

Product Document



**Application Note: AS1340-AN01-
Evaluation Board Description**

AS1340

50V, Micropower, DC-DC Boost Converter

AN01-Evaluation Board Description



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Revision History

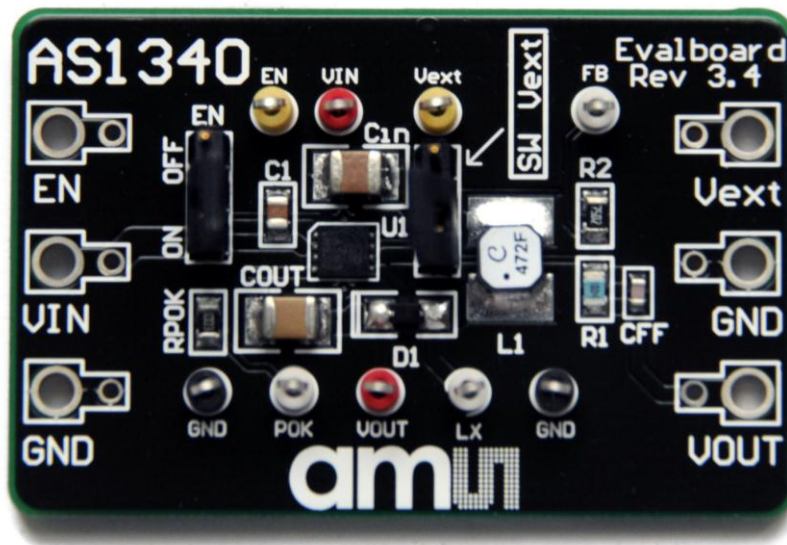
Revision	Date	Owner	Description
1.0			Initial release
1.1	06.28.2013	skre	Change into new design

1 General Description

This document describes the AS 1340 Evaluation Board.

The AS1340 boost converter contains a 1.4A internal switch in a tiny TDFN-8 3x3mm package. The device operates from a 2.7V to 5.5V supply, and can boost voltages up to 50V output.

