Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

austriamicrosystems AG

is now

ams AG

The technical content of this austriamicrosystems document is still valid.

Contact information:

Headquarters:
ams AG
Tobelbaderstrasse 30
8141 Unterpremstaetten, Austria
Tel: +43 (0) 3136 500 0
e-Mail: ams_sales@ams.com

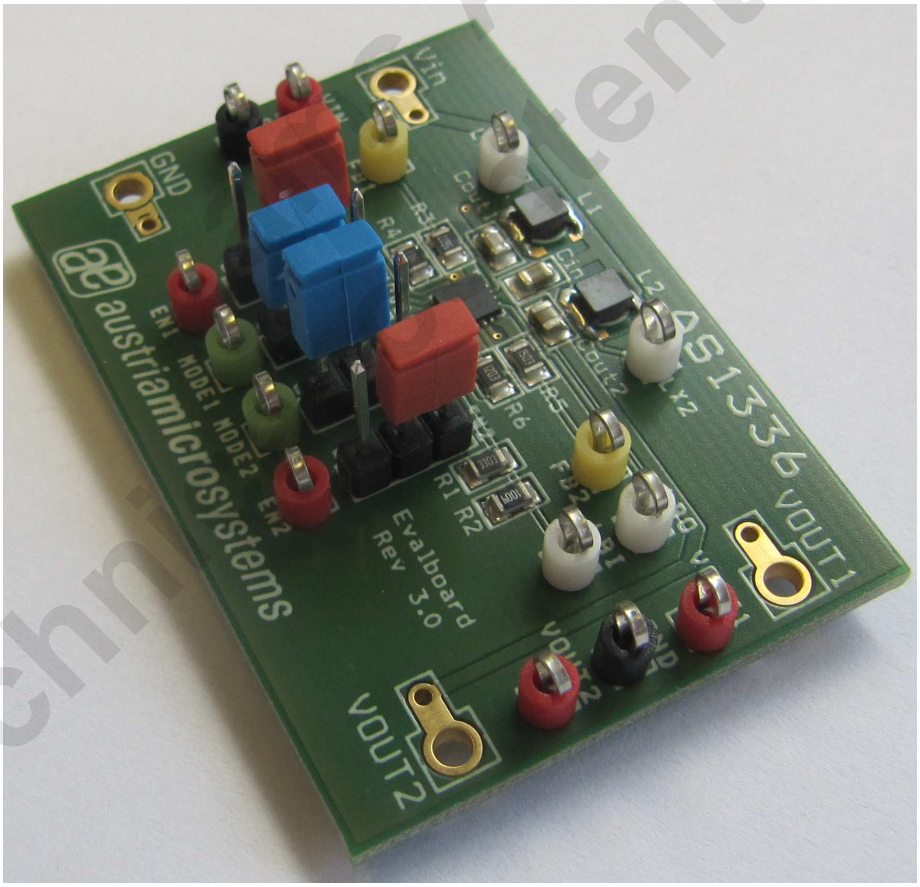
Please visit our website at **www.ams.com**

