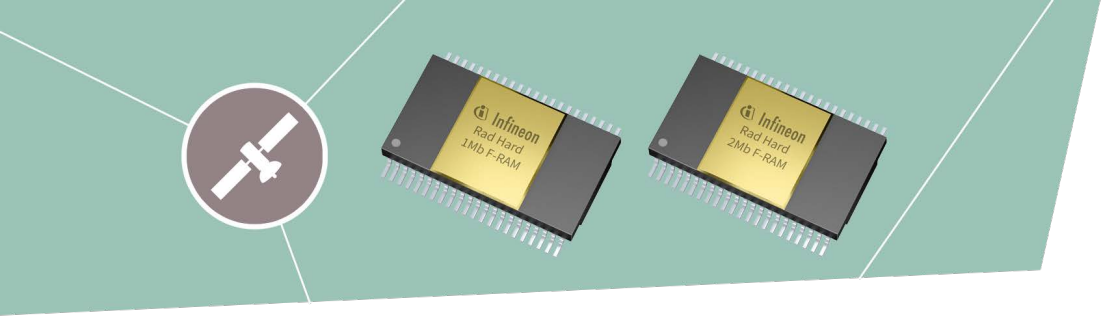


Product brief

HiRel RadHard non-volatile parallel F-RAM

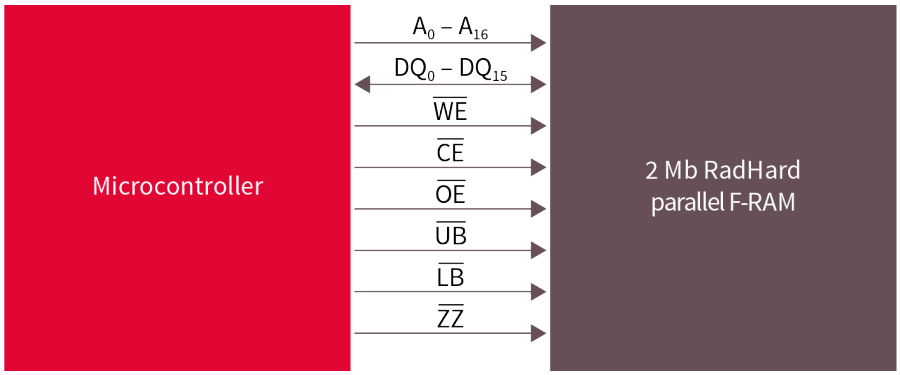
Infineon Technologies' HiRel memories perform in the most extreme environments

Infineon Technologies' now offers 1 and 2 Mb densities, radiation hardened, highest reliable, non-volatile parallel ferroelectric RAM (F-RAM).

Infineon's radiation hardened F-RAMs have higher endurance and better radiation performance than the current parallel EEPROMs and offers an option as a direct replacement part. Our RadHard F-RAMs are ideal for data storage for sensors and instruments, data logging for calibration data for satellites and processor boot code applications.

Our RadHard F-RAM's virtually infinite endurance, Infineon instant non-volatile writes, greater than 100-year data retention and are Single Event Upset (SEU) immune making them the highest reliable, non-volatile memory for space applications.

Datalogger for satellite calibration data



Key benefits

Ultimate reliability

- DLAM QML-V
- QCI, datapacks
- RHA, WLAT

Product features

- 1 & 2 Mb densities
- TID >150 Krad (Si)
- SEL > 114 MeV.cm^2/mg
- SEFI < 1.34 x 10^{-4} err/dev.day
- SEU immune
- Mil temperature grade
- 44-pin ceramic SOP
- QML-V certified

Key applications

- Data logging for calibration data for satellites
- Data storage for sensors and instruments

Differentiated memory portfolio

- Performance
- Density
- Reliability
- Longevity

HiRel RadHard non-volatile parallel F-RAM

Infineon Technologies' HiRel memories perform in the most extreme environments

Radiation hardened memories

Infineon's' HiRel RadHard memory products portfolio consists of the world's most-reliable non-volatile memory and offers a wide selection of NOR flash, F-RAM, and SRAM solutions that enhance overall system computing limits, while providing Size, Weight and Power (SWaP) benefits with greater design flexibility to satisfy the needs of today's advanced space systems and beyond.

Key features

CYRS15B102N/CYRS15B101N

- 2 Mb (128 k x 16)/1 Mb (128 k x 8) density
- 60 ns access time, 90 ns cycle time
- Infineon instant non-volatile write technology
- 10-trillon read/write cycle endurance
- 120 years data retention at +85°C
- 2.0–3.6 V operating voltage range
- Low operating current (10 mA max)
- –55°C to +125°C military temperature grade
- 44-pin ceramic SOP
- QML-V qualified
- Radiation performance
  - TID: > 150 Krad (Si)
  - SEL: > 114 MeV.cm^2/mg [LET] @ 115°C
  - SEU: immune
  - SEFI: < 1.34 x 10^{-4} err/dev.day

Support: www.infineon.com/hirelmemory

Parts list

Density	Description	Infineon P/N	Operating temp	Qual. Level	TID[1)]	SEL[2)]	SEU[3)]	SEFI[4)]
2 Mb	Parallel F-RAM	CYRS15B102N-GGMB	–55°C to 125°C	QML-V	150 Krad (Si)	> 114	Immune	< 1.34 x 10^{-4}
		CYPT15B102N-GGMB	–55°C to 125°C	PROTOTYPE	–	–	–	–
1 Mb	Parallel F-RAM	CYRS15B101N-GGMB	–55°C to 125°C	QML-V	150 Krad (Si)	> 114	Immune	< 1.34 x 10^{-4}
		CYPT15B101N-GGMB	–55°C to 125°C	PROTOTYPE	–	–	–	–

1) Total Ionizing Dose [Krad (Si)]
2) Single Event Latchup MeV.cm^2/mg [LET] @ 115°C
3) Single Event Upset
4) Single Event Functional Interrupt err/device-day

www.infineon.com

Published by
Infineon Technologies AG
Am Campeon 1-15, 85579 Neubiberg
Germany

Document number: B197-I1236-V1-7600-NA-EC-P
Date: 02 / 2022