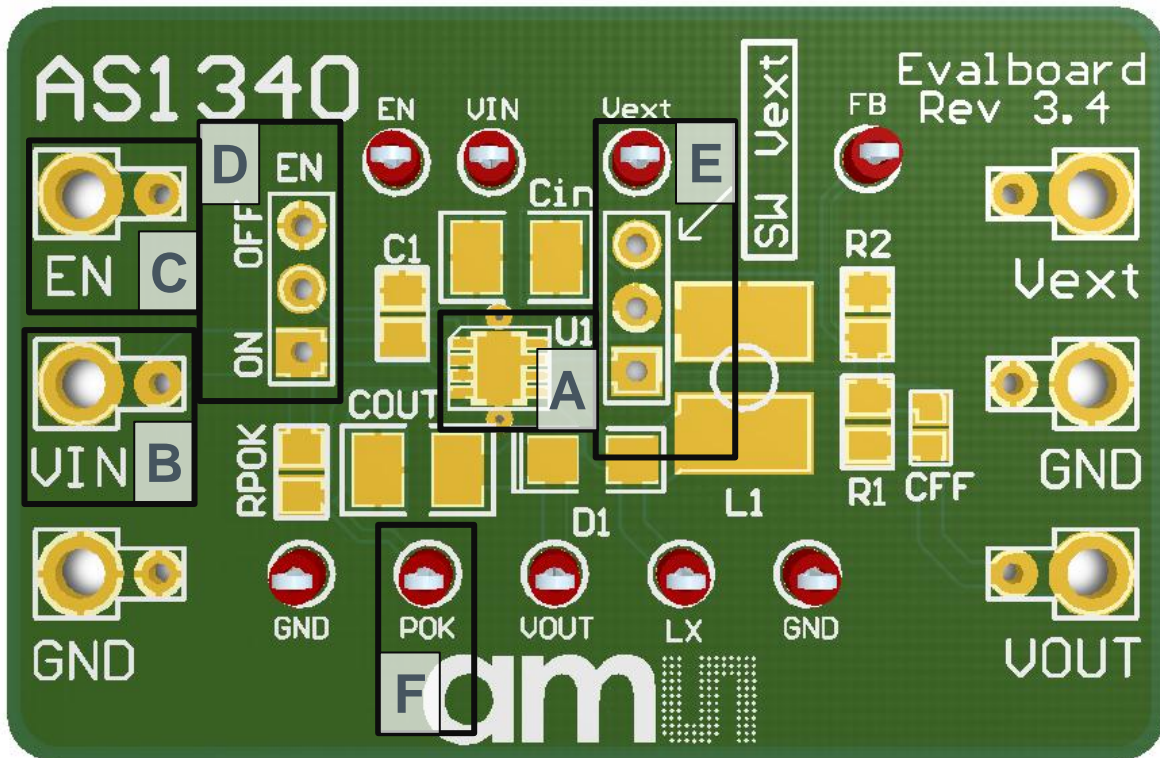
Figure 1: Kit Content



2 Hardware Description

The Evaluation Board has to be supplied via the pins VIN and GND in the range of 2.7V up to 5.5V. The jumper “EN” section D in the picture below has put to ON (downwards) in order to enable the chip. On the AS1340 Evaluation Board the output voltage is factory-set to 18V.

Figure 2: Evaluation Board Overview



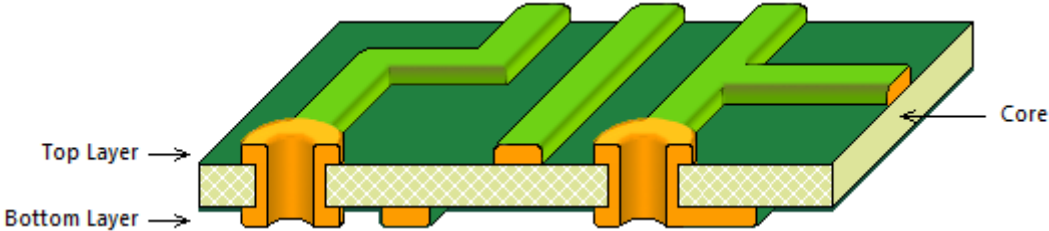
Label	Name	Designator	Description	Info
A	U1	U1	AS1340	AS1340 50V, Micropower, DC-DC Boost Converter
B	VIN	-	Supply	Voltage Range from 2.7V to 5.5V
C	EN	-	Enable	Active-High Enable Input . A logic low on this pin shuts down the device and reduces the supply current to 0.1µA. "EN" Jumper (J1) must be removed when using this input to enable/disable the chip.
D	EN	-	Enable ON/OFF	Enable/disable the chip
E	Vext	-	SW or external supply	Jumper setting to <u>Vext</u> (upwards), supply voltage of the chip can be split to allow higher supply voltage for the coil through Vext pin. Jumper setting to <u>SW</u> (downwards), supply voltage is only provided by VIN.
F	POK	-	Power-OK	0 = VOUT < 90% of VOUTNOM 1 = VOUT > 90% of VOUTNOM

For detailed information according electrical characteristics please refer to the AS1340 datasheet. The latest version of the datasheet can be found on our homepage, www.ams.com

