

Power Factor Correction Preregulator 200kHz 16-Pin SOIC Tube



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[Inquiry](#)

Manufacturer: [Texas Instruments, Inc](#)

Package/Case: SOP16

Product Type: Power Management ICs

RoHS: RoHS Compliant/Lead free 

Lifecycle: Active

General Description

The UC1854 provides active-power factor correction for power systems that otherwise would draw non-sinusoidal current from sinusoidal power lines. This device implements all the control functions necessary to build a power supply capable of optimally using available power-line current while minimizing line-current distortion. To do this, the UC1854 contains a voltage amplifier, an analog multiplier and divider, a current amplifier, and a fixed-frequency PWM. In addition, the UC1854 contains a power MOSFET-compatible gate driver, 7.5-V reference, line anticipator, load-enable comparator, low-supply detector, and overcurrent comparator.

The UC1854 uses average current-mode control to accomplish fixed-frequency current control with stability and low distortion. Unlike peak current-mode, average current control accurately maintains sinusoidal line current without slope compensation and with minimal response to noise transients.

The high reference voltage and high oscillator amplitude of the UC1854 minimize noise sensitivity while fast PWM elements permit chopping frequencies above 200 kHz. The UC1854 is used in single-phase and three-phase systems with line voltages that vary from 75 V to 275 V and line frequencies across the 50-Hz to 400-Hz range. To reduce the burden on the circuitry that supplies power to this device, the UC1854 features low starting supply current.

These devices are available packaged in 16-pin plastic and ceramic dual in-line packages, and a variety of surface-mount packages.

Key Features

Control Boost PWM to 0.99 Power Factor

Limit Line-Current Distortion to < 5%

World-Wide Operation Without Switches

Feedforward Line Regulation

Average Current-Mode Control

Low Noise Sensitivity

Low Startup Supply Current

Fixed-Frequency PWM Drive

Low-Offset Analog Multiplier and Divider

1-A Totem-Pole Gate Driver

Precision Voltage Reference

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Recommended For You

UCC28064ADR

Texas Instruments, Inc

SOP16

UC3637N

Texas Instruments, Inc

DIP-18

UCC27517DBVR

Texas Instruments, Inc

SOT23-5

UCC2946TPWRQ1

Texas Instruments, Inc

TSSOP8

UCC28730QDRQ1

Texas Instruments, Inc

SOP7

UCC21222QDRQ1

Texas Instruments, Inc

SOP16

UCD9090QRGZRQ1

Texas Instruments, Inc

VQFN-48

UCC27531QDBVRQ1

Texas Instruments, Inc

SOT23-6

UCC27511AQDBVRQ1

Texas Instruments, Inc

SOT23-6

UCC2803QDRQ1

Texas Instruments, Inc
SOP8

UCC28951QPWRQ1

Texas Instruments, Inc
TSSOP24

UCC21320QDWKRQ1

Texas Instruments, Inc
SOIC-14

UCC27322QDGNRQ1

Texas Instruments, Inc
HVSSOP-8

UCC28950QPWRQ1

Texas Instruments, Inc
TSSOP24

UCC2808AQDR-2Q1

Texas Instruments, Inc
SOP8