Demo Board Manual

AS1336

Dual, Low Voltage, Micropower DC-DC Step-Up Converters

www.austriamicrosystems.com/DC-DC_Step-Up/AS1336



General Description

Board Description

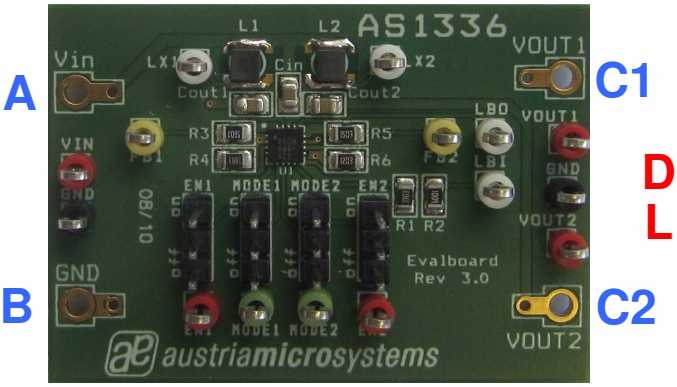


Figure 1: Board Description - Connectors

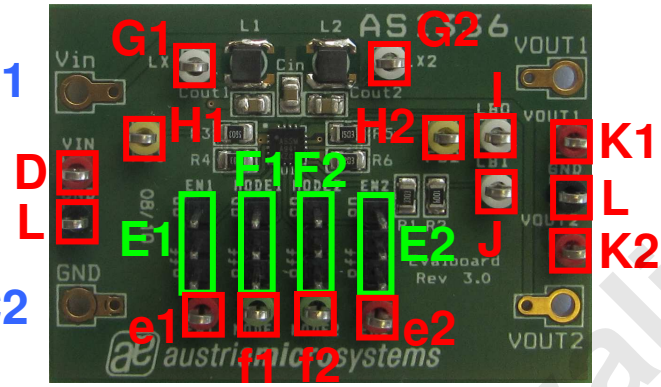


Figure 2: Board Description – Measurement Points

Connector Description

Label	Name	Description	Info
A	**VIN**	Supply Voltage	Supply voltage ranging from 0.8V to 3.6V
B	**GND**	Ground	
C1	**VOUT1**	Output Voltage 1	Output voltage ranging from 1.8V to 3.6V
C2	**VOUT2**	Output Voltage 2	Output voltage ranging from 1.8V to 3.6V

Measurement Point Description

Label	Name	Description	Info	
D	**VIN**	Supply Voltage	Measurement Points	
e1	**EN1**	Enable 1		
e2	**EN2**	Enable 2		
f1	**MODE1**	Mode 1		
f2	**MODE2**	Mode 2		
G1	**LX1**	External Inductor 1		
G2	**LX2**	External Inductor 2		
H1	**FB1**	Feedback 1		
H2	**FB2**	Feedback 2		
I	**LBO**	Low Battery Comparator Output		
J	**LBI**	Low Battery Comparator Input		
K1	**VOUT1**	Output Voltage 1		
K2	**VOUT2**	Output Voltage 2		
L	**GND**	Ground		
E1	**EN1**	Enable 1		on: The VOUT1 of AS1336 is enabled
				off: The VOUT1 of AS1336 is disabled
				No Jumper: Connect a valid enable signal to “e1”.
E2	**EN2**	Enable 2		on: The VOUT2 of AS1336 is enabled
				off: The VOUT1 of AS1336 is disabled
				No Jumper: Connect a valid enable signal to “e2”.
F1	**MODE1**	Mode 1		on: fixed frequency operation of regulator 1
				off: autom. Powersafe operation of reg.1

F2	**MODE2**	Mode 2		on: fixed frequency operation of regulator 2 off: autom. Powersafe operation of reg.2

Getting Started

The AS1336 Demoboard is designed to work with the AS1336A adjustable output voltage version.
With the resistor divider R1/R2 it is possible to adjust the “Low Battery Comparator Input” threshold.
With the resistor divider R3/R4 it is possible to adjust VOUT1 and with the resistor divider R5/R6 it is possible to adjust VOUT2.

On this Demoboard the following resistor values are mounted:
R1 = 330k and R2 = 1M → V_{DETECT} = 800mV
R3 = 560k and R4 = 180k → VOUT1 = 3.3V
R5 = 150k and R6 = 120k → VOUT2 = 1.8V

Bill of Materials

Ref.	Function	Value	Description	Manufacturer	Mfg. Order Nr.
Cin	Input Capacitor	10µF	0805 / X5R / 6.3V	Murata	GRM219R60J106KE19
Cout1	Output 1 Capacitor	10µF	0805 / X5R / 6.3V	Murata	GRM219R60J106KE19
Cout2	Output 2 Capacitor	10µF	0805 / X5R / 6.3V	Murata	GRM219R60J106KE19
L1	Coil	10µH	456mΩ / 0.7A / 3.2x2.5x1.55mm	Murata	LQH32PN100MN0
L2	Coil	10µH	456mΩ / 0.7A / 3.2x2.5x1.55mm	Murata	LQH32PN100MN0
R1	Resistor (LBI)	330k	0805/ ±1%	Multicomp	MC 0.1W 0805 1% 330K
R2	Resistor (LBI)	1M	0805/ ±1%	Multicomp	MC 0.1W 0805 1% 1M
R3	Resistor (VOUT1)	560k	0805/ ±1%	Multicomp	MC 0.1W 0805 1% 560K
R4	Resistor (VOUT1)	180k	0805/ ±1%	Multicomp	MC 0.1W 0805 1% 180K
R5	Resistor (VOUT2)	150k	0805/ ±1%	Multicomp	MC 0.1W 0805 1% 150K
R6	Resistor (VOUT2)	120k	0805/ ±1%	Multicomp	MC 0.1W 0805 1% 120K
U1	DC/DC Converter	ASSM	TQFN 3x3mm 16-pin	Austriamicrosystems AG	AS1336A-BQFT

