LTC1658
14-Bit Rail-to-Rail Micropower DAC

FEATURES

- 14-Bit Resolution
- **8-Lead MSOP Package**
- **Buffered True Rail-to-Rail Voltage Output**
- 3V or 5V Single Supply Operation
- Very Low Power: $I_{CC(TYP)}$ = 270µA
- Power-On Reset
- 3-Wire Cascadable Serial Interface is Compatible with SPI and MICROWIRE™
- **Maximum DNL Error: 1LSB**
- Low Cost

APPLICATIONS

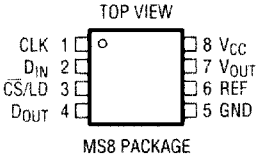
- Digital Calibration
- Industrial Process Control
- Automatic Test Equipment
- Cellular Telephones

DESCRIPTION

The LTC®1658 is a single supply, rail-to-rail voltage output, 14-bit digital-to-analog converter (DAC) in an 8-lead MSOP package. It includes an output buffer amplifier and an easy-to-use 3-wire cascadable serial interface.

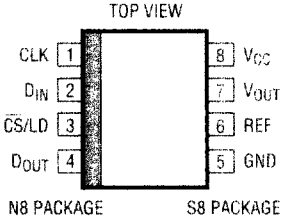
The LTC1658 output swings from 0V to V_{REF}. The REF pin can be tied to V_{CC} for rail-to-rail output swing. The LTC1658 operates from a single 2.7V to 5.5V supply. The typical power supply current is 270µA.

The low power supply current makes the LTC1658 ideal for battery-powered applications. The space saving MSOP provides the smallest 14-bit DAC system available.



MS8 PACKAGE
8-LEAD PLASTIC MSOP

LTC1658CMS8
LTC1658IMS8

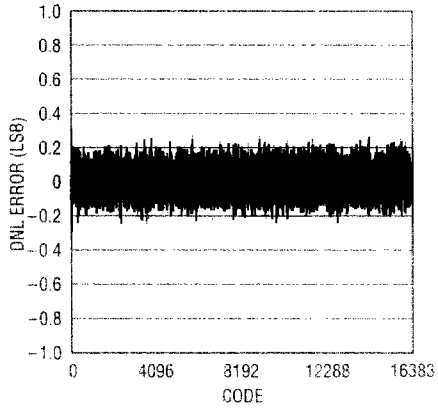


N8 PACKAGE
8-LEAD PDIP

S8 PACKAGE
8-LEAD PLASTIC SO

LTC1658CN8
LTC1658IN8
LTC1658CS8
LTC1658IS8

Differential Nonlinearity vs Input Code



Functional Block Diagram: 14-Bit Rail-to-Rail DAC