Protec HighRel Components

SPACE COMPONENTS NEWSLETTER *September 2025*

Europe's #1 HighRel Distributor

New radiation-hardened GaN transistor

IR HiRel
An Infineon Technologies Company

- Validated based on MIL-PRF-19500 for space applications
- ESD rating: Class 1C per MIL-STD-750, Method 1020
- Radiation LET (GAN): 70 MeV-cm^2/mg (Au ion) ≙ 86.5 MeV-cm^2/mg (Si eq.)
- Operating temperature range: −55°C to +155°C
- Size: 7.1mm x 5.3mm
- Light weight: 0.23g
- Applications: Isolated DC/DC converters, PoL Converters, Synchronous rectification , Motor drives

Product Name	Package	Screening Level	TiD (krad)	BV_{DSS} (V)	Q_G (nC)	$R_{DS(on)}$ @25°C (mΩ)	I_{DC} @25°C (A)	I_{dpuls} (A)	Power diss (W)	Gate Voltage
IG1NT052N10R	PowIR-SMD	COTS	100	100	13	6	52	208	30	+/- 5
IG1NT052N10G	PowIR-SMD	COTS	500	100	13	6	52	208	30	+/- 5
JANSG2N7697UFHC	PowIR-SMD	JANS	500	100	13	6	52	208	30	+/- 5

HI-1592: MIL-STD-1553 Transceiver

HOLT INC.
INTEGRATED CIRCUITS

The cost effective HI-1592 was tested for higher SEE levels

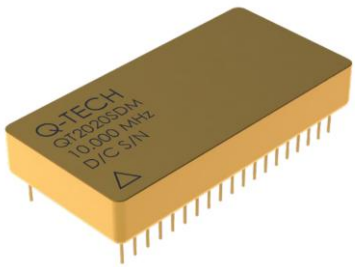
- Radiation performance: Latch-up immune, SEU ~~67.7MeV-cm2/mg~~ 86.3MeV-cm^2/mg and 100Krad (TiD)
- 1.8V, 2.5V and 3.3V compatible digital I/O
- Package: hermetic 24-pin ceramic SOIC
- Extended temperature range: −55°C to +125°C
- Optional: burn-in, 100% PIND testing and compliance to
- MIL-PRF-38535 QML class Q
- Compatible with Holt's DO-254 MIL-STD-1553 IP Core, HI-6300, instantiated in a radiation-hardened FPGA.

Rad-Hard MCXOs: Extended Portfolio

Q-TECH CORPORATION

QT2020/2021 Series microcomputer-compensated crystal oscillators (MCXOs) now offer expanded PPB stability levels

- Exceptionally low SWaP
  - Size: 25.4mm x 50.8mm
  - Weight: 50g
  - Power: 90mW @ 3.3V
- 1 PPS input and output can be configured
- Frequency: 5 – 100MHz
- Output: CMOS or Sine Wave
- Maximum aging rate: ±1.5ppm over 20 years



Product Name	Performance	SEL (MeV-cm2/mg)	TiD (krad)	Start-up time	Warm-up time
QT2020 MCXO	MIL-PRF-55310, Class 3	29	50	1.5s to ±50 ppm	30s to ±10 ppb
QT2021 MCXO	MIL-PRF-55310, Class 3	75	50	1.5s to ±50 ppm	10s to ±10 ppb