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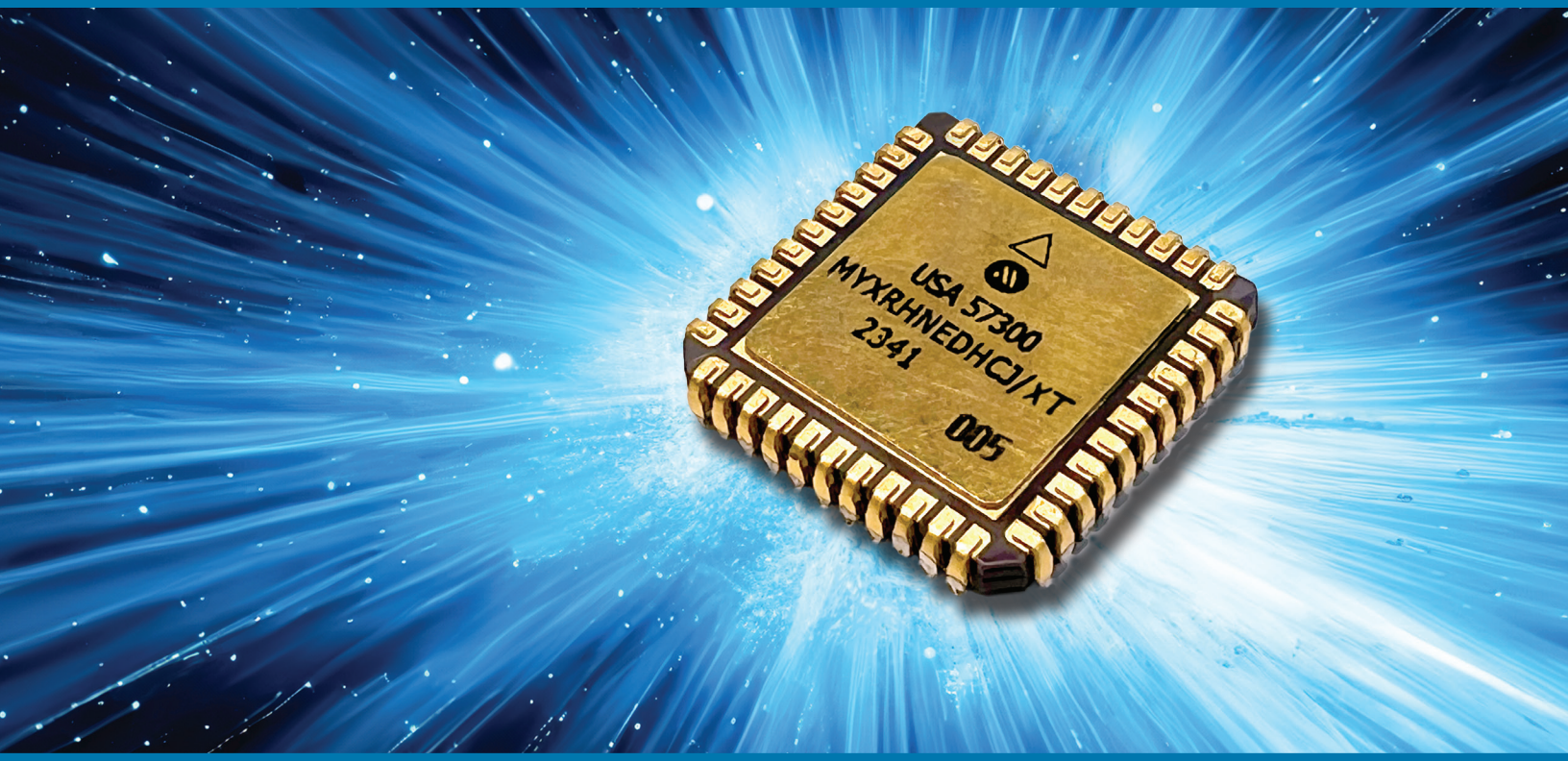
Nuclear Event Detector

High-Performance NED

Preliminary Product Brief



The High-Performance NED features a 4X increase in radiation dose rate sensitivity and 25% faster response times at 5X lower overdrive levels relative to legacy devices, with integrated differential drivers providing SWaP savings, improved noise immunity & reduced delay times; screened to MIL-PRF-38534 Classes H & K.

