

# LX9610 Power Module

12A, 22V, Step-Down Power Module

## Description

The Microsemi® LX9610 is a 22V, 12A power module designed for step-down point-of-load applications. This device includes a synchronous controller with compensation built-in, internal power MOSFETs, and the output inductor all in a 15mm x 15mm QFN package. It will operate with an input voltage from 8V to 22V, while the output voltage is adjustable from 0.8V to 5V, using a single external resistor. Included is an internal 5V regulator, and the only other components needed to make a complete 12A DC to DC converter are a 4.7µF decoupling capacitor for the 5V regulator, and the bulk input and output capacitors.

The LX9610 is packaged in a thermal enhanced, compact over-molded module with a length, width and height of the power module are 15mm, 15mm and 4mm. This package is suitable for assembly by standard automated surface mount equipment.

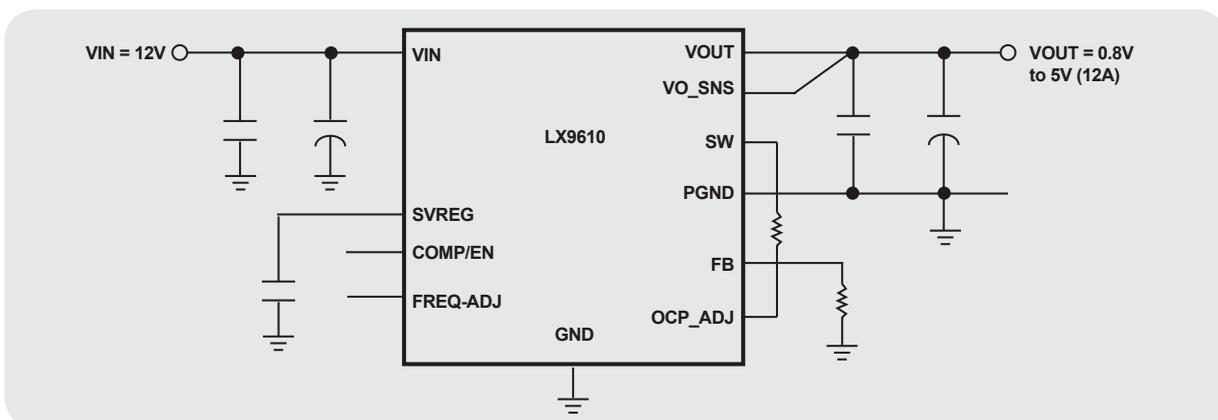
## Key Features and Benefits

- Fully-integrated 12A power module requiring only input/output caps and few external components
- Operational input supply voltage range: 8V to 22V
- Adjustable output from 0.8V to 5V using one external resistor
- Integrated upper and lower N-Channel MOSFETs
- Maximum 1 MHz switching frequency (Preset frequency is 600 kHz)
- Can be enabled or shut down through the COMP/EN pin
- Internal digital soft start
- Cycle-by-cycle over current monitoring with hiccup mode protection
- Available in QFN 15mm x 15mm x 4mm
- RoHS compliant & halogen free

## Applications

- FPGA
- Industrial equipment
- Telecom and datacom applications
- Point-of-load regulator applications
- Gaming

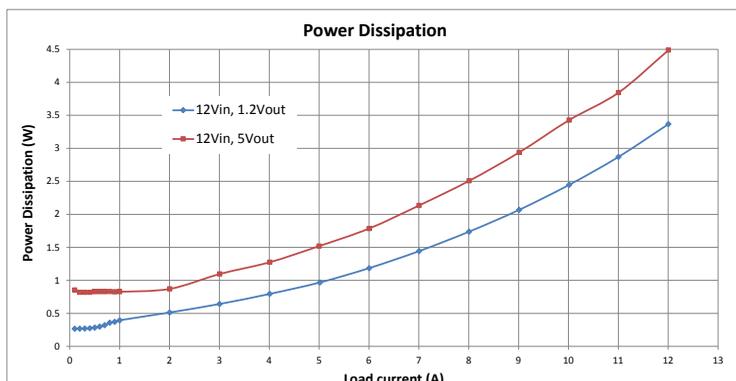
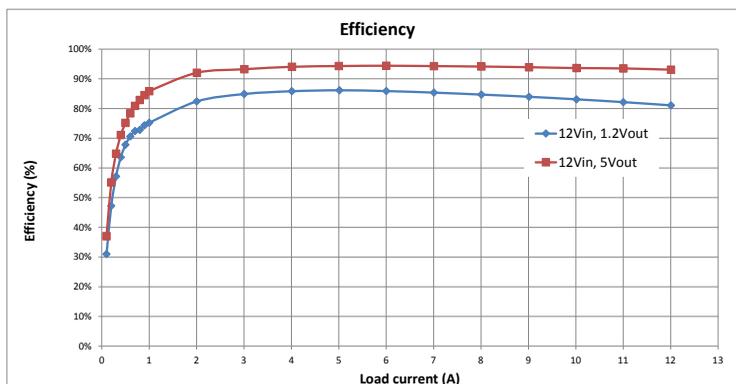
## Simplified Block Diagram



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## Dynamic Load Response and Efficiency



## Ordering Information

Ambient Temperature	Type	Package	Part Number	Packaging Type
-40°C to 85°C	RoHS2 compliant, Pb-free Matte Sn lead finish MSL3	QFN 15 x 15 x 3.75 15L	LX9610ILQ	Tube
			LX9610ILQ-TR	Tape and Reel

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