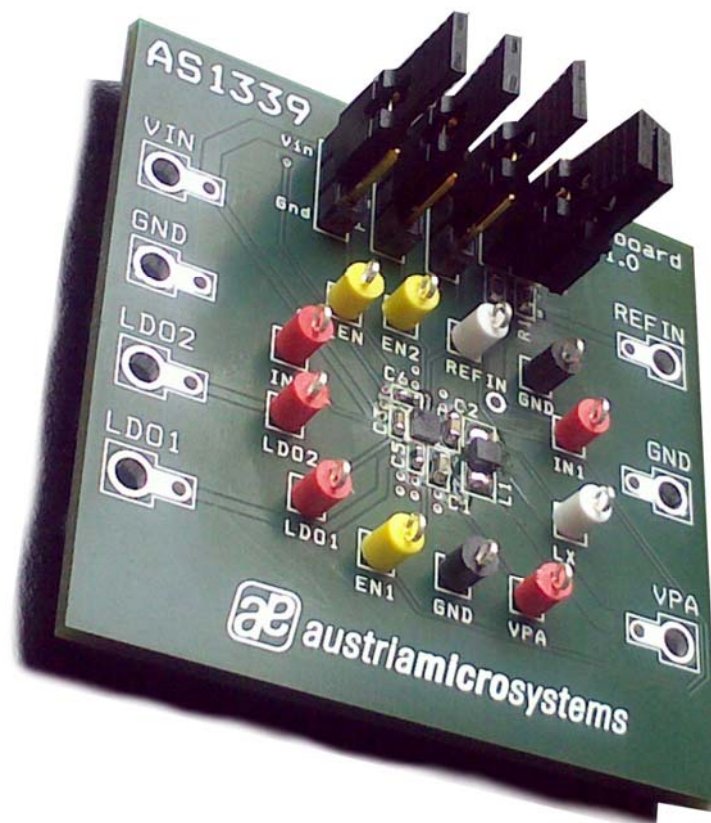


# AS1339

## Evaluation Board Application Note



## General Description

### Board Description

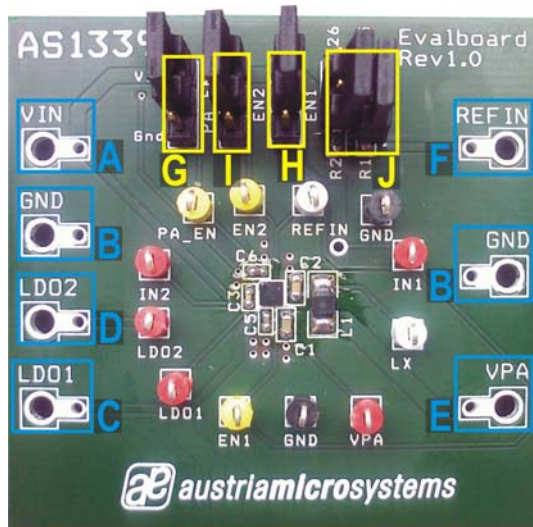


Figure 1: Board Description - Connector

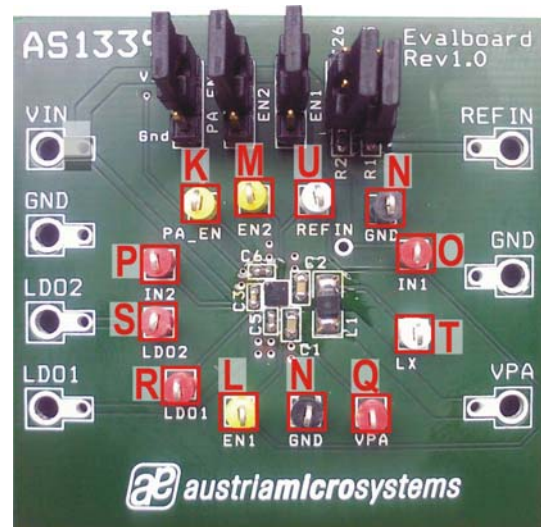


Figure 2: Board Description – Measurement Points











### Connector Description

Label	Name	Description	Info
A	<b>VIN</b>	Input Voltage	Input voltage ranging from 2.7V to 5.5V
B	<b>GND</b>	Ground	
C	<b>LDO1</b>	LDO1 Output Connector	Output voltage: 2.85V
D	<b>LDO2</b>	LDO2 Output Connector	
E	<b>VPA</b>	Step-Down Output Connector	Output voltage ranging from 0.8V to 3.75V
F	<b>REFIN</b>	DAC Controlled Input	
			Reference voltage for step-down converter