Layout of Demo Board

Board schematics and layout

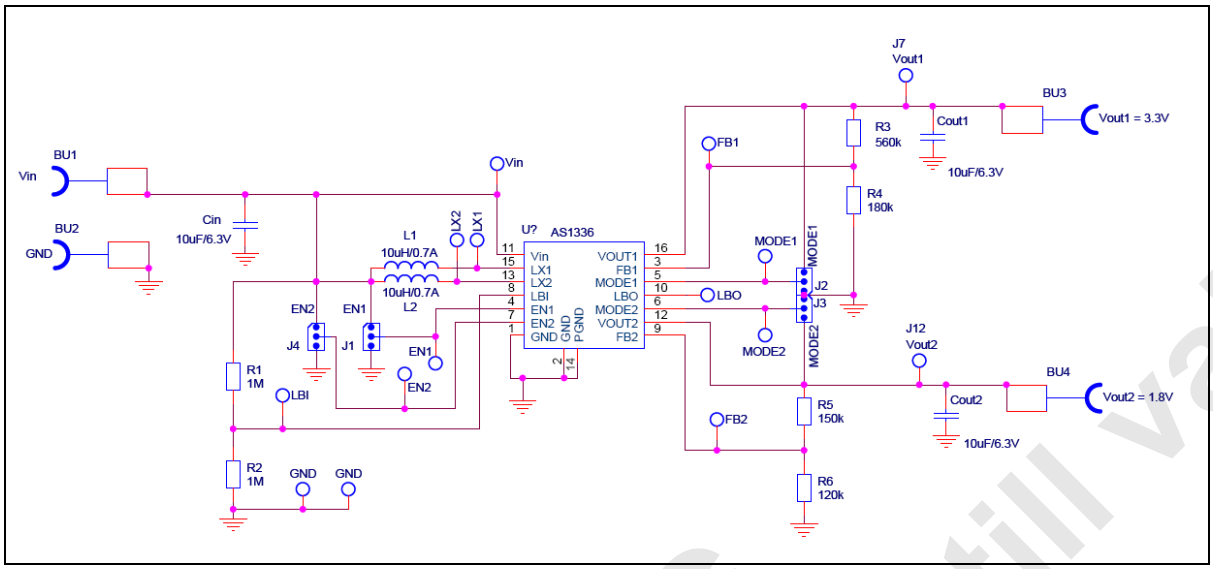


Figure 3: Schematics

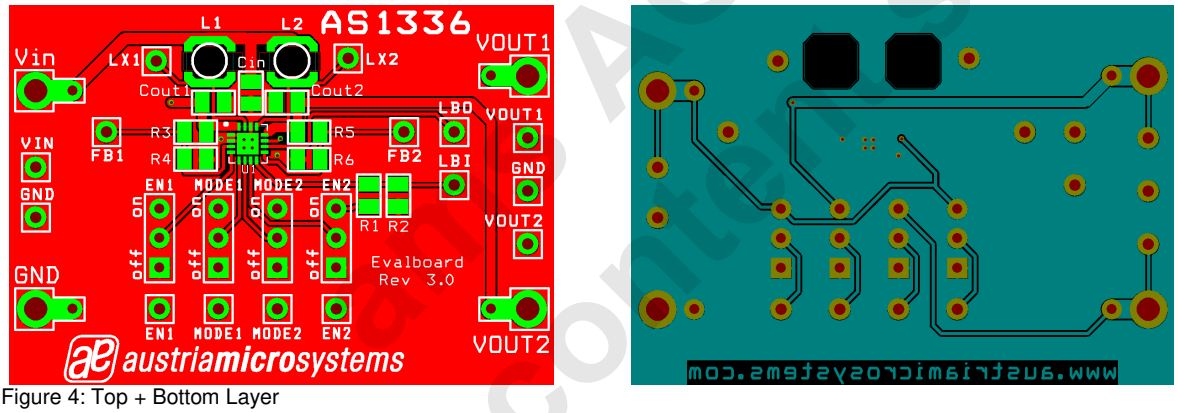


Figure 4: Top + Bottom Layer

Copyright

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 life-sustaining 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
Tobelbaderstraße 30
A-8141 Unterpremstätten - Graz, 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