

LT3042 - 20V, 200mA, Ultralow Noise, Ultrahigh PSRR RF Linear Regulator

Manufacturers	Analog Devices, Inc
Package/Case	DFN10
Product Type	Power Management ICs
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for LT3042IDD#PBF or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The LT3042 is a high performance low dropout linear regulator featuring LTC's ultralow noise and ultrahigh PSRR architecture for powering noise sensitive RF applications. Designed as a precision current reference followed by a high performance voltage buffer, the LT3042 can be easily paralleled to further reduce noise, increase output current and spread heat on the PCB.

The device supplies 200mA at a typical 350mV dropout voltage. Operating quiescent current is nominally 2mA and drops to $\ll 1\mu\text{A}$ in shutdown. The LT3042'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 LT3042 is stable with a minimum 4.7 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 LT3042 is available in thermally enhanced 10-Lead MSOP and 3mm \times 3mm DFN packages.

Features

Ultralow RMS Noise: 0.8 μ VRMS (10Hz to 100kHz)

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

Ultrahigh PSRR: 79dB at 1MHz

Output Current: 200mA

Wide Input Voltage Range: 1.8V to 20V

Single Capacitor Improves Noise and PSRR

100 μ A SET Pin Current: \pm 1% Initial Accuracy

Single Resistor Programs Output Voltage

High Bandwidth: 1MHz

Programmable Current Limit

Low Dropout Voltage: 350mV

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: 4.7 μ F Ceramic

Reverse Battery and Reverse Current Protection

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

Application

RF Power Supplies: PLLs, VCOs, Mixers, LNAs

Very Low Noise Instrumentation

High Speed/High Precision Data Converters

Medical Applications: Imaging, Diagnostics

Precision Power Supplies

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



[LTM8045EY#PBF](#)

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BGA40



[LT4295IUFD#PBF](#)

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28-WFQFN