



Power Management

Home > Products > Power Management > Power Management Evaluation Kits > DC1023

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- Current Sources
- Hot Swap IC
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LT3505 Evaluation Kit

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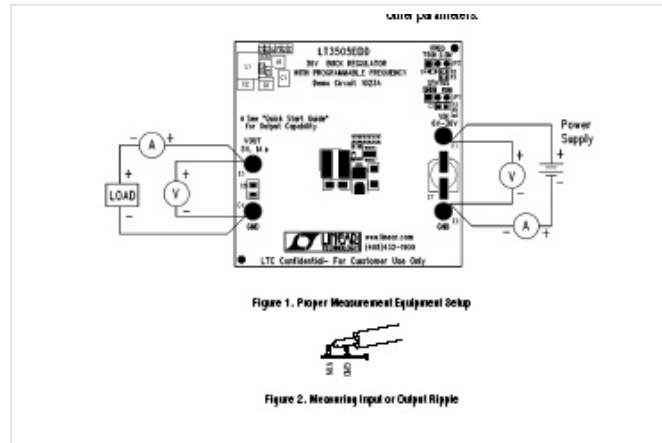
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FEATURES

LT3505 Evaluation Kit

Disclaimer: Linear Technology cannot assume responsibility for use of any circuitry other than circuitry entirely embodied in a Linear Technology product. No circuit patent licenses are implied. Linear Technology reserves the right to change the circuitry and specifications without notice at any time.

TYPICAL APPLICATION



[BACK TO TOP](#)

DESCRIPTION

Demo circuit DC1023A is a monolithic step-down DC/DC switching regulator featuring the LT3505. The demo circuit is designed for 5V output from a 6V to 36V input. The wide input range of the LT3505 allows a variety of input sources. The typical sources are automotive batteries, wall adaptors and industrial supplies. The oscillator can be programmed for high frequency operation allowing the use of tiny, low cost external components or it can be programmed for lower frequency operation to maximize efficiency. The current mode control scheme creates fast transient response and good loop stability. The gate drive of the internal switch is boosted to a voltage that is higher than V_{in} to ensure saturation of the switch. A charge pump consisting of a diode and capacitor on the demo board performs the boost function. The SHDN pin can be used to set the part in shutdown mode, reducing the supply current to less than 2µA. The SHDN pin can also be used to program soft start. In this mode, the SHDN pin is driven through an external RC filter to create a voltage ramp on this pin. The soft start function reduces the input current surge during start-up. Cycle by cycle current limit, frequency foldback and thermal shutdown provide the protection against shorted outputs. The LT3505 datasheet gives a complete description of the part, operation and application information. The datasheet must be read in conjunction with this quick start guide for demo circuit DC1023A.

[BACK TO TOP](#)

PACKAGING[BACK TO TOP](#)

ORDER INFO

Part numbers ending in PBF are [lead free](#). Please contact LTC marketing for information on lead based finish parts.

Part numbers containing TR or TRM are shipped in [tape and reel or 500 unit mini tape and reel](#), respectively

Please refer to our [general ordering information](#) or the product datasheet for more details

Evaluation Kits

Part Number	Description	Price
DC1023A	LT3505EDD Demo Board	\$100.00
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[BACK TO TOP](#)

APPLICATIONS[BACK TO TOP](#)

SIMULATE

To simulate selected Linear Technology products, please download [LTSpice / SwitcherCAD III](#). This powerful schematic capture and simulation tool includes macro models for 80% of Linear Technology's switching regulators, over 200 op amp models, as well as resistors, transistors and MOSFET models.

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[BACK TO TOP](#)