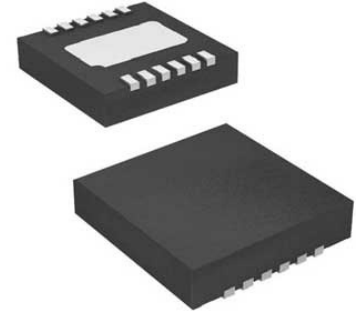


20V, 500mA, Ultralow Noise, Ultrahigh PSRR Linear Regulator with VIOC Control

Manufacturers	Analog Devices, Inc
Package/Case	12-Lead DFN (3mm x 3mm w/ EP)
Product Type	Power Management ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for LT3045IDD-1#PBF or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The LT3045-1 is a high performance low dropout linear regulator featuring LTC's ultralow noise and ultrahigh PSRR architecture for powering noise sensitive applications. Designed as a precision current reference followed by a high performance voltage buffer, the LT3045-1 can be easily paralleled to further reduce noise, increase output current and spread heat on the PCB. In addition to the LT3045 feature set, the LT3045-1 incorporates a VIOC tracking function to control an upstream switching converter to maintain a constant voltage across the LT3045-1 and hence minimize power dissipation.

The device supplies 500mA at a typical 260mV dropout voltage. Operating quiescent current is nominally 2.3mA and drops to $\ll 1\mu\text{A}$ in shutdown. The LT3045-1's wide output voltage range (0V to 15V) while maintaining unity-gain operation provides virtually constant output noise, PSRR, bandwidth and load regulation, independent of the programmed output voltage. Additionally, the regulator features programmable current limit, fast start-up capability and programmable power good to indicate output voltage regulation.

The LT3045-1 is stable with a minimum 10 μF ceramic output capacitor. Built-in protection includes reverse battery protection, reverse current protection, internal current limit with foldback and thermal limit with hysteresis. The LT3045-1 is available in thermally enhanced 12-Lead MSOP and 3mm \times 3mm DFN packages.

VIOC FunctionLT3045-1YesLT3045No

Features

Ultralow RMS Noise: $0.8\mu\text{VRMS}$ (10Hz to 100kHz)

Ultralow Spot Noise: $2\text{nV}/\sqrt{\text{Hz}}$ at 10kHz

Ultrahigh PSRR: 76dB at 1MHz

Output Current: 500mA

Wide Input Voltage Range: 1.8V to 20V

Single Capacitor Improves Noise and PSRR

100 μA SET Pin Current: $\pm 1\%$ Initial Accuracy

VIOC Pin Controls Upstream Regulator to Minimize Power Dissipation

Single Resistor Programs Output Voltage

Programmable Current Limit

Low Dropout Voltage: 260mV

Output Voltage Range: 0V to 15V

Programmable Power Good

Fast Start-Up Capability

Precision Enable/UVLO

Parallelable for Lower Noise and Higher Current

Internal Current Limit with Foldback

Minimum Output Capacitor: 10 μF Ceramic

Reverse Battery and Reverse Current Protection

12-Lead MSOP and 3mm \times 3mm DFN Packages

Application

RF Power Supplies: PLLs, VCOs, Mixers, LNAs, PAs

Very Low Noise Instrumentation

High Speed/High Precision Data Converters

Medical Applications: Imaging, Diagnostics

Post-Regulator for Switching Supplies

Related Products



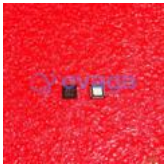
[LT3763EFE](#)

Analog Devices, Inc
TSSOP28



[LT1038CK](#)

Analog Devices, Inc
TO-3



[LTC4417IUF](#)

Analog Devices, Inc
QFN-24



[LTC3440EMS](#)

Analog Devices, Inc
MSOP10



[LTC1966CMS8#PBF](#)

Analog Devices, Inc
MSOP-8P



[LTC2990IMS#PBF](#)

Analog Devices, Inc
10MSOP



[LTM8045EX#PBF](#)

Analog Devices, Inc
BGA40



[LT4295IUFD#PBF](#)

Analog Devices, Inc
28-WFQFN