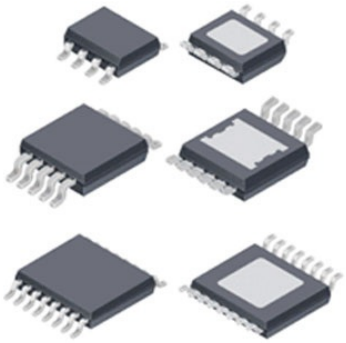
LT3094IMSE#PBF

Data Sheet

−20V, 500mA, Ultralow Noise, Ultrahigh PSRR Negative Linear Regulator

Manufacturers	Analog Devices, Inc
Package/Case	12-Lead MSOP w/ EP
Product Type	Power Management ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for LT3094IMSE#PBF or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The LT3094 is a high performance low dropout negative linear regulator featuring ADI's ultralow noise and ultrahigh PSRR architecture for powering noise sensitive applications. The device can be easily paralleled to further reduce noise, increase output current and spread heat on a PCB.

The LT3094 supplies 500mA at a typical 235mV dropout voltage. Operating quiescent current is nominally 2.35mA and drops to 3µA in shutdown. The device's wide output voltage range (0V to –19.5V) error amplifier operates in unity-gain and provides virtually constant output noise, PSRR, bandwidth, and load regulation independent of the programmed output voltage. Additional features are a bipolar enable pin, programmable current limit, fast startup capability and programmable power good to indicate output voltage regulation. The regulator incorporates a tracking function to control an upstream supply to maintain a constant voltage across the LT3094 to minimize power dissipation and optimize PSRR.

The LT3094 is stable with a minimum 10µF ceramic output capacitor. Built-in protection includes internal current limit with foldback and thermal limit with hysteresis. The LT3094 is available in thermally enhanced 12-Lead MSOP and 3mm × 3mm DFN Packages.

Features

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

Ultralow Spot Noise: 2.2nV/√Hz at 10kHz

Ultrahigh PSRR: 74dB at 1MHz

Output Current: 500mA

Wide Input Voltage Range: –1.8V to –20V

Single Capacitor Improves Noise and PSRR

100μA SET Pin Current: ±1% Initial Accuracy

Single Resistor Programs Output Voltage

Programmable Current Limit

Low Dropout Voltage: 235mV

Output Voltage Range: 0V to –19.5V

Programmable Power Good and Fast Start-Up

Bipolar Precision Enable/UVLO Pin

VIOC Pin Controls Upstream Regulator to Minimize Power Dissipation and Optimize PSRR

Minimum Output Capacitor: 10μF Ceramic

12-Lead MSOP and 3mm × 3mm DFN Packages

Application

RF and Precision Power Supplies

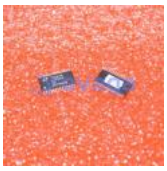
Very Low Noise Instrumentation

High Speed/High Precision Data Converters

Medical Applications: Diagnostics and Imaging

Post-Regulator for Switching Supplies

Related Products



LT3763EFE

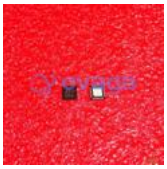
Analog Devices, Inc

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

Analog Devices, Inc

BGA40

LT4295IUFD#PBF

Analog Devices, Inc

28-WFQFN