

## Current Mode PWM Controller 18V 200mA 1000kHz 8-Pin SOIC T/R



Images are for reference only

[Inquiry](#)

**Manufacturer:** [Texas Instruments, Inc](#)

**Package/Case:** SOP-8

**Product Type:** Power Management ICs

**RoHS:** RoHS Compliant/Lead free 

**Lifecycle:** Active

### General Description

UCCx8C4x family are high-performance, current-mode PWM controllers. The UCCx8C4x is an enhanced BiCMOS version with pin-for-pin compatibility to the industry standard UCx84xA family and UCx84x family of PWM controllers. The BiCMOS technology offers lower power consumption to improve efficiency as well as faster current sense and oscillator frequency. In addition, lower startup voltage versions of 7 V are offered as UCCx8C40 and UCCx8C41 for use in battery systems. The UCC28C4x series is specified for operation from  $-40^{\circ}\text{C}$  to  $105^{\circ}\text{C}$ , and the UCC38C4x series is specified for operation from  $0^{\circ}\text{C}$  to  $70^{\circ}\text{C}$ .

Providing necessary features to control fixed frequency, peak current-mode power supplies, this family offers the following performance advantages. The device offers high-frequency operation up to 1 MHz, suitable for high speed applications. The trimmed discharge current enables more precise programming of the maximum duty cycle and dead-time limit when compared to the UCx84x family. Reduced start-up and operating currents minimizes start-up loss and low operating power consumption for improved efficiency. The device also features a fast current-sense-to-output delay time of 35 ns for superior overload protection at the power switch, and a  $\pm 1\text{-A}$  peak output current capability with improved rise and fall times for driving large external MOSFETs directly. The UCC38C4x family is offered in 8-pin VSSOP (DGK), 8-pin SOIC (D), and 8-pin PDIP (P) packages.

## Key Features

Enhanced Replacement for UCx84x and UCx84xA Family With Pin-to-Pin Compatibility

1-MHz Operation

50- $\mu$ A Standby Current, 100- $\mu$ A Maximum

Low Operating Current of 2.3 mA at 52 kHz

Fast 35-ns Cycle-by-Cycle Over-Current Limiting

$\pm$ 1-A Peak Output Current

Rail-to-Rail Output Swings with 25-ns Rise and 20-ns Fall Times

$\pm$ 1% Initial Trimmed 2.5-V Error Amplifier Reference

Trimmed Oscillator Discharge Current

New Undervoltage Lockout Versions

VSSOP-8 Package Minimizes Board Space

### Description

UCCx8C4x family are high-performance, current-mode PWM controllers. The UCCx8C4x is an enhanced BiCMOS version with pin-for-pin compatibility to the industry standard UCx84xA family and UCx84x family of PWM controllers. The BiCMOS technology offers lower power consumption to improve efficiency as well as faster current sense and oscillator frequency. In addition, lower startup voltage versions of 7 V are offered as UCCx8C40 and UCCx8C41 for use in battery systems. The UCC28C4x series is specified for operation from  $-40^{\circ}\text{C}$  to  $105^{\circ}\text{C}$ , and the UCC38C4x series is specified for operation from  $0^{\circ}\text{C}$  to  $70^{\circ}\text{C}$ .

Providing necessary features to control fixed frequency, peak current-mode power supplies, this family offers the following performance advantages. The device offers high-frequency operation up to 1 MHz, suitable for high speed applications. The trimmed discharge current enables more precise programming of the maximum duty cycle and dead-time limit when compared to the UCx84x family. Reduced start-up and operating currents minimizes start-up loss and low operating power consumption for improved efficiency. The device also features a fast current-sense-to-output delay time of 35 ns for superior overload protection at the power switch, and a  $\pm$ 1-A peak output current capability with improved rise and fall times for driving large external MOSFETs directly. The UCC38C4x family is offered in 8-pin VSSOP (DGK), 8-pin SOIC (D), and 8-pin PDIP (P) packages.

## 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