MCU 16-bit MSP430 RISC 8KB Flash 2.5V/3.3V 32-Pin VQFN EP T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	QFN32
Product Type:	Embedded Processors & Controllers
RoHS:	RoHS Compliant/Lead free RoHS
Lifecycle:	Active

MSP430F2132IRHBR Image

Images are for reference only

Inquiry

General Description

The TPS92515 family of devices are compact monolithic switching regulators integrating a low resistance N-Channel MOSFET. The devices are intended for high-brightness LED lighting applications where efficiency, high bandwidth, PWM and/or analog dimming and small size are important.

The regulator operates using a constant off-time, peak current control. The operation is simple: after an off-time based on the output voltage, an on-time begins. The on-time ends once the inductor peak current threshold is reached. The TPS92515 device can be configured to maintain a constant peak-to-peak ripple during the ON and OFF periods of a shunt FET dimming cycle. This is ideal for maintaining a linear response across the entire shunt FET dimming range.

Steady-state accuracy is aided by the inclusion of a low-offset, high-side comparator. LED current can be modulated using either Analog or PWM dimming, or both simultaneously. Other features include UVLO, wide input voltage operation, inherent LED Open operation and wide operating temperature range with thermal shut-down.

The TPS92515 and TPS92515-Q1 devices have an operational input range up to 42 V. The TPS92515HV and TPS92515HV-Q1 offer high-voltage options with an input range up to 65 V. All are available in a thermally enhanced 10-pin HVSSOP package.

Key Features

AEC-Q100 Grade 1 Qualified

Integrated 290-mΩ (typ) Internal N-Channel FET

Operation Down to 5.15 V After Start-Up

Low Offset High-side Peak Current Comparator

Constant Average Current, up to 2 A

Inherent Cycle-by-Cycle Current Limit

Multiple Dimming Methods

1000:1 PWM Dimming Range

200:1 Analog Dimming Range

Simple Constant Off-time Control

No Loop Compensation

Fast Transient Response

Thermally Enhanced HVSSOP Package

Integrated Thermal Protection

Recommended For You

TMS320DM642AZNZ6	**TMS320C31PQA40**	**TMS320C6726BRFP266**
Texas Instruments, Inc	Texas Instruments, Inc	Texas Instruments, Inc
BGA	QFP	QFP144
MSP430F147IPM	**MSP430F135IPMR**	**TMS320DM648ZUTD9**
Texas Instruments, Inc	Texas Instruments, Inc	Texas Instruments, Inc
QFP64	LQFP64	BGA
TMS320C203PZ80	**MSP430G2452IPW20**	**MSP430G2231IPW14R**
Texas Instruments, Inc	Texas Instruments, Inc	Texas Instruments, Inc
QFP	TSSOP20	TSSOP14
TMS320F28027PTT	**TMS5703137DZWTQQ1**	**TMS34010FNL-40**
Texas Instruments, Inc	Texas Instruments, Inc	Texas Instruments, Inc
LQFP48	NFBGA-337	PLCC
TMS320C6670ACYPA2	**TMS320VC5402APGE16**	**TMS320DM642AGDKA5**
Texas Instruments, Inc	Texas Instruments, Inc	Texas Instruments, Inc
FCBGA84	LQFP-144	FCCSP(GDK)