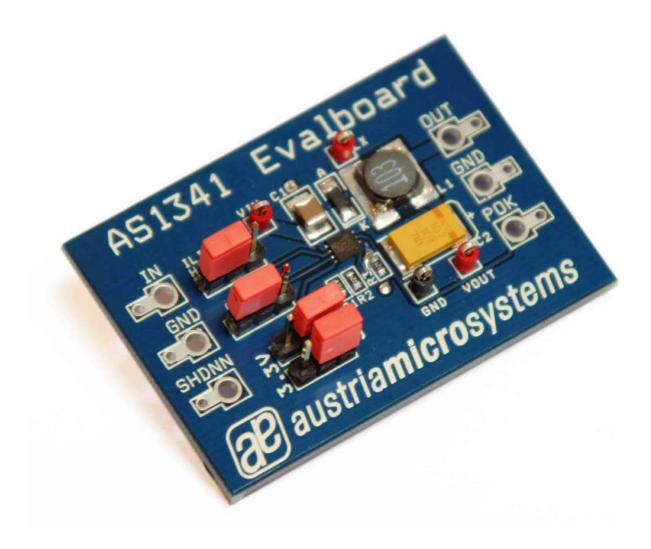


AS1341 Evaluation Board Application Note



Revision 1.01

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	
В	GND	Ground		
С	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		LOW ILIMIT: 0.7A
н	ON/OFF	Enable Jumper	ON OFF
I	3.3V 5V		

Measurement Points Description

Label	Name	Description	Info
J	LX	External Conductor	
K	GND	Power Supply Connectors for	
L	VIN	VBATT and Ground.	
М	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 "K".

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 AS1326 has a default output voltage of 3.3V. Additionally the output voltage can be set between 2.5 and 5V via an additionally resistor R1 which can be placed at "P". The required resistor value for a certain output voltage can be calculated as shown in equation 1.

R1=R2*(VOUT/VFB-1) (Eq1)

R1=270kΩ*(Vout/1.24V-1) (Eq2)

Using the current limiter

The ISET pin is used to adjust the inductor current limit and to implement the soft-start feature. With pin ISET connected to pin REF, the inductor current limit is set to 1.6A. With ISET connected to a resistor-divider network from pin REF to GND, the current limit is calculated as:

ILIMIT=1.6A*RSS2/(RSS+RSS2) (Eq3)

ILIMIT=1.6A*RSS2/(220kΩ+RSS2) (Eq4)

Setting the soft-start

On default the soft-start feature is disabled. The soft-start feature can be implemented by placing a resistor RSS (already soldered) between pin ISET and pin REF and a capacitor CSS between pin ISET and GND. At power-up, ISET is 0V and the LX current is

tss=RSS*CSS (Eq5)

tss=220kΩ*CSS (Eq6)

If the current limiter resistance is also in use, the equation for the soft-start time would be:

tss=(RSS*RSS2/(RSS+RSS2))CSS (Eq7)

tss=(220k Ω *RSS2/(220k Ω +RSS2))CSS (Eq8)

Rev 1.0

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Layout of evaluation board

Board schematics and layout

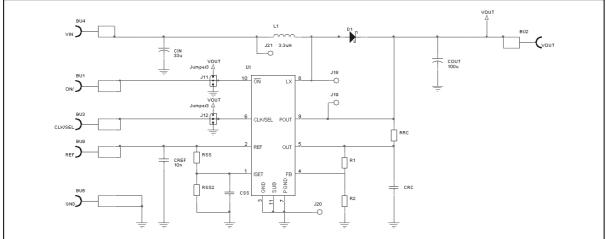


Figure 3: Schematics

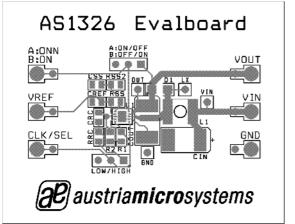


Figure 4: Top view

www.austriamicrosystems.com Figure 5: Bottom view

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AS1326 Evalboard

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DH4

Assembly List

Label	Info	Туре	Manufacturer	
CIN	33μF, ±10%, 10V, 150mΩ	TPSC336K010R0150	AVX	
COUT	100μF , ±10%, 10V, 50mΩ	T495D107M010ATE050	Kemet	
or	82μF , ±20%, 6.3V, 18mΩ	A700V826M006ATE018	Kemet	
L1	3.3μH, 46mΩ, 1.8A	MOS6020-332	Coilcraft	
RSS	220kΩ			
R1	270kΩ			
RCC	10Ω			
CRC	330nF			
RCC	10nF			

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