

DC/DC Cntrlr Single-OUT Step Down/Step Up 500kHz 20-Pin HTSSOP EP T/R



Images are for reference only

Manufacturer: [Texas Instruments, Inc](#)

Package/Case: HTSSOP20

Product Type: Power Management ICs

RoHS: RoHS Compliant/Lead free 

Lifecycle: Active

[Inquiry](#)

General Description

The LM5118 wide voltage range Buck-Boost switching regulator controller features all of the functions necessary to implement a high-performance, cost-efficient Buck-Boost regulator using a minimum of external components. The Buck-Boost topology maintains output voltage regulation when the input voltage is either less than or greater than the output voltage, making it especially suitable for automotive applications. The LM5118 operates as a buck regulator while the input voltage is sufficiently greater than the regulated output voltage and gradually transitions to the buck-boost mode as the input voltage approaches the output. This dual-mode approach maintains regulation over a wide range of input voltages with optimal conversion efficiency in the buck mode and a glitch-free output during mode transitions. This easy-to-use controller includes drivers for the high-side buck MOSFET and the low-side boost MOSFET. The regulators control method is based upon current mode control using an emulated current ramp. Emulated current mode control reduces noise sensitivity of the pulse-width modulation circuit, allowing reliable control of the very small duty cycles necessary in high input voltage applications. Additional protection features include current limit, thermal shutdown and an enable input. The device is available in a power-enhanced, 20-pin HTSSOP package featuring an exposed die attach pad to aid thermal dissipation.

Key Features

Ultra-Wide Input Voltage Range From 3 V to 75 V

Emulated Peak Current Mode Control

Smooth Transition Between Step-Down and Step-Up Modes

Switching Frequency Programmable to 500 KHz

Oscillator Synchronization Capability

Internal High Voltage Bias Regulator

Integrated High and Low-Side Gate Drivers

Programmable Soft-Start Time

Ultra-Low Shutdown Current

Enable Input Wide Bandwidth Error Amplifier

1.5% Feedback Reference Accuracy

Thermal Shutdown

Package: 20-Pin HTSSOP (Exposed Pad)

Create a Custom Design Using the LM5118 With the WEBENCH Power Designer

Recommended For You

LM2637M

Texas Instruments, Inc

SOP24

LM5116MH

Texas Instruments, Inc

TSSOP20

LM234Z-3

Texas Instruments, Inc

TO-92

LM27761DSGR

Texas Instruments, Inc

WSO8

LM74700QDBVRQ1

Texas Instruments, Inc

SOT23-6

LM2991S

Texas Instruments, Inc

TO-263

LM74800QDRRRQ1

Texas Instruments, Inc

WSO-12

LMR14030SDDAR

Texas Instruments, Inc

SOP8

LM2940CT-12

Texas Instruments, Inc

TO-220

LM536035QPWPTQ1

Texas Instruments, Inc

HTSSOP-16

LM5575MH

Texas Instruments, Inc

TSSOP16

LM536013QDSXTQ1

Texas Instruments, Inc

WSO-10

LM5160QPWRQ1

Texas Instruments, Inc

HTSSOP14

LM5576MH

Texas Instruments, Inc

TSSOP20

LMQ61460AFSQRJRRQ1

Texas Instruments, Inc

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