100V No-Opto Flyback Regulator Operates at 150°C Delivering up to 24W & Producing up to a 1kV Output Voltage

MILPITAS, CA – March 6, 2017 – Linear Technology Corporation announces the H-grade versions of the LT8304/-1, monolithic flyback regulators with guaranteed operation for junction temperatures as high as 150°C. By sampling the isolated output voltage directly from the primary-side flyback waveform, the part requires no opto-coupler or third winding for regulation. The LT8304 operates over a 3V to 100V input voltage range, has a 2A/150V integrated DMOS power switch and delivers up to 24W of output power, making it well suited for a wide variety of automotive, industrial, medical and military applications. The new LT8304-1 version is tailored for high output voltages up to 1kV.

These devices operate in boundary mode, which is a variable frequency current mode control switching scheme, typically resulting in better than ±5% output voltage regulation over the full line, load and temperature range. Boundary mode enables the use of a smaller transformer compared to equivalent continuous conduction mode designs. Several off-the-shelf transformers, identified in the data sheet, can be used for numerous applications. The high level of integration and the use of low ripple Burst Mode® operation result in a simple to use, low component count and high efficiency solution for isolated power delivery.

Additional features include output short-circuit protection, 116µA no load operating quiescent current, accurate enable and undervoltage lockout with hysteresis, internal soft-start and loop compensation, along with output diode temperature compensation.

The LT8304H/-1 operates over a –40°C to 150°C junction temperature range and is available in a small thermally enhanced SO-8 package. Pricing starts at $3.55 each in 1000-piece quantities. For more information, visit www.linear.com/product/LT8304.

Photo Caption: Isolated Monolithic Flyback Converter

Summary of Features: LT8304H/-1

- V_{IN} Range from 3V to 100V
- Up to 24W of Output Power
- LT8304-1 Capable of Output Voltages Up to 1kV
- Onboard 2A, 150V Integrated DMOS Power Switch
- Off-the-Shelf Power Transformers
- No Opto-Coupler or Transformer Third Winding Required for Voltage Feedback
- 116µA Quiescent Current
- Boundary Mode Operation
- Accurate Input Enable & Undervoltage Lockout with Hysteresis
- Output Diode Temperature Compensation
- H Grades: –40°C to 150°C Operating Junction Temp

Pricing shown is for budgetary use only and may differ due to local duties, taxes, fees and exchange rates.

About Linear Technology

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for over three decades. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear Technology produces power management, data conversion, signal conditioning, RF and interface ICs, μModule® subsystems and wireless sensor network products. For more information, visit www.linear.com

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