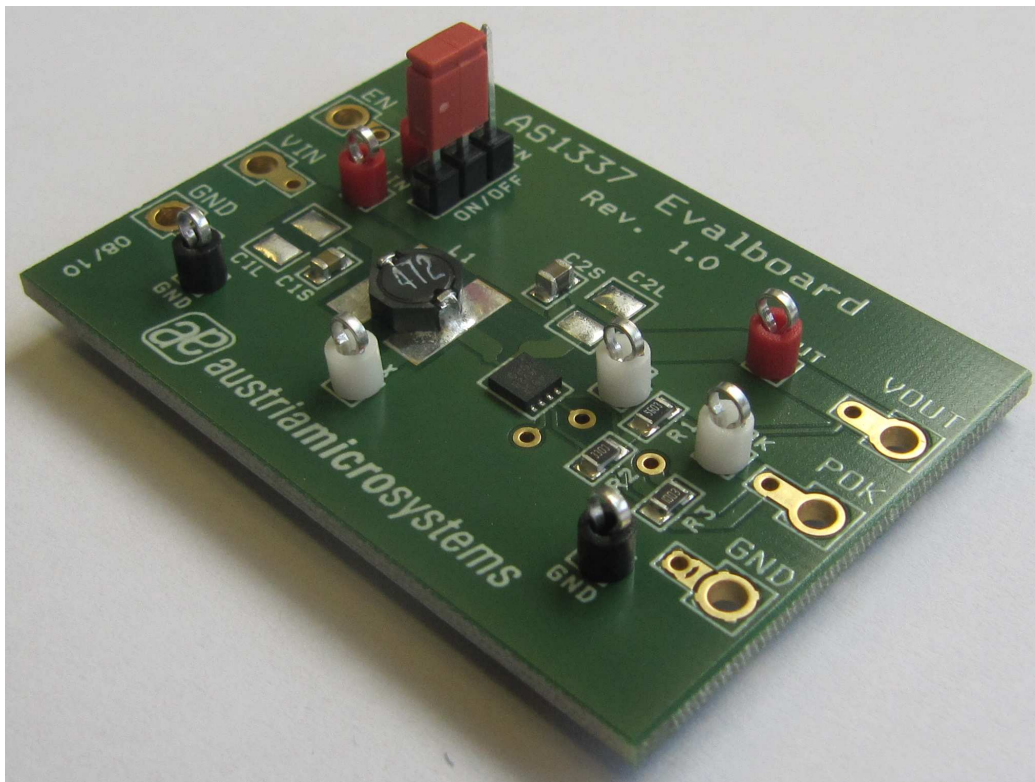


Application Note: AN01- Demoboard

# AS1337

200mA, DC-DC Step-Up Converter with Buck Mode



## Table of Contents

<b>1</b>	<b>FURTHER APPLICATIONS .....</b>	<b>3</b>
<b>2</b>	<b>REVISION STATUS .....</b>	<b>3</b>
<b>3</b>	<b>GENERAL DESCRIPTION.....</b>	<b>3</b>
<b>4</b>	<b>GETTING STARTED .....</b>	<b>4</b>
<b>5</b>	<b>HW- OVERVIEW.....</b>	<b>4</b>
5.1	AS1337 Demoboard jumper and device locations .....	4
5.2	AS1337 Demoboard 1V0 schematic .....	4
5.3	AS1337 Demoboard 1V0 layout .....	5
<b>6</b>	<b>COPYRIGHT .....</b>	<b>6</b>
<b>7</b>	<b>DISCLAIMER .....</b>	<b>6</b>

# 1 Further Applications

Visit our home-page: <http://www.austriamicrosystems.com>

## 2 Revision status

AS1337- AN01 - Demoboard  
 AS1337 Demoboard – Layout  
 AS1337 Demoboard – Schematic

Rev.: 1V0  
 Rev.: 1V0  
 Rev.: 1V0

## 3 General Description



Figure 1: Board Description - Connectors

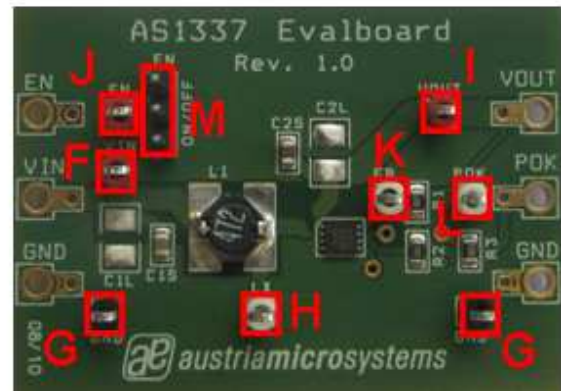


Figure 2: Board Description – Measurement Points

### Connector Description

Label	Name	Description	Info
A	VIN	Supply Voltage	Supply voltage ranging from 0.65V to 4.5V
B	GND	Ground	
C	EN	Enable Input	Set the digital input “high” for normal operation. For shutdown, set “low”
D	VOUT	Output Voltage	Output voltage ranging from 2.5V to 5.0V
E	POK	POK	high, when VOUT is within regulation

### Measurement Point Description

Label	Name	Description	Info
F	VIN	Supply Voltage	Measurement Points
G	GND	Ground	
H	LX	External Inductor	
I	VOUT	Output Voltage	
J	EN	Enable Input	
K	FB	Feedback	
L	POK	POK	
M	EN	Enable	<input type="checkbox"/> ON: The AS1337 is enabled <input type="checkbox"/> OFF: The AS1337 is disabled <input type="checkbox"/> No Jumper: Connect a valid enable signal via external connector “C”.

