaged in a 2-lead, ultra-small, hermetic, gullwing package. Both the wafer process technology and the package have space flight heritage.

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