UCC28063DR

Power Factor Correction Controller 500kHz 16-Pin SOIC T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	SOP16
Product Type:	Power Management ICs
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active

Images are for reference only

Inquiry

General Description

Optimized for consumer applications concerned with audible noise elimination, this solution extends the advantages of transition mode – high efficiency with low-cost components – to higher power ratings than previously possible. By utilizing a Natural Interleaving technique, both channels operate as masters (that is, there is no slave channel) synchronized to the same frequency. This approach delivers inherently strong matching, faster responses, and ensures that each channel operates in transition mode.

Expanded system level protections feature input brownout and dropout recovery, output over-voltage, open-loop, overload, soft-start, phase-fail detection, and thermal shutdown. The additional FailSafe over-voltage protection (OVP) feature protects against shorts to an intermediate voltage that, if undetected, could lead to catastrophic device failure. Advanced non-linear gain results in rapid, yet smoother response to line and load transient events. Reduced bias currents improve stand-by power efficiency. Special line-dropout handling avoids significant current disruption and minimizes audible-noise generation.

Key Features

Input Filter and Output Capacitor Ripple-Current Cancellation
Reduced Current Ripple for Higher System Reliability and Smaller Bulk Capacitor

Reduced EMI Filter Size

Phase Management Capability

Fail-Safe OVP with Dual Paths Prevents Output Overvoltage Conditions by Voltage-Sensing Failures

Sensorless Current-Shaping Simplifies Board Layout and Improves Efficiency

Advanced Audible Noise Performance

Non-linear Error-Amplifier Gain

Soft Recovery on Overvoltage

Integrated Brownout and Dropout Handling

Reduced Bias Currents

Improved Efficiency and Design Flexibility Over Traditional Single-Phase Continuous Conduction Mode (CCM)

Inrush-Safe Current Limiting:
Prevents MOSFET Conduction During Inrush

Eliminates reverse Recovery Events in Output rectifiers

Enables Use of Low-Cost Diodes Without Extensive Snubber Circuitry

Improved Light-Load Efficiency

Fast, Smooth Transient Response

Expanded System-Level Protections

1-A Source/1.8-A Sink Gate Drivers

–40°C to 125°C Operating Temperature Range in a 16-Lead SOIC Package

Description
Optimized for consumer applications concerned with audible noise elimination, this solution extends the advantages of transition mode – high efficiency with low-cost components – to higher power ratings than previously possible. By utilizing a Natural Interleaving technique, both channels operate as masters (that is, there is no slave channel) synchronized to the same frequency. This approach delivers inherently strong matching, faster responses, and ensures that each channel operates in transition mode.
Expanded system level protections feature input brownout and dropout recovery, output over-voltage, open-loop, overload, soft-start, phase-fail detection, and thermal shutdown. The additional FailSafe over-voltage protection (OVP) feature protects against shorts to an intermediate voltage that, if undetected, could lead to catastrophic device failure. Advanced non-linear gain results in rapid, yet smoother response to line and load transient events. Reduced bias currents improve stand-by power efficiency. Special line-dropout handling avoids significant current disruption and minimizes audible-noise generation.

Recommended For You

UCC28064ADR	UC3637N	UCC27517DBVR
Texas Instruments, Inc	Texas Instruments, Inc	Texas Instruments, Inc
SOP16	DIP-18	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