



650MA LOW DROP OUT REGULATOR

FEATURES

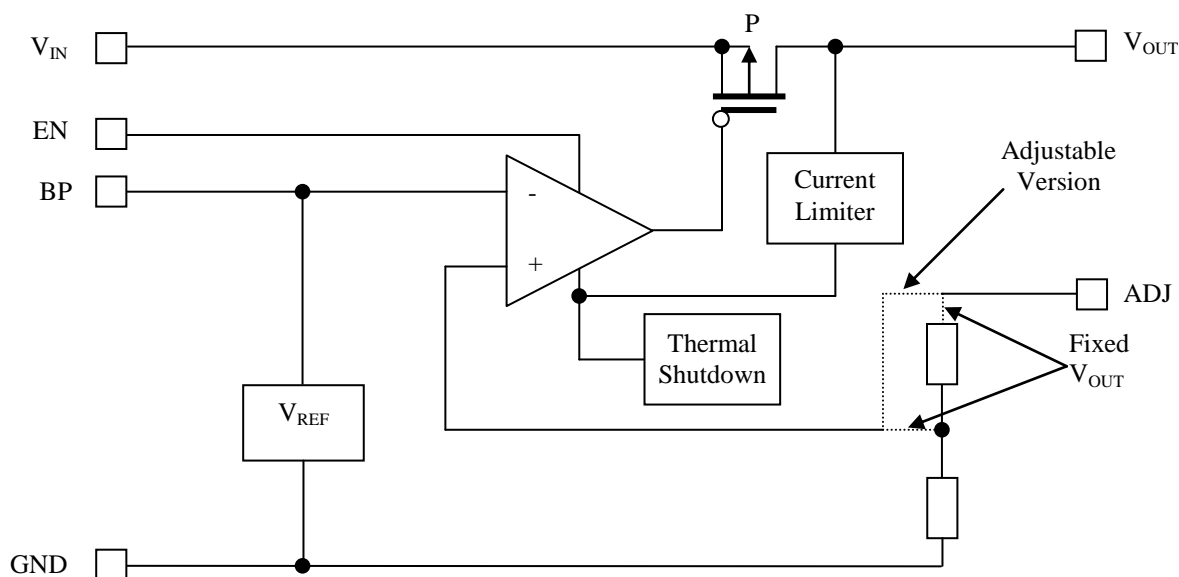
- Typical 2% internally trimmed output
- Output current is excess of 650 mA
- Low Dropout Voltage of 600mV typical at 650mA
- P-MOS output stage with low R_{dsON}
- Short circuit protection
- Internal thermal overload protection
- Available in 3-Lead surface mount SOT-223 package

DESCRIPTION

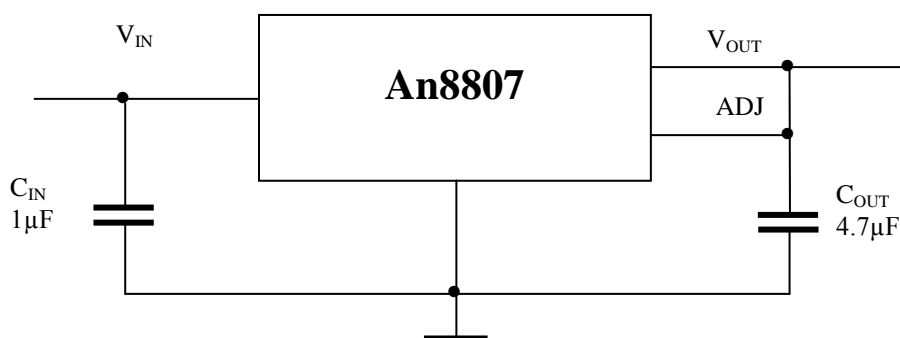
The An8807 series is a low dropout regulator rated for 650mA output current. Low power consumption and high accuracy is achieved through CMOS technology and internal trimmed reference voltage.

The An8807 series consists of a high-precision voltage reference, error correction circuit, and a current limit output driver. The fast transient response is a cut standing feature for applications with various loads.