## 4 Getting Started

The AS1337 Demoboard is designed to work with the AS1337A “Battery connected in shutdown” version. With the resistor divider R1/R2 it is possible to adjust the VOUT.

On this Demoboard the following resistor values are mounted:

R1 = 560k and R2 = 330k → VOUT = 3.3V

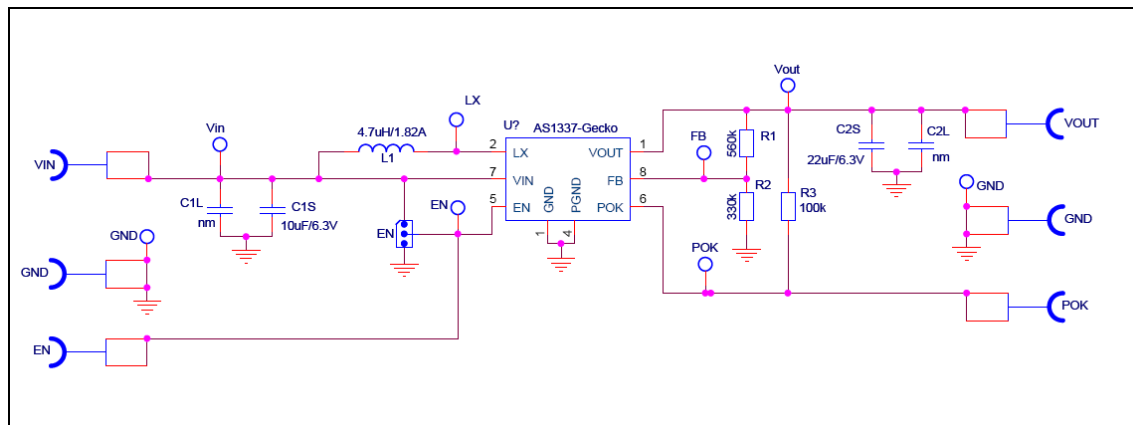
## 5 HW- Overview

### 5.1 AS1337 Demoboard jumper and device locations

Listed below are the various connectors and jumpers.

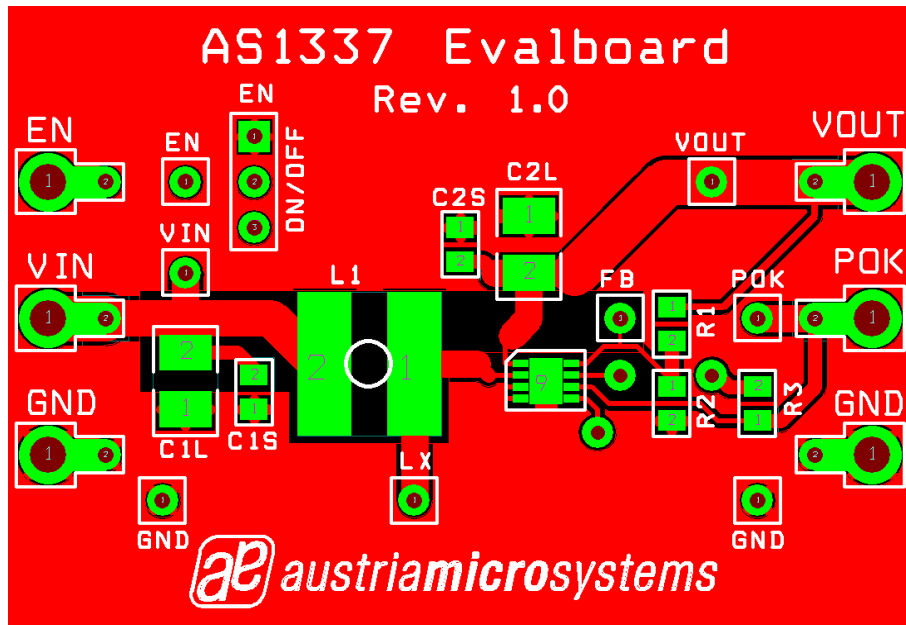
Ref.	Function	Value	Description	Manufacturer	Mfg. Order Nr.
C1s	Input Capacitor	10 $\mu$ F	0805 / X5R / 6.3V	Murata	GRM219R60J106KE19
C2s	Output Capacitor	22 $\mu$ F	0805 / X5R / 6.3V	Murata	GRM21BR60J226ME39
L1	Coil	4.7 $\mu$ H	50m $\Omega$ / 1.82A / 6.8x6.0x2.4mm	Coilcraft	MOS6020-472ML
R1	Resistor (VOUT)	560k	0805/ $\pm$ 1%	Multicomp	MC 0.1W 0805 1% 560K
R2	Resistor (VOUT)	330k	0805/ $\pm$ 1%	Multicomp	MC 0.1W 0805 1% 330K
R3	R <sub>POK</sub>	100k	0805/ $\pm$ 1%	Multicomp	MC 0.1W 0805 1% 100K
U1	DC/DC Converter	ASSE	TQFN 3x3mm 8-pin	austriamicrosystems	AS1337A-BTDT

