

Teledyne e2v HiRel Unveils Family of High Power PIN Diode Limiter Modules

*Limiter modules are designed for high reliability EW, radar applications
SCDs are supported, devices are tested and shipped from Teledyne's certified US production facility*

MILPITAS, CA – April 15, 2020 – [Teledyne e2v HiRel](#) today announced a new addition to its family of high power limiters, the [TDLM202402](#), a quasi-active S-band SMT PIN Diode Limiter that offers “always on” high power CW and peak protection.

Packaged in a small 8 mm x 5 mm form factor for demanding electronic warfare and radar applications, the TDLM202402 utilizes proven hybrid assembly technology. It has 50 dBm (100 W) CW power handling capability and 60 dBm (1,000 W) peak power from 2 to 4 GHz (25 µsec pulse width at 5% duty cycle). Parts are screened and qualified for high reliability applications. These power limiters have an operating temperature range of -65 °C to 125 °C.

The new limiter also boasts excellent thermal management features, with a proprietary design methodology that minimizes thermal resistance from the PIN Diode junction-to-base plate (RTHJ-A). The limiter design employs a two-stage detector circuit which enables ultra-fast turn-on of the high-power PIN Diodes.

“This is Teledyne e2v HiRel’s first [high power limiter](#) for military applications, and we have more in the development pipeline,” said Erik Everett, VP of Worldwide Sales at Teledyne HiRel. “We support Source Controlled Drawings, and devices are tested and shipped from our certified facility in Milpitas, California, one of the industry’s most trusted production locations.”

The TDLM202402 is designed for optimal small signal insertion loss, permitting an extremely low receiver noise figure while simultaneously offering excellent large input signal. Other key features and specifications include:

- Low insertion loss (typ): 0.5 dB
- Return loss (typ): 17 dB
- Low flat leakage power (typ): 14 dBm
- Low spike energy leakage (typ): 0.5 ergs
- Input/Output DC blocking capacitors
- RoHS compliant

[Contact Teledyne e2v HiRel](#) for information on similar devices for X, L, IFF and other bands.

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Media Contact:

Darrek Porter, Director of Marketing
Teledyne Defense Electronics
(404)-368-9714 darrek.porter@teledyne.com