ams AG

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**

AS1341

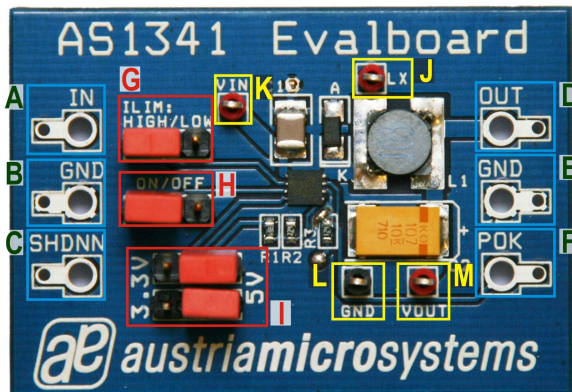## Evaluation Board Application Note

General Description

Board Description

Figure 1: Board Description

Connector Description

Label	Name	Description	Info
A	**VIN**	Input Voltage	Input voltage ranging from 4.5V to 20V
B	**GND**	Ground	
C	**SHDNN**	Enable Jumper	
D	**OUT**	Power Output Connector	
E	**GND**	Ground	
F	**POK**	Power-OK Signal	

Jumper Description

Label	Name	Description	Info	
G	**ILIM: HIGH/LOW**	Current Limiter	▪☐☐ LOW ILIMIT: 0.7A ☐☐▪ HIGH ILIMIT: 1.4A	
H	**ON/OFF**	Enable Jumper	☐☐▪ ON ▪☐☐ OFF	
I	**3.3V 5V**		☐☐☐ 3.3V	☐☐☐ 5V

Measurement Points Description

Label	Name	Description	Info
J	**LX**	External Conductor	
K	**VIN**	Power Supply Connectors for VIN and GND.	
L	**GND**		
M	**OUT**	Power Output Connector	

Operational sequence

This evaluation board comes with the AS1341.

1. If not present get the datasheet for the AS1341 from www.austriamicrosystems.com. Drive the IC on the Demoboard only with the recommended settings and values as described in the datasheet.

2. Connect a 4.5V to 20V power supply (VIN **"A"** and GND **"B"**).

3. Perform measurements at the measurement points **"J"** to **"M"**.

If there are questions do not hesitate to contact us. See contact information at the end of the application note.

Optional Features

Setting the output voltage

The AS1341 has a default output voltage of 5V if FB is set to GND. Additionally the output voltage can be set between 1.25 and VIN via an additionally resistor R1 & R2. The required resistor value for a certain output voltage can be calculated as shown in equation 1.

$$R1=R2*(V_{OUT}/V_{FB} -1) \text{ (Eq1)}$$

R1 = 360kΩ
R2 = 220kΩ
V_{FB} = 1.25V

Predefined resistor values on board are set for 3.3V. If another voltage is required R1 and R2 can be replaced and Jumpers "I" must be set to 3.3V.

Using the current limiter

The current limit can be set via jumper ILIM **"G"** between 700mA & 1.4A. This connects the pin ILIMIT of the AS1341 either to GND or to VCC

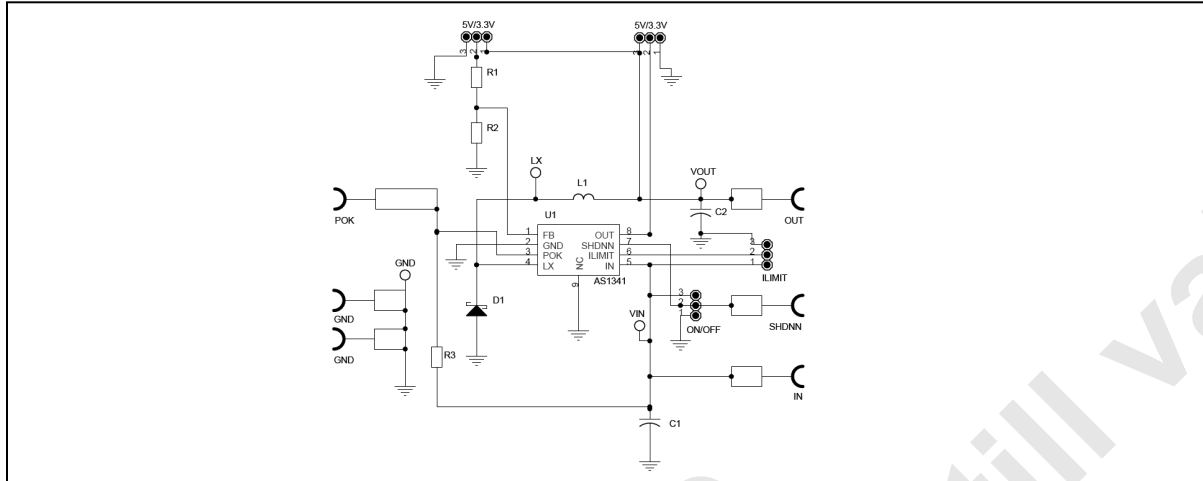# Layout of evaluation board
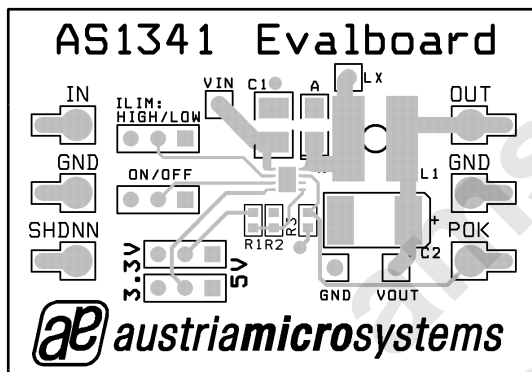
Board schematics and layout
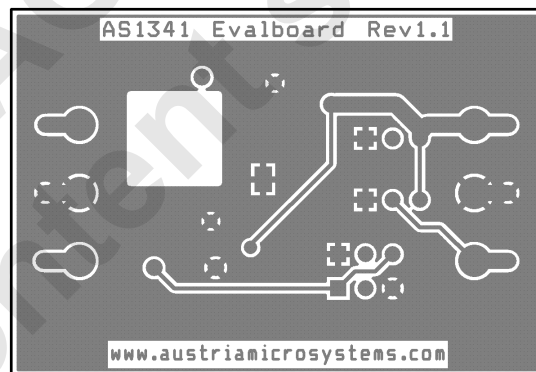

Figure 3: Schematics

Figure 4: Top view

Figure 5: Bottom view

Assembly List

Label	Info	Type	Manufacturer
C1	10µF, 25V, X7R	GRM32DR71E106KA12L	Murata
C2	100µF, 10V	T520V107M010ATE018	Kemet
L1	10µH, 85mΩ, 1.6A	MSS6132-103	Coilcraft
R1	360kΩ		
R2	220kΩ		
R3	120Ω		
D1	Schottky Diode	MBR120VL	

Copyright

Disclaimer

ae austria**micro**systems

Contact Information

Headquarters
austriamicrosystems AG
A-8141 Schloss Premstätten, 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