Protec HighRel Components

SPACE COMPONENTS NEWSLETTER *February 2025*

Infineon IR HiRel

TO-247

TO-263

New released Radiation tolerant N-channel Power MOSFET family

A family of radiation tolerant N-channel MOSFETs in plastic packages for LEO missions and (mega) constellations

- Designed for up to 5y in LEO
- Radiation performance: SEE tolerant, LET of 46MeV-cm^2/mg, 30krad (TiD)
- Qualified according to automotive standard AEC-Q101
- Operating temperature range: –40°C to +125°C
- Applications: Power conditioning and distribution functions, DC/DC converters, …
- p-Channel MOSFETs in plastic packages to be expected soon

Product name	Package	BV_{DSS} (V)	Q_G (nC)	$R_{DS(on)}$ @25°C	I_{DC} @25°C	I_{dpuls} (A)	Power dissipation (W)	Gate voltage	Die size
BUP06CN015E-01	TO-247	60	75	15	45	200	390	+/- 20	6
BUP06CN035L-01	TO-263		25	35	35	100	150	+/- 20	3
BUP15CN027E-01	TO-247	150	75	27	45	180	390	+/- 20	6
BUP15CN060L-01	TO-263		25.5	60	23	93	150	+/- 20	3

avalanche technology

Expansion of Gen 3 MRAM families

Avalanche continues to expand the widely heralded Gen 3 Aerospace & Defense targeted MRAM families.

- **Space Grade E-Family (for Enhanced screening options)**
  - Entire Gen 3 Space Grade portfolio of Parallel & Dual QSPI devices has a new premium sister family, screened to higher-reliability levels
  - Radiation performance: LET of 75MeV-cm^2/mg & 100krad (TiD)
  - Additional burn in time (168h vs 48h)
  - Dual QPSI: higher performance (100MHz) & more mechanically robust

- **New lower density options (Dual QSPI) are available now in pre-production status**
  - 64Mb and 128Mb
  - Variety of qualification and screening options, including standard Space Grade and Space Grade-E
  - Smaller footprint, but same electrical pinout (from 64Mb to 8Gb)