

















































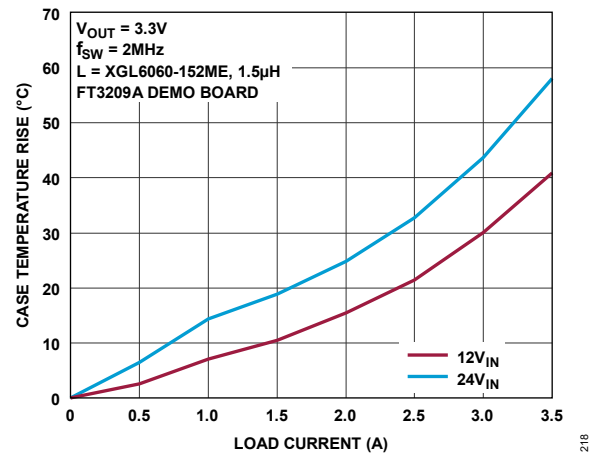








decreased to reduce the temperature to an acceptable level. [Figure 41](#) shows how case temperature rise can be managed by reducing  $V_{IN}$ .



**Figure 41. Case Temperature Rise vs. Load Current**

TYPICAL APPLICATIONS

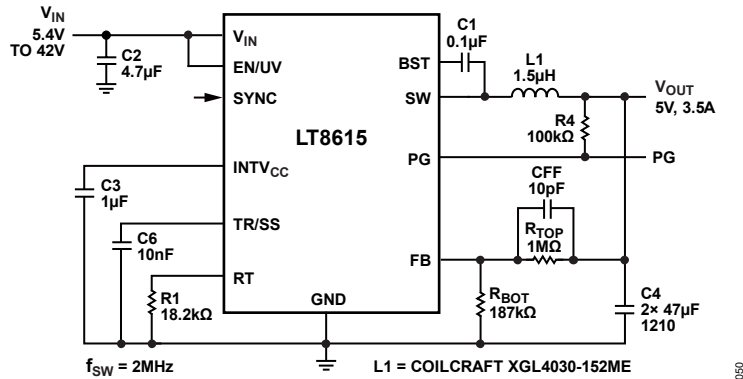


Figure 42. 5V Step-Down Converter

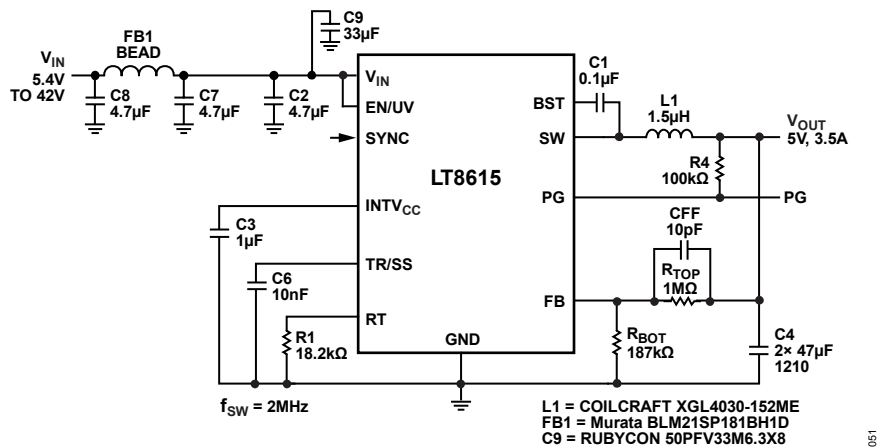


Figure 43. Ultralow EMI 5V Step-Down Converter

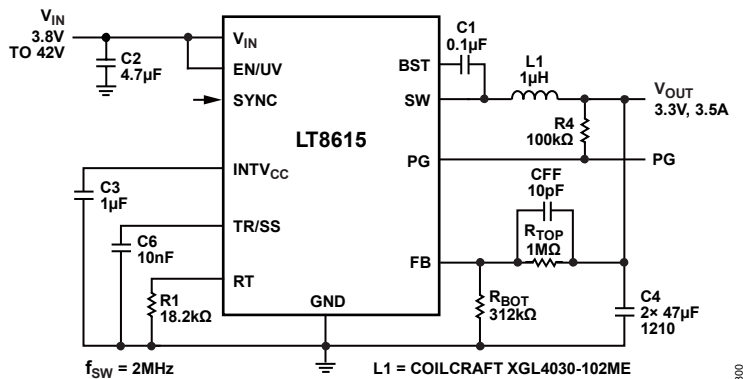


Figure 44. 3.3V Step-Down Converter

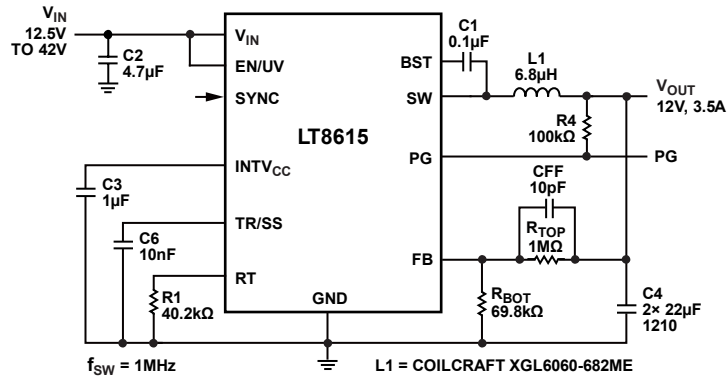


Figure 45. 12V Step-Down Converter

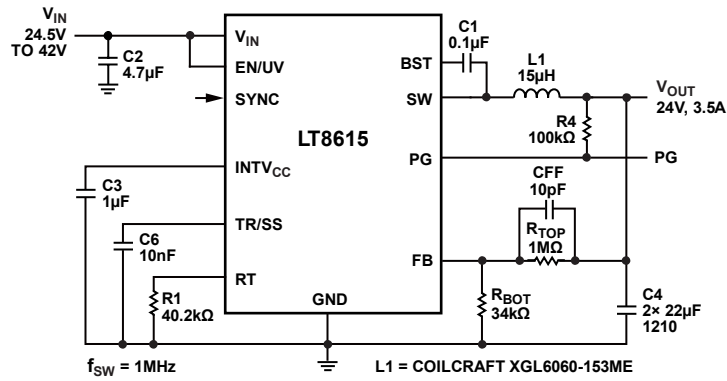
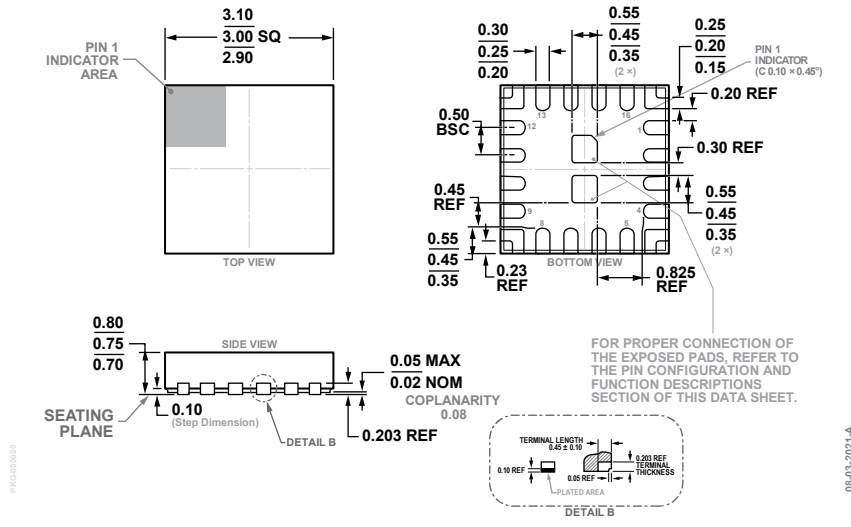


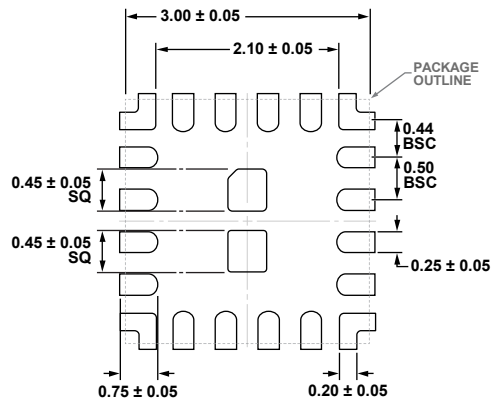
Figure 46. 24V Step-Down Converter

### OUTLINE DIMENSIONS

Refer to <https://www.analog.com/en/design-center/package-quality-symbols-footprints.html> for the most recent package drawings.



RECOMMENDED SOLDER PAD LAYOUT  
 APPLY SOLDER MASK TO AREAS THAT ARE NOT SOLDERED



**16-Lead Lead Frame Chip Scale Package [LFCSP\_SS]**  
**3 x 3 mm Body, With Side Solderable Leads**  
**(CS-16-2)**  
 Dimensions shown in millimeters

## ORDERING GUIDE

**Table 5. Ordering Guide**

LEAD FREE FINISH	TAPE AND REEL	PART MARKING	PACKAGE DESCRIPTION	TEMPERATURE RANGE
LT8615RUDM#PBF	LT8615RUDM#TRPBF	LHWC	16-Lead (3mm × 3mm) Plastic QFN	-40°C to +150°C
<b>AUTOMOTIVE PRODUCTS**</b>				
LT8615RUDM#WPBF	LT8615RUDM#WTRPBF	LHWC	16-Lead (3mm × 3mm) Plastic QFN	-40°C to +150°C

Contact the factory for parts specified with wider operating temperature ranges. \*The temperature grade is identified by a label on the shipping container.