### Measurement Points Description

Label	Name	Description	Info
K	<b>PA_EN</b>	Enable for Step-Down	Measurement Points
L	<b>EN1</b>	Enable for LDO1	
M	<b>EN2</b>	Enable for LDO2	
N	<b>GND</b>	Ground.	
O	<b>IN1</b>	Power Input for the Step-Down	
P	<b>IN2</b>	Power Input for the LDO's	
Q	<b>VPA</b>	Output of the Step-Down	
R	<b>LDO1</b>	Output of the LDO1	
S	<b>LDO2</b>	Output of the LDO2	
T	<b>LX</b>	External Inductor	
U	<b>REFIN</b>	Reference Input	

## Jumper Description

Label	Name	Description	Info
G	PA_EN	Enable Jumper Step-Down	 ON = The Step-Down of the AS1339 is on.  OFF = The Step-Down of the AS1339 is off.
H	EN1	Enable Jumper LDO1	 ON = The LDO1 of the AS1339 is on.  OFF = The LDO1 of the AS1339 is off.
I	EN2	Enable Jumper LDO2	 ON = The LDO2 of the AS1339 is on.  OFF = The LDO2 of the AS1339 is off.
J	R2, R1	Voltage Divider	 R2 and R1 are set; The Output Voltage of the Step-Down is regulated to 1.8V.
		Pull - up	 R2 is open, R1 is set; The Output Voltage of the Step-Down is regulated to 3.75V or is in Bypass Mode.
		Pull - down	 R2 is set, R1 is open; The Output Voltage of the Step-Down is regulated to maximum 0.8V.
		Connector F (REFIN)	 R2 and R1 are open; The Output Voltage of the Step-Down can be set via an external source on Connector "F" (REFIN). Allowed Voltage Range on REFIN: GND to VIN

**Note:**

- For all current measurements remove both jumper "J" (R1 and R2).
- Due to the tolerances of the external resistances R1 and R2, the stated output voltages of the Step-Down converter are not guaranteed.

## Operational sequence

This evaluation board comes with the AS1339.

1. Drive the IC on the evaluation board only with the recommended settings and values as described in the datasheet.
2. Connect a 2.7V to 5.5V power supply (VIN "A" and GND "B").
3. Perform measurements at the measurement points "K" to "U".