3 Board Schematics; Layout and BOM

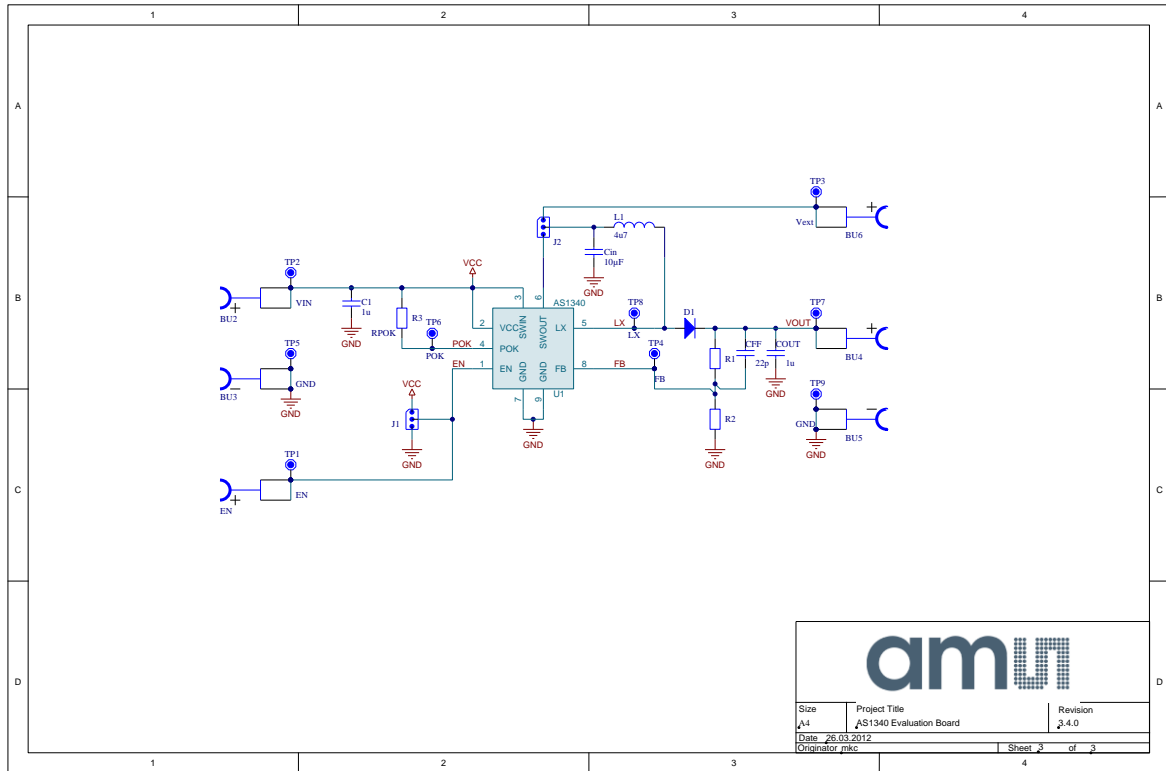
The AS1340 Evaluation Board is a 2-layer FR4 board.

