

The Microcross MYXRHNEDDCJ series Nuclear Event Detectors (NED) are screened to class H & K, and feature integrated differential drivers – providing SWaP savings, improved overall noise immunity, 300% greater radiation dose sensitivity, and 25% faster response times compared with legacy devices.



KEY FEATURES

- Gamma Dose Rate Sensitivity Threshold Range Adjustable from 5×10^4 to 2×10^7 rads (Si) / sec.
- 44 Pin 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 / cm²
- Delay from Radiation Detected to Output Signal Asserted: 15ns
- 3.3V Power Requirement
- -55 to +125°C Temperature Range
- Differential Line Drivers and Receivers All Operate Through Prompt Dose Without Extra Shielding

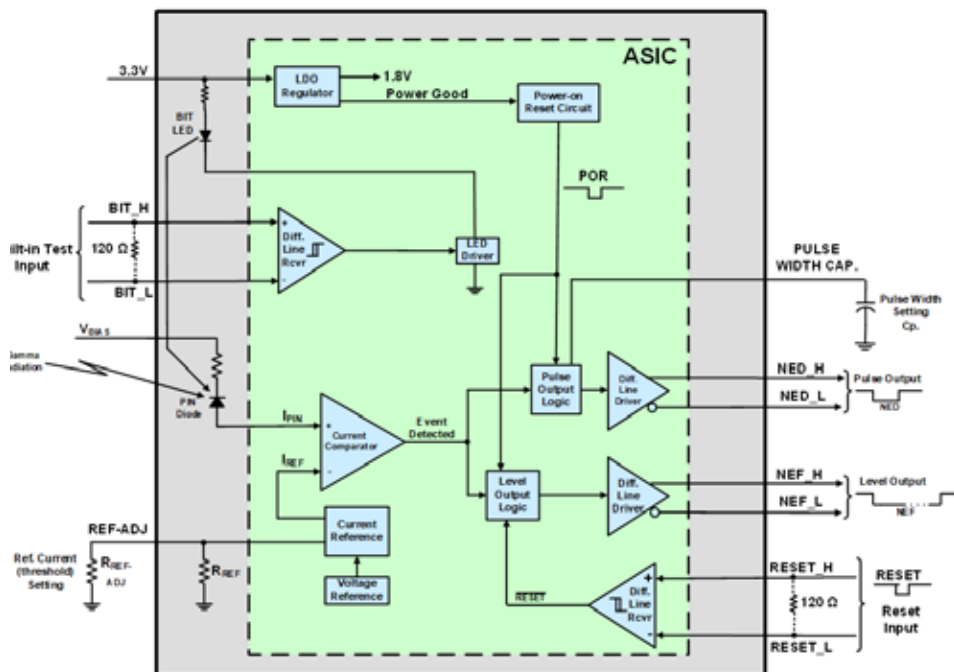
BENEFITS

- 4X Lower Minimum Dose Rate Sensitivity
- 25% Faster Response Time – 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 in the Jazz Semiconductor Trusted Foundry
- Improvements in Obsolescence Mitigation with In-House Sourced PIN Diode and ASIC

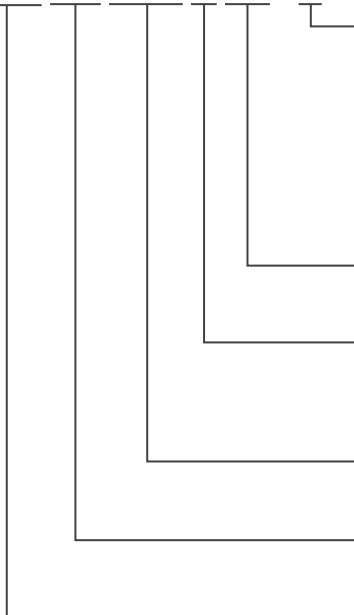
APPLICATIONS

- Aircrafts and Drones
- Missiles and Bombs
- Satellites
- Military Ground Vehicles
- Nuclear Material Storage

NED with Integrated Line Drivers & Receivers



MYX RH NED H CJ / X



Screening Flow

- EM Engineering Model, screened in accordance with internal Micross procedures
- D1 MIL-PRF-38534 Class H screened, but without qualification
- H MIL-PRF-38534 Class H screened and qualified
- H+ MIL-PRF-38534 Class H screened, plus customer-specified subset of Class K screening (**see NOTE**) and Class H qualified
- K MIL-PRF-38534 Class K screened and qualified

Package

- CJ Ceramic 44 Pin J-Lead

Configuration

- S Standard Performance NED
- H High Performance NED, with differential line drivers and receivers

Product

- NED Nuclear Event Detector

Radiation Rating

- RH Rad-Hard

Micross

NOTE: Customer-specified Class H+ screening options include PIND Testing, X-Ray, 100% Pull Test, One-Lot Date Code, Pre-Cap Source Inspection and Solder Dipping

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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