KEY FEATURES

- Gamma Dose Rate Sensitivity Threshold Range Adjustable from 5×10^4 to 2×10^7 rads (Si) / sec.
- 44 Pin Hermetic J-Lead SMT Package (.650in x .650in x .113in)
- Integrated Differential Line Drivers and Receivers
  - Eliminates the Need for Shielding External Drivers and Receivers
- Radiation Specifications
  - Total Dose (Device Survivability): 1×10^6 rads (Si)
  - Dose Rate (Operate Through): 1×10^{12} rads (Si) / sec.
  - Neutron Fluence (Operate Through): 5×10^{13} neutrons / cm^2
- Delay from Radiation Detected to Output Signal Asserted: 15ns at 2X Overdrive
- 3.3V Power Requirement
- -55 to +125°C Extended Full MIL-Temperature Range (XT)
- MIL-PRF-38534 Classes H & K

BENEFITS

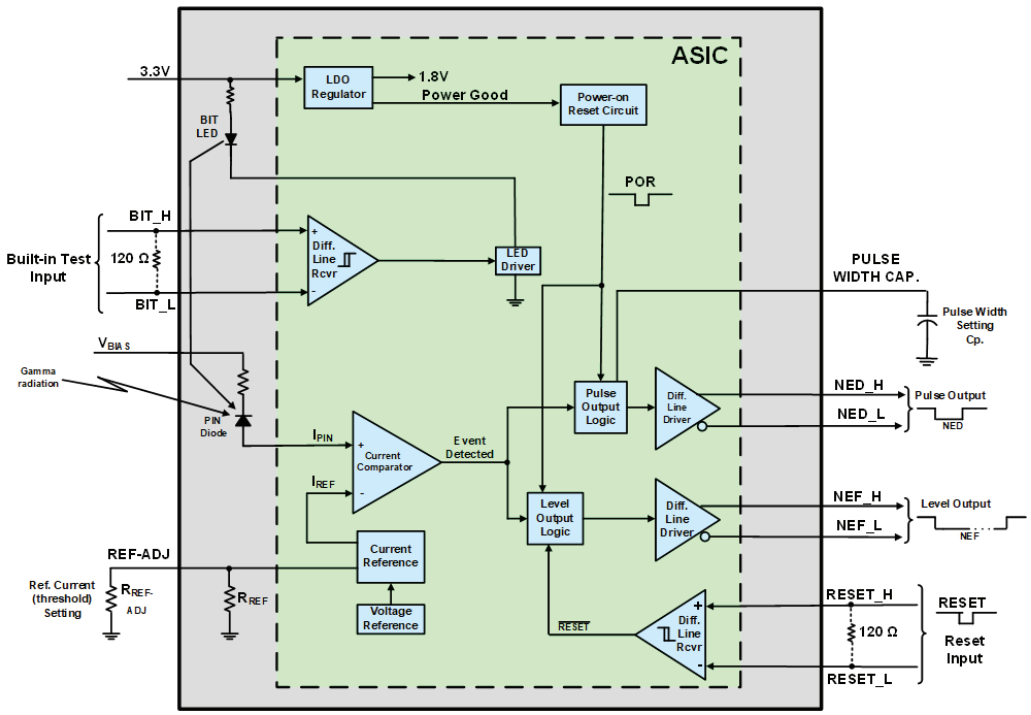
- 4X Lower Minimum Dose Rate Sensitivity
- 25% Faster Response Time at 5X Lower Overdrive Level – Enabling a More Rapid Shutdown of Critical Electronics
- Improved Noise Immunity
- Use Output Signal to Shut Down Power Supplies, Take Processors Offline and Block Memory Write Operations
- Manufactured on US Soil
- Improvements in Obsolescence Mitigation with In-House PIN Diode and Controller
- Screening for Space Option Available

APPLICATIONS

- Aircrafts and Drones
- Defense Weapon Systems
- Satellites
- Military Ground Vehicles
- Nuclear Material Storage

High-Performance NED

INTEGRATED LINE DRIVERS & RECEIVERS



ORDERING INFORMATION

MYX RH NED H CJ / K

Screening Flow

XT	Extended Temperature, -55°C to 125°C, Internal and External Visual Inspections, Fine & Gross Leak Testing
K	MIL-PRF-38534 Class K Screened and Qualified

Package

CJ	Ceramic J-Lead

Configuration

H	High Performance NED

Product

NED	Nuclear Event Detector

Radiation Rating

RH	Rad-Hard

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Disclaimer

The information in this Preliminary Product Brief is believed to be accurate; however, no responsibility is assumed by Micross for its use, and no license or rights are granted by implication or otherwise in connection therewith. Specifications are subject to change without notice. Further, although Micross is currently able to supply small quantities of this product to interested customers, the product described herein has not yet been qualified in accordance with MIL-PRF-38534. For production, Micross plans on offering versions of the product with Class H or Class K qualification in compliance with MIL-PRF-38534.

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