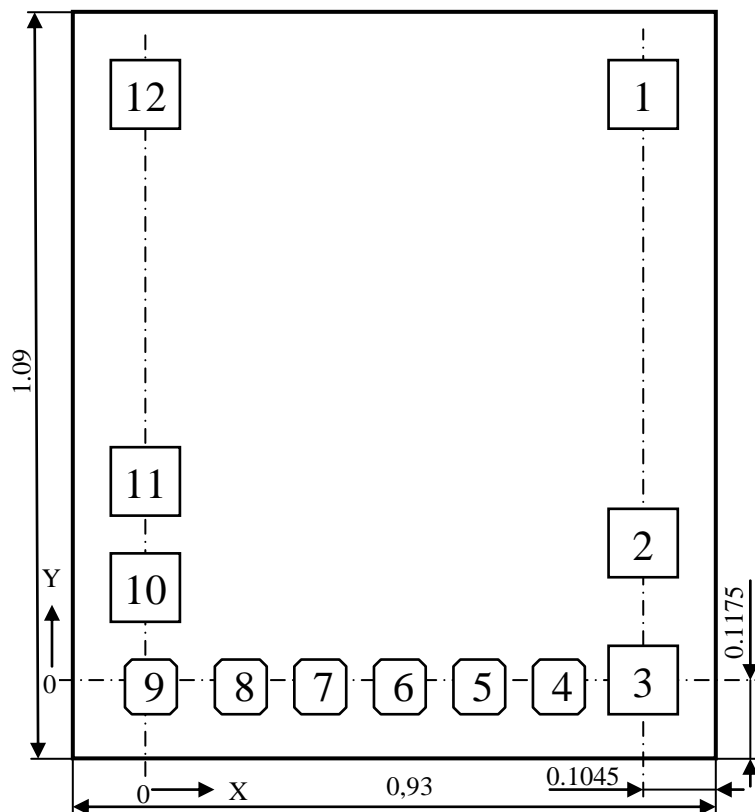
BLOCK DIAGRAM



TYPICAL APPLICATION



PAD DIAGRAM



1. Chip size: X=0.88 mm, Y=1.04 mm (without scribe line width).
2. Scribe line width: X=50 μ m, Y=50 μ m
3. Pad size: 90 μ m x 90 μ m (4+9: 73,5 μ m x 80 μ m)
4. Substrate to GND.
5. Wafer thickness: 460 μ m

PAD LOCATION

Pad number	Pad name	X	Y
1	V _{IN}	708	855
2	GND	721	140
3	EN	721	0
4	NC	602	- 18
5	NC	480	- 18
6	NC	358	- 18
7	NC	236	- 18
8	NC	114	- 18
9	NC	- 8	- 18
10	BP	0	115
11	ADJ	0	269
12	V _{OUT}	0	855

**ABSOLUTE MAXIMUM RATINGS**

Input Voltage, V_{IN}	8 V
Maximum Operating Junction Temperature, T_J	150°C
Storage Temperature Range	-65°C to 150°C
Lead Temperature (soldering, 10 seconds)	260°C

ELECTRICAL CHARACTERISTICS

TA=25°C unless otherwise noted

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Input Voltage Range	V_{IN}		Note 1		7.0	V
Output Voltage Accuracy	V_O	25°C, $I_O = 1\text{mA}$	-1.5		+1.5	%
		0 - 85°C, $10\text{mA} < I_O < 650\text{mA}$	-2.0		+2.0	%
Maximum Output Current	I_O				650	mA
Current Limit	I_{CL}	$V_{IN} = V_{OUT} + 0.6\text{V}$	900			mA
Quiescent Current	I_Q	$I_O = 0\text{mA}$		50	70	µA
Ground Pin Current	I_{GND}	$1\text{mA} < I_O < 650\text{mA}$		50	70	µA
Dropout Voltage	$V_{DROPOUT}$	$I_O = 650\text{mA}$	1.3V < V_O ≤ 2.0V		1500	mV
			2.0V < V_O ≤ 2.8V		860	mV
			2.8V < V_O		690	mV
Line Regulation	ΔV_{OI}	$V_{OUT} + 0.15 < V_{IN} < 7.0\text{V}$, $I_O = 1\text{mA}$			10	mV
Load Regulation	ΔV_{OL}	$10\text{mA} < I_O < 650\text{mA}$			30	mV
EN high (min), ACTIVE	V_{EH}	$I_O = 10\text{mA}$	1.6			V
EN low (max)	V_{EL}	$I_O = 10\text{mA}$			0.4	V
Shutdown Supply Current		$V_{OUT} = 0\text{V}$			1.0	µA
Thermal shutdown Temp				160		°C
Thermal shutdown Hyster				30		°C
Output Noise		$C_{BY\ PASS} = 10\text{pF}$		350		nV/Hz
PSRR		1 KHz, $C_{OUT} = 4.7\mu\text{F}$		50		dB
Operation Temp. Range			-40		+85	°C
Output Voltage Range			1.3 ÷ 5.2 V with step 0.1 V; ADJ			
EN input current	I_{EH}	$V_{EN} = V_{IN}$, $V_{IN} = 2.5\text{V} - 7\text{V}$			0.1	µA
EN input current	I_{EL}	$V_{EN} = 0\text{V}$, $V_{IN} = 2.5\text{V} - 7\text{V}$			0.5	µA

Note 1: $V_{IN(\text{min})} = V_{OUT} + V_{DROPOUT}$



angstrom

An8807

AME8807 analogue (AME INC.)

PHOTO An8807