Figure 3: AS1340 PCB Layer Stack up



3.1 Schematic of AS1340 Evaluation Board

Figure 4: Schematic



3.2 Board Layout of AS1340 Evaluation Board

Figure 5: Top Layer

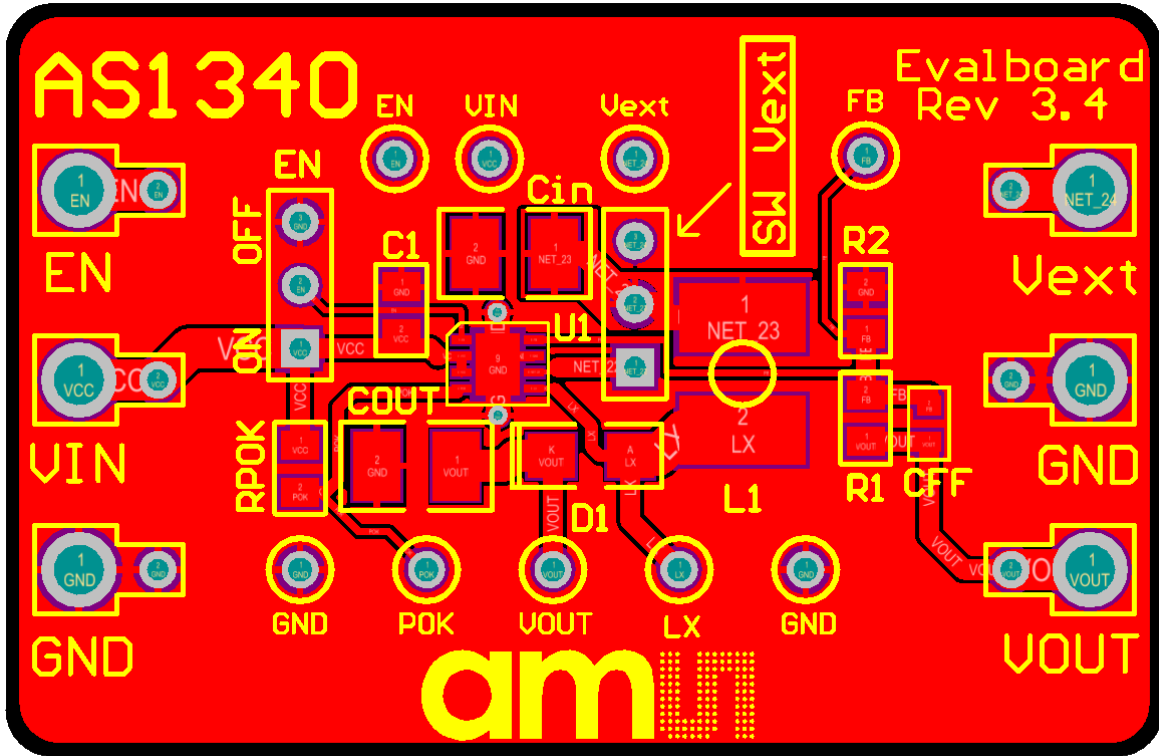
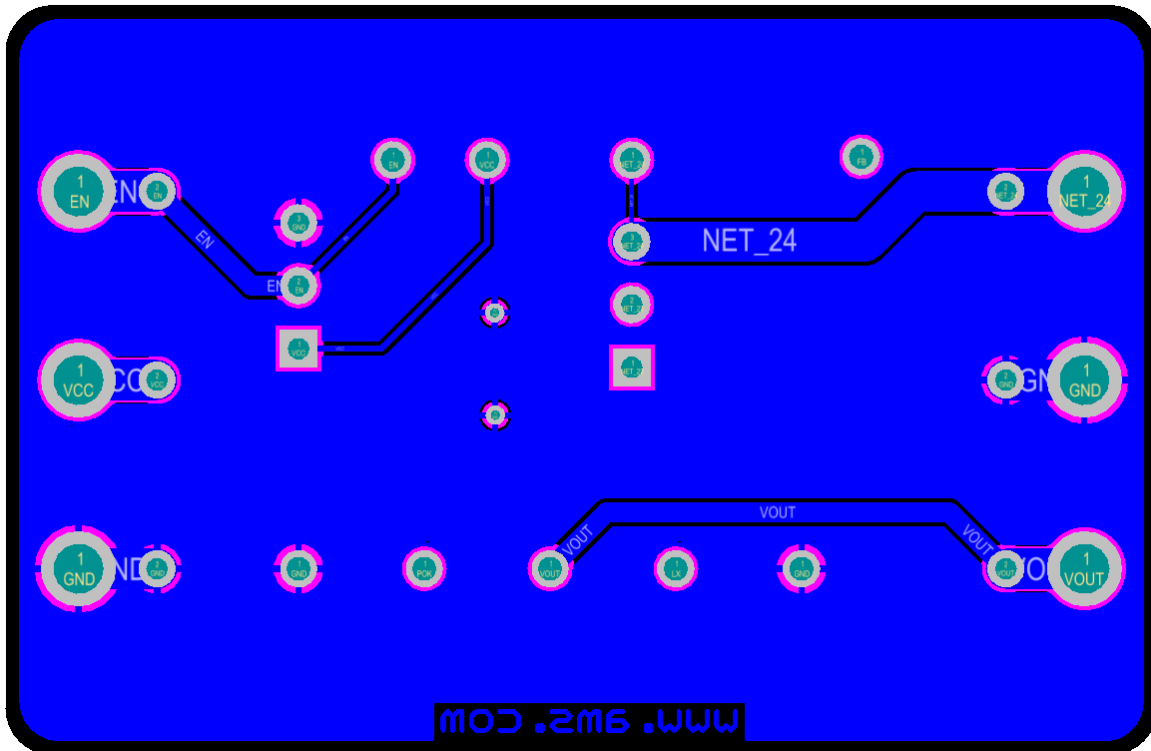


Figure 6: Bottom Layer



3.3 BOM

Figure 7: Bill of Material

Designator	Part Description	Comment
U1	AS1340	50V DCDC Boost converter
C1	1uF/16V/X7R	input capacitor: VCC
Cout	1uF/50V/X7R	output capacitor: Vout
Cin	10uF/16V/X7R	input capacitor: LX
CFF	22pF/50V/COG	
L1	4.7uH/1.9A/125mohm	DCDC boost coil (LPS4018-472M)
R1	1M	FB resistor
R2	75k	FB resistor
RPOK	100k	pull – up for POK
D1	40V/1A	PMEG4010BEA

4 Ordering Information

The AS1340 Evaluation Kit can be ordered via www.ams.com.

Figure 8: Ordering Information

Ordering Code	Description
AS1340A-TD-10_EK_ST	AS1340 Evaluation Board