### 5.2 AS1337 Demoboard 1V0 schematic

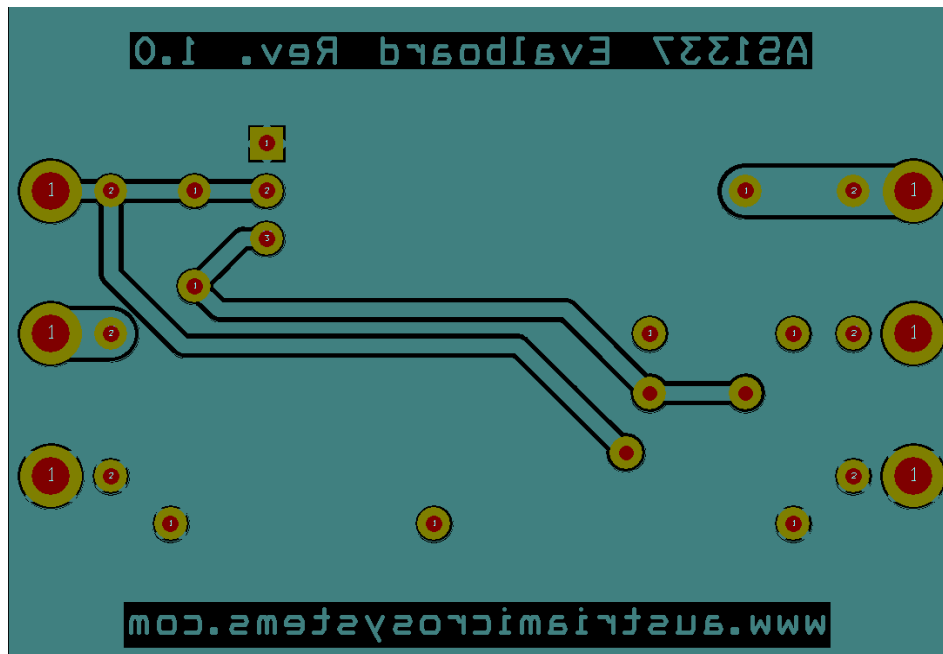


Application schematic

### 5.3 AS1337 Demoboard 1V0 layout



Layout (top view)



Layout (bottom view)

## 6 Copyright

Copyright © 1997-2011, austriamicrosystems AG, Schloss Premstaetten, 8141 Unterpremstaetten, Austria-Europe. Trademarks Registered ®. All rights reserved. The material herein may not be reproduced, adapted, merged, translated, stored, or used without the prior written consent of the copyright owner.

All products and companies mentioned are trademarks or registered trademarks of their respective companies.

## 7 Disclaimer

Devices sold by austriamicrosystems AG are covered by the warranty and patent indemnification provisions appearing in its Term of Sale. austriamicrosystems AG makes no warranty, express, statutory, implied, or by description regarding the information set forth herein or regarding the freedom of the described devices from patent infringement. Austriamicrosystems AG reserves the right to change specifications and prices at any time and without notice. Therefore, prior to designing this product into a system, it is necessary to check with austriamicrosystems AG for current information.

This product is intended for use in normal commercial applications. Applications requiring extended temperature range, unusual environmental requirements, or high reliability applications, such as military, medical life-support or lifesustaining equipment are specifically not recommended without additional processing by austriamicrosystems AG for each application. For shipments of less than 100 parts the manufacturing flow might show deviations from the standard production flow, such as test flow or test location.

The information furnished here by austriamicrosystems AG is believed to be correct and accurate. However, austriamicrosystems AG shall not be liable to recipient or any third party for any damages, including but not limited to personal injury, property damage, loss of profits, loss of use, interruption of business or indirect, special, incidental or consequential damages, of any kind, in connection with or arising out of the furnishing, performance or use of the technical data herein. No obligation or liability to recipient or any third party shall arise or flow out of austriamicrosystems AG rendering of technical or other services.



### Contact Information

#### Headquarters

austriamicrosystems AG  
Tobelbader Strasse 30  
Schloss Premstaetten  
A-8141 Unterpremstaetten, Austria  
T. +43 (0) 3136 500 0  
F. +43 (0) 3136 5692

For Sales Offices, Distributors and Representatives, please visit:  
<http://www.austriamicrosystems.com/contact>