

1A Low Dropout Regulator with Power-Good and Tight-Tolerance for Medium Power Applications

The AP7361E is an ultra-low dropout linear regulator in a thermally efficient 3 mm X 3mm package with Power-Good output.

Its low dropout voltage and low quiescent current make the AP7361E suitable for low to medium power applications including battery powered devices.

Its Enable and Power-Good functions aid in power supply sequencing control as required in today's complex systems.

Overcurrent protection, including short-circuit foldback, coupled with thermal-shutdown protect the IC from damage during fault conditions.

The AP7361E is available in the U-DFN3030-8 (Type E) package with a height of 0.6mm.



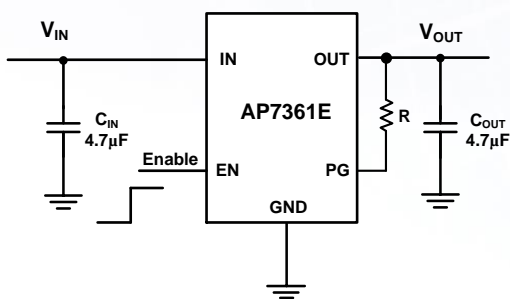
The Diodes Advantage

- **Ultra Low (340mV) Dropout Voltage** ($V_{out} = 3V$ $I_{out} = 1A$)
Maximizes usable supply voltage range, especially in battery powered applications
- **Power Good Feature**
Facilitates power-on sequence control
- **1.0% Output Accuracy at 25°C, 1.5% over -40 to +85°C**
Maintains accuracy under all conditions
- **Low I_q 68 μA**
Suited for battery Application and meeting energy savings standards
- **Wide Input Voltage: 2.2V to 6V**
Supports standard rails and core-core LDO POL applications
- **Both Fixed and adjustable Output Voltage options**
Fixed versions: ,1.0,1.2,1.5,1.8,2.5,2.8 and 3.3 V
Adjustable with 0,8V V_{ref} allowing outputs from 0.8 to 5 V
- **High PSRR (75dB @ 1kHz)**
Suitable for applications such as audio, video and RF sub-systems

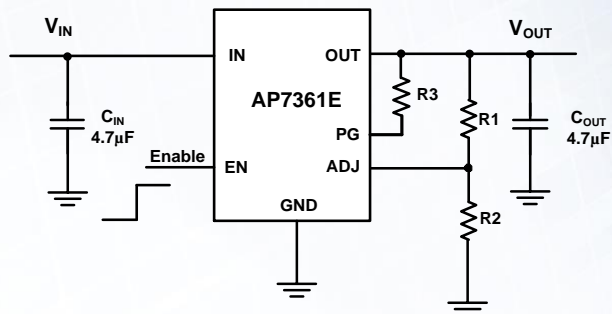
Applications

- LCD-TV, Monitors
- Set-Top-Boxes
- Home Appliance Equipment
- Notebook Computers
- Industrial Point of Loads

Typical Application Circuits



Fixed Version with EN



Adjustable Output

Enable (EN) is active HIGH defined as $> 1.0\text{ V}$ and disabled when $\text{EN} < 0.3\text{ V}$

Power Good (PG) is open drain and is pulled HIGH when $V_{\text{out}} > 80\%$ of nominal V_{out}

ADJ is related to an internal reference voltage of 0.8V therefore $V_{\text{out}} = 0.8(1+(R1/R2))$ and $R2 < 80\text{k}\Omega$

Product Portfolio

Orderable Part Number	V_{IN} (V)	V_{OUT} (V)	I_{OUT} (mA)	V_{DROP} @ Full Load (mV)	I_{Q} (μA)	Output Accuracy (%)	Enable	Power Good	Package
AP7361E-FGE-7	2.2 to 6	Adjustable 0.8V to 5.0V	1000	dropout is V_{out} dependent	68	1	Yes	Yes	DFN3030-8
AP7361E-10FGE-7	2.2 to 6	1.0	1000	840	68	1	Yes	Yes	DFN3030-8
AP7361E-12FGE-7	2.2 to 6	1.2	1000	710	68	1	Yes	Yes	DFN3030-8
AP7361E-15FGE-7	2.2 to 6	1.5	1000	570	68	1	Yes	Yes	DFN3030-8
AP7361E-18FGE-7	2.2 to 6	1.8	1000	340	68	1	Yes	Yes	DFN3030-8
AP7361E-25FGE-7	2.2 to 6	2.5	1000	440	68	1	Yes	Yes	DFN3030-8
AP7361E-28FGE-7	2.2 to 6	2.8	1000	340	68	1	Yes	Yes	DFN3030-8
AP7361E-33FGE-7	2.2 to 6	3.3	1000	340	68	1	Yes	Yes	DFN3030-8

To find out more information:

<https://www.diodes.com/part/AP7361E>