

LM5122QMHX/NOPB

DC/DC Cntrlr Single-OUT Step Up 975kHz Automotive 20-Pin HTSSOP EP T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	HTSSOP20
Product Type:	Power Management ICs
RoHS:	RoHS Compliant/Lead free W
Lifecycle:	Active



Images are for reference only

General Description

The LM5122 is a multi-phase capable synchronous boost controller intended for high-efficiency synchronous boost regulator applications. The control method is based upon peak-current-mode control. Current-mode control provides inherent line feed forward, cycle-by-cycle current limiting, and ease of loop compensation.

The switching frequency is programmable up to 1 MHz. Higher efficiency is achieved by two robust N-channel MOSFET gate drivers with adaptive dead-time control. A user-selectable diode-emulation mode also enables discontinuous-mode operation for improved efficiency at light load conditions.

An internal charge pump allows 100% duty cycle for high-side synchronous switch (bypass operation). A 180° phase shifted clock output enables easy multiphase interleaved configuration. Additional features include thermal shutdown, frequency synchronization, hiccup-mode current limit, and adjustable line undervoltage lockout.

Key Features

AEC-Q100 Qualified with the following results: Device Temperature Grade 1: -40°C to +125°C Ambient OperatingTemperature Device HBM ESD Classification Level 2 DeviceCDM ESD Classification Level C6 Maximum Input Voltage: 65 V Minimum Input Voltage: 3 V (4.5 V for Start-Up) Output Voltage up to 100 V Bypass (VOUT = VIN) Operation 1.2-V Reference with ±1% Accuracy Free-Run andSynchronizable Switching to 1 MHz Peak-Current-Mode Control Robust 3-A Integrated Gate Drivers Adaptive Dead-TimeControl Optional Diode-Emulation Mode

Email: sales@avaq.com

ProgrammableCycle-by-Cycle Current Limit

Hiccup-Mode Overload Protection

Programmable Line UVLO

Programmable SoftStart

Thermal Shutdown Protection

Low Shutdown QuiescentCurrent: 9 µA

Programmable Slope Compensation

ProgrammableSkip-Cycle Mode Reduces Standby Power

Allows External VCCSupply

Inductor DCR Current Sensing Capability

Multi-phaseCapability

Thermally Enhanced 20-PinHTSSOP

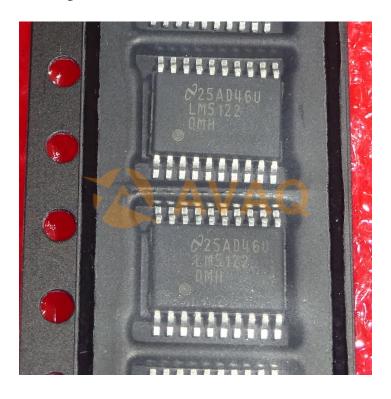
Create a Custom Design Using the LM5122 With the WEBENCH? Power Designer

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Recommended For You

Texas Instruments, Inc SOP24

LM2637M

LM27761DSGR Texas Instruments, Inc WSON8

LM74800QDRRRQ1 Texas Instruments, Inc WSON-12

LM536035QPWPTQ1 Texas Instruments, Inc HTSSOP-16

LM5160QPWPRQ1 Texas Instruments, Inc

HTSSOP14

LM5116MH Texas Instruments, Inc TSSOP20

LM74700QDBVRQ1 Texas Instruments, Inc SOT23-6

LMR14030SDDAR Texas Instruments, Inc SOP8

LM5575MH Texas Instruments, Inc TSSOP16

LM5576MH Texas Instruments, Inc

TSSOP20

LM234Z-3

Texas Instruments, Inc TO-92

LM2991S Texas Instruments, Inc TO-263

LM2940CT-12 Texas Instruments, Inc TO-220

LM536013QDSXTQ1 Texas Instruments, Inc

WSON-10

Texas Instruments, Inc VQFN-14

LMQ61460AFSQRJRRQ1