

AN8060, AN8060S

Low Drop Type Negative Output (−4V) Regulator with Reset Pin

Overview

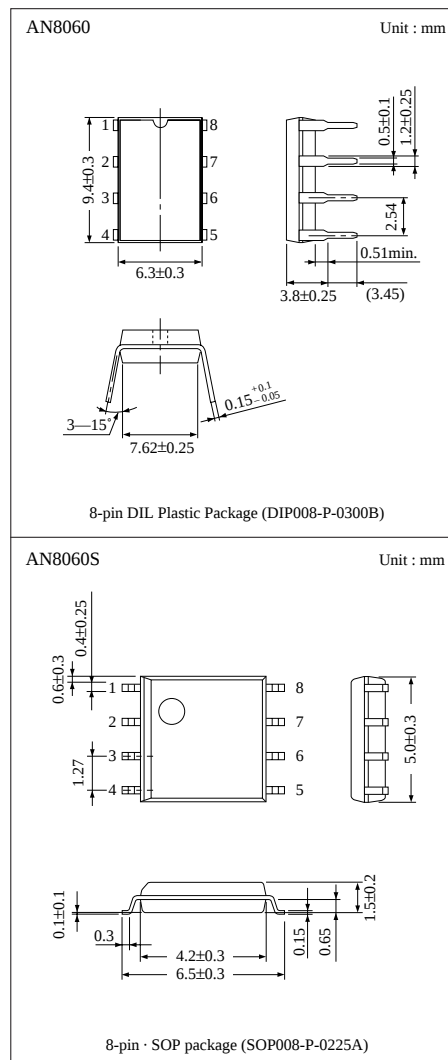
The AN8060 and the AN8060S are the low drop type regulators having the function of resetting output voltage. With a comparator to sense reduced voltage building it is suitable for batteries operation.

Features

