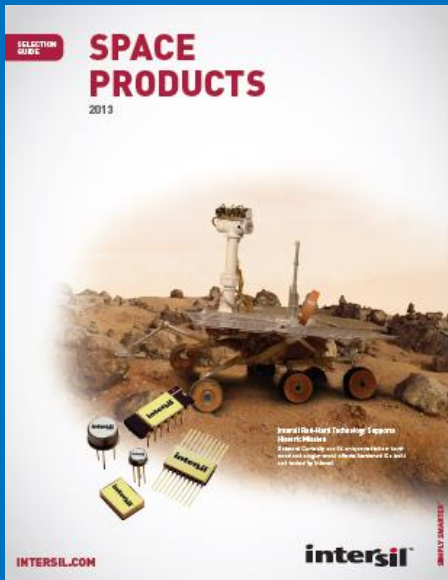


### Intersil Shortform Download:

Download the latest Shortform [here](#).



### Facts about Intersil Space Parts

Intersil offers a broad range of radiation hardened and Single-Event Effects (SEE) hardened IC products for RH and space applications.

- Over 300 space-qualified radiation hardened products available.
- Consistent design and manufacturing in Intersil's MILPRF-38535-qualified facility located in Palm Bay, Florida.
- Intersil is one of only 11 RHA Defense Logistics Agency (Land and Maritime) QML suppliers.
- All products are fully Class V (space level) compliant.
- All products are on individual DLA SMD drawings.

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## Industry's First Rad Hard 12V POL Regulator with 3.0 to 13.2V Input Range

### ISL70003SEH

The ISL70003SEH is a radiation and SEE hardened synchronous buck regulator capable of operating over an input voltage range of 3.0V to 13.2V. With integrated MOSFETs, this highly efficient single chip power solution provides a tightly regulated output voltage that is externally adjustable from 0.6V to ~90% of the input voltage. Continuous output load current capability is 6A for  $T_J \leq +125^\circ\text{C}$  and 3A for  $T_J \leq +150^\circ\text{C}$ .

The ISL70003SEH uses voltage mode control architecture with feed-forward and switches at a selectable frequency of 500kHz or 300kHz. Loop compensation is externally adjustable to allow for an optimum balance between stability and output dynamic performance.

The internal synchronous power switches are optimized for high efficiency and excellent thermal performance. The chip features two logic-level disable inputs that can be used to inhibit pulses on the phase (LXX) pins in order to maximize efficiency based on the load current.

The ISL70003SEH also supports DDR applications and contains a buffer amplifier for generating the VREF voltage. High integration, best in class radiation performance and a feature filled design make the ISL70003SEH an ideal choice to power many of today's small form factor applications.

#### Features:

- $\pm 1\%$  Reference voltage over line, temperature and radiation
- Integrated MOSFETs 31m $\Omega$  PFET/21m $\Omega$  NFET - 95% peak efficiency
- Externally adjustable loop compensation
- Supports DDR applications (VTT tracks VDDQ/2)
  - Buffer amplifier for generating VREF voltage
  - 3A current sinking capability
- IMON pin for output current monitoring
- Adjustable analog soft-start
- Diode emulation for increased efficiency at light loads
- 500kHz or 300kHz operating frequency synch wording
- Monotonic start-up into pre-biased load

#### Links to:

Datasheet: <http://www.intersil.com/content/dam/Intersil/documents/isl7/isl70003seh.pdf>

Eval Board: <https://www.intersil.com/content/dam/Intersil/documents/an18/an1897.pdf>

SEE Data: <https://www.intersil.com/content/dam/Intersil/documents/an19/an1913.pdf>

TID Data: <https://www.intersil.com/content/dam/Intersil/documents/an19/an1924.pdf>