### *Tape and reel specifications.*

\*\*Versions of this part are available with controlled manufacturing to support the quality and reliability requirements of automotive applications. These models are designated with a #W suffix. Only the automotive grade products shown are available for use in automotive applications. Contact your local Analog Devices account representative for specific product ordering information and to obtain the specific Automotive Reliability reports for these models.

## RELATED PARTS

PART NUMBER	DESCRIPTION	COMMENTS
<a href="#">LT8608/LT8608B</a>	42V, 1.5A Synchronous Step-Down Regulator with 2.5µA Quiescent Current	$V_{IN(MIN)} = 3.2V$ , $V_{IN(MAX)} = 42V$ , $V_{OUT(MIN)} = 0.778V$ , $I_Q = 2.5\mu A$ , $I_{SD} = 1\mu A$ , MSOP-10E, 2mm × 2mm DFN-8
<a href="#">LT8609/LT8609A</a>	42V, 3A, 94% Efficiency, 2.2MHz Synchronous MicroPower Step-Down DC/DC Converter with $I_Q = 2.5\mu A$	$V_{IN(MIN)} = 3V$ , $V_{IN(MAX)} = 42V$ , $V_{OUT(MIN)} = 0.8V$ , $I_Q = 2.5\mu A$ , $I_{SD} < 1\mu A$ , MSOP-10E, 3mm x 3mm DFN-10
<a href="#">LT8640A</a>	42V, 5A/8A Peak Synchronous Step-Down Silent Switcher with 2.5µA Quiescent Current	$V_{IN} = 3.4V$ to 42V, $V_{OUT(MIN)} = 0.97V$ , $I_Q = 2.5\mu A$ , $I_{SD} < 1\mu A$ , 3mm × 4mm QFN-18 Package
<a href="#">LT8614</a>	42V, 4A Synchronous Step-Down Silent Switcher with 2.5µA Quiescent Current	$V_{IN} = 3.4V$ to 42V, $V_{OUT(MIN)} = 0.97V$ , $I_Q = 2.5\mu A$ , $I_{SD} = 1\mu A$ , 3mm × 4mm QFN-18 Package
<a href="#">LT8610A/LT8610AB</a>	42V, 3.5A, 96% Efficiency, 2.2MHz Synchronous MicroPower Step-Down DC/DC Converter with $I_Q = 2.5\mu A$	$V_{IN} = 3.4V$ to 42V, $V_{OUT(MIN)} = 0.97V$ , $I_Q = 2.5\mu A$ , $I_{SD} < 1\mu A$ , MSOP-16E Package
<a href="#">LT8610AC</a>	42V, 3.5A, 96% Efficiency, 2.2MHz Synchronous MicroPower Step-Down DC/DC Converter with $I_Q = 2.5\mu A$	$V_{IN} = 3V$ to 42V, $V_{OUT(MIN)} = 0.8V$ , $I_Q = 2.5\mu A$ , $I_{SD} < 1\mu A$ , MSOP-16E Package
<a href="#">LT8611</a>	42V, 2.5A, 96% Efficiency, 2.2MHz Synchronous MicroPower Step-Down DC/DC Converter with $I_Q = 2.5\mu A$ and Input/Output Current Limit/Monitor	$V_{IN} = 3.4V$ to 42V, $V_{OUT(MIN)} = 0.97V$ , $I_Q = 2.5\mu A$ , $I_{SD} < 1\mu A$ , 3mm × 5mm QFN-24 Package

ALL INFORMATION CONTAINED HEREIN IS PROVIDED "AS IS" WITHOUT REPRESENTATION OR WARRANTY. NO RESPONSIBILITY IS ASSUMED BY ANALOG DEVICES FOR ITS USE, NOR FOR ANY INFRINGEMENTS OF PATENTS OR OTHER RIGHTS OF THIRD PARTIES THAT MAY RESULT FROM ITS USE. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. NO LICENCE, EITHER EXPRESSED OR IMPLIED, IS GRANTED UNDER ANY ADI PATENT RIGHT, COPYRIGHT, MASK WORK RIGHT, OR ANY OTHER ADI INTELLECTUAL PROPERTY RIGHT RELATING TO ANY COMBINATION, MACHINE, OR PROCESS, IN WHICH ADI PRODUCTS OR SERVICES ARE USED. TRADEMARKS AND REGISTERED TRADEMARKS ARE THE PROPERTY OF THEIR RESPECTIVE OWNERS. ALL ANALOG DEVICES PRODUCTS CONTAINED HEREIN ARE SUBJECT TO RELEASE AND AVAILABILITY.