

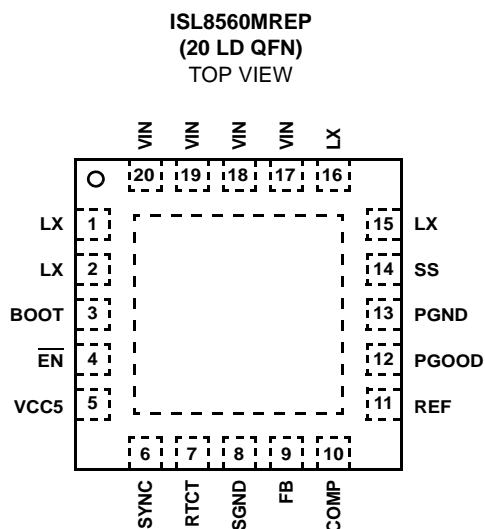
DC/DC Power Switching Regulator

The ISL8560MREP is a step down DC/DC power switching regulator which accepts 9.0V to 60V input and provides a 2A output current. The output voltage can be set in the range between 1.21V and 55V by means of an external divider. The device uses an internal power DMOS transistor with a typical $r_{DS(ON)}$ of 0.19Ω to obtain very high efficiency and high switching speed. A switching frequency in the range of 100kHz to 600kHz can be realized (the maximum power dissipation of the various packages must be observed). Notable features of this next generation of DC/DC converter includes pulse-by-pulse current limit for FET protection, hiccup mode for short circuit protection, voltage feedforward regulation, Frequency SYNC, soft-start, low standby current of 60 μ A typical in the disabled state, and thermal shut-down. The device is available in a 20 Ld QFN package.

Device Information

The specifications for an Enhanced Product (EP) device are defined in a Vendor Item Drawing (VID), which is controlled by the Defense Supply Center in Columbus (DSCC). “Hot-links” to the applicable VID and other supporting application information are provided on our website.

Pinout



Features

- Specifications per DSCC VID V62/08608
- Full Mil-Temp Electrical Performance from -55°C to +125°C
- Controlled Baseline with One Wafer Fabrication Site and One Assembly/Test Site
- Full Homogeneous Lot Processing in Wafer Fab
- No Combination of Wafer Fabrication Lots in Assembly
- Full Traceability Through Assembly and Test by Date/Trace Code Assignment
- Enhanced Process Change Notification
- Enhanced Obsolescence Management
- Eliminates Need for Up-Screening a COTS Component
- Voltage Feedforward Mode
- Step Down DC/DC Supporting up to 2A Based on Max T_J and VIN/VOUT
- Input Voltage Range of 9.0V to 60V
- Internal Reference of 1.21V $\pm 1\%$
- Adjustable Output Voltage Range of 1.21V to 55V
- Adjustable Switching Frequency 100kHz to 600kHz
- Frequency SYNC Pin
- Zero Load Current Operation
- Pulse by Pulse Mode Current Limit and Hiccup mode
- Low Standby Current of 60 μ A Typical
- Thermal Shut-down
- Load Dump to 100V for 400ms

Applications

- Industrial and Avionics power supplies
- Portable computers
- Battery chargers
- Distributed power systems

Related Literature

- **Technical Brief TB363 “Guidelines for Handling and Processing Moisture Sensitive Surface Mount Devices (SMDs)”**

Ordering Information

| VENDOR PART NUMBER (Notes 1, 2) | VENDOR ITEM DRAWING | PART MARKING | TEMP. RANGE (°C) | PACKAGE | PKG. DWG. # |
|------------------------------------|---------------------|-----------------|---------------------|---------------|-------------|
| ISL8560MREP | V62/08608-01XB | ISL8560MREP | -55 to +125 | 20 Ld 6x6 QFN | L20.6x6B |

NOTES:

1. Refer to TB347 for details on reel specifications.
2. Devices must be procured to the **VENDOR PART NUMBER**.

