
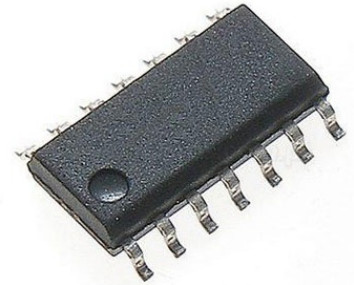


Voltage Mode PWM Controller 1A 21kHz 14-Pin SOIC Tube

Manufacturer:	Texas Instruments, Inc
Package/Case:	SOP14
Product Type:	Power Management ICs
RoHS:	RoHS Compliant/Lead free 
Lifecycle:	Active



Images are for reference only

[Inquiry](#)

General Description

The UCC3581 voltage mode pulse width modulator is designed to control low power isolated DC - DC converters in applications such as Subscriber Line Power (ISDN I.430). Primarily used for single switch forward and flyback converters, the UCC3581 features BiCMOS circuitry for low startup and operating current, while maintaining the ability to drive power MOSFETs at frequencies up to 100kHz. The UCC3581 oscillator allows the flexibility to program both the frequency and the maximum duty cycle with two resistors and a capacitor. A TTL level input is also provided to allow synchronization to an external frequency source.

The UCC3581 includes programmable soft start circuitry, overcurrent detection, a 7.5V linear preregulator to control chip VDD during startup, and an on-board 4.0V logic supply.

The UCC3581 provides functions to maximize light load efficiency that are not normally found in PWM controllers.

A linear preregulator driver in conjunction with an external depletion mode N-MOSFET provides initial controller power. Once the bootstrap supply is functional, the preregulator is shut down to conserve power. During light load, power is saved by providing a programmable minimum duty cycle clamp. When a duty cycle below the minimum is called for, the modulator skips cycles to provide the correct average duty cycle required for output regulation. This effectively reduces the switching frequency, saving significant gate drive and power stage losses.

The UCC3581 is available in 14-pin plastic and ceramic dual-in-line packages and in a 14-pin narrow body small outline IC package (SOIC). The UCC1581 is specified for operation from -55°C to +125°C, the UCC2581 is specified for operation from -40°C to +85°C, and the UCC3581 is specified for operation from 0°C to +70°C.

Key Features

Low 85 μ A Startup Current

Low 300 μ A Operating Current

Automatically Disabled Startup Preregulator

Programmable Minimum Duty Cycle with Cycle Skipping

Programmable Maximum Duty Cycle

Output Current 1A Peak Source and Sink

Programmable Soft Start

Programmable Oscillator Frequency

External Oscillator Synchronization Capability

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Recommended For You

UCC28064ADR

Texas Instruments, Inc

SOP16

UC3637N

Texas Instruments, Inc

DIP-18

UCC27517DBVR

Texas Instruments, Inc

SOT23-5

UCC2946IPWRQ1

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