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

## Layout of evaluation board

### Board schematics and layout

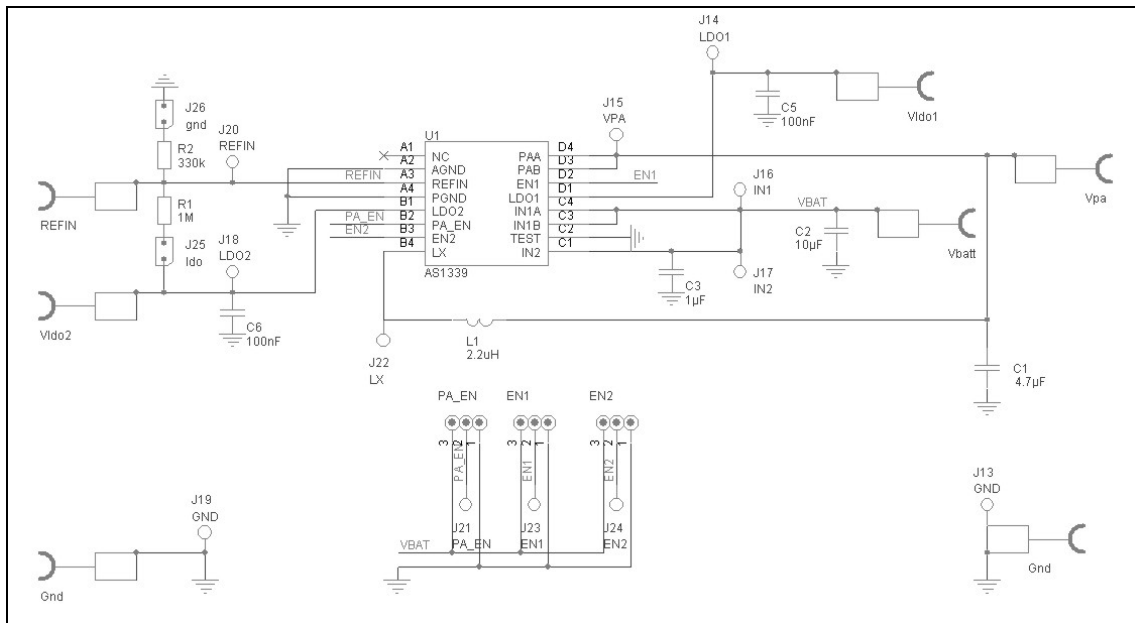


Figure 3: Schematics

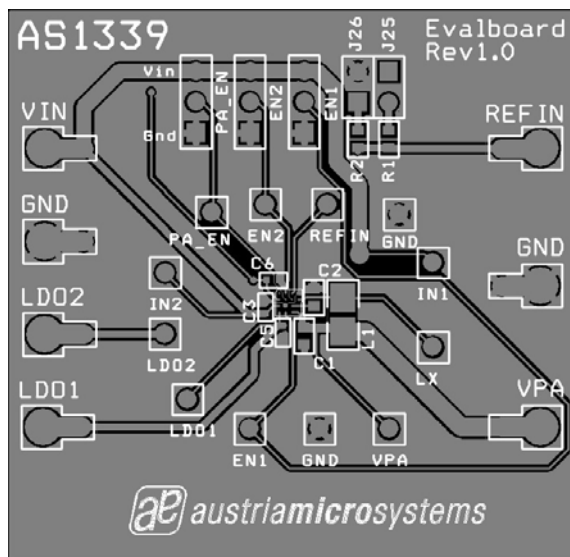


Figure 4: Top view

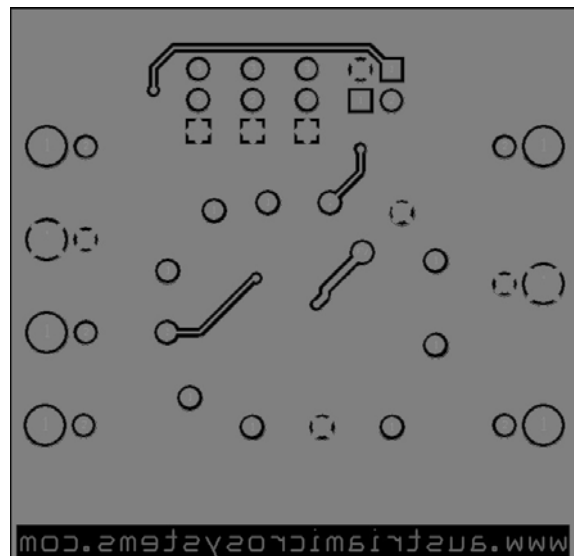


Figure 5: Bottom view

### Assembly List

Label	Info	Type	Manufacturer
C1	4.7µF, 6.3V, 0603, X5R	GRM188R60J475KE19D	Murata
C2	10µF, 6.3V, 0603, X5R	GRM188R60J106ME47D	Murata
C3	1µF, 10V, 0402, X5R	GRM155R61A105KE15	Murata
C5, C6	100nF, 10V, 0402, X5R	GRM155R61A104KA01B	Murata
L1	2.2µH, 0.98A, 120mΩ, 2.2x2.0x1.4mm	EPL2014-222MLC	Coilcraft
R1	1MΩ, 0603		
R2	330kΩ, 0603		

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