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AS1341

Evaluation Board Application Note



General Description

Board Description

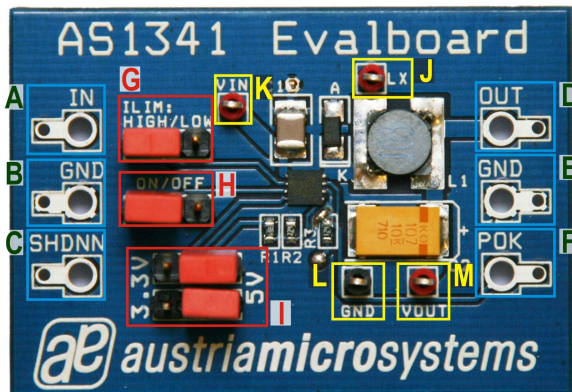


Figure 1: Board Description

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	<input type="checkbox"/> LOW ILIMIT: 0.7A <input type="checkbox"/> HIGH ILIMIT: 1.4A
H	ON/OFF	Enable Jumper	<input type="checkbox"/> ON <input type="checkbox"/> OFF
I	3.3V 5V		<input type="checkbox"/> 3.3V <input type="checkbox"/> 5V

Measurement Points Description

Label	Name	Description	Info
J	LX	External Conductor	
K	VIN	Power Supply Connectors for VIN and GND.	
L	GND	VIN and 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
VFB = 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

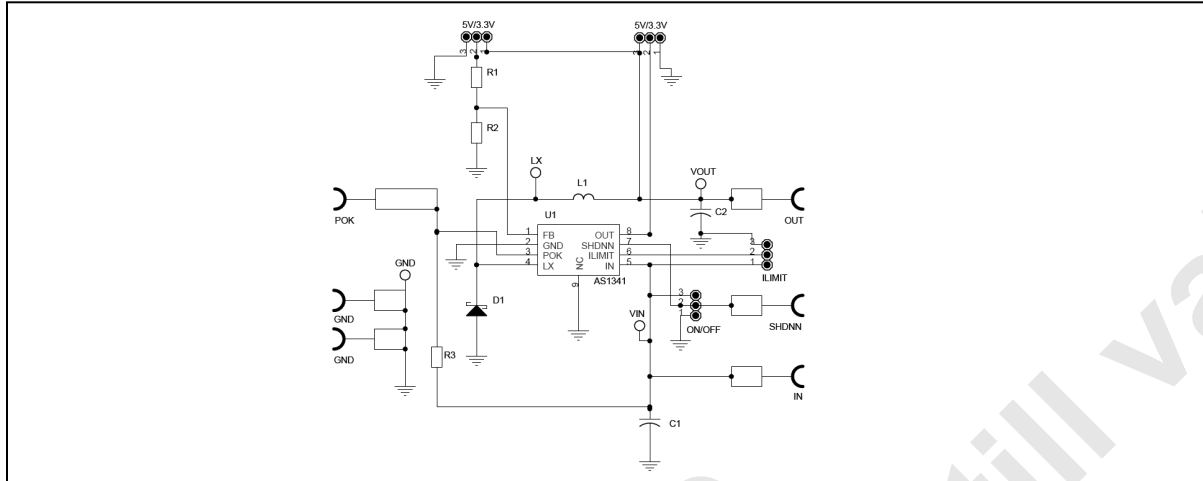


Figure 3: Schematics

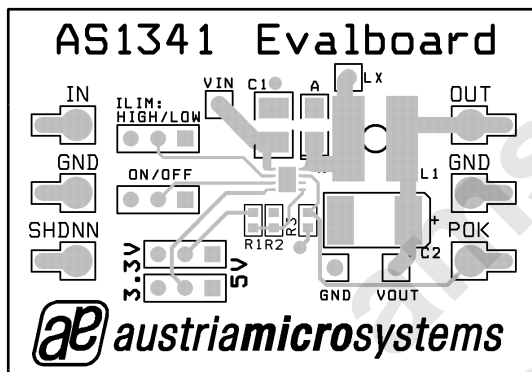


Figure 4: Top view

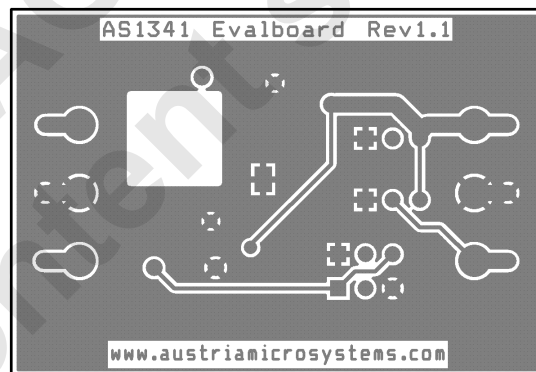


Figure 5: Bottom view

Assembly List

Label	Info	Type	Manufacturer
C1	10 μ F, 25V, X7R	GRM32DR71E106KA12L	Murata
C2	100 μ F, 10V	T520V107M010ATE018	Kemet
L1	10 μ H, 85m Ω , 1.6A	MSS6132-103	Coilcraft
R1	360k Ω		
R2	220k Ω		
R3	120 Ω		
D1	Schottky Diode	MBR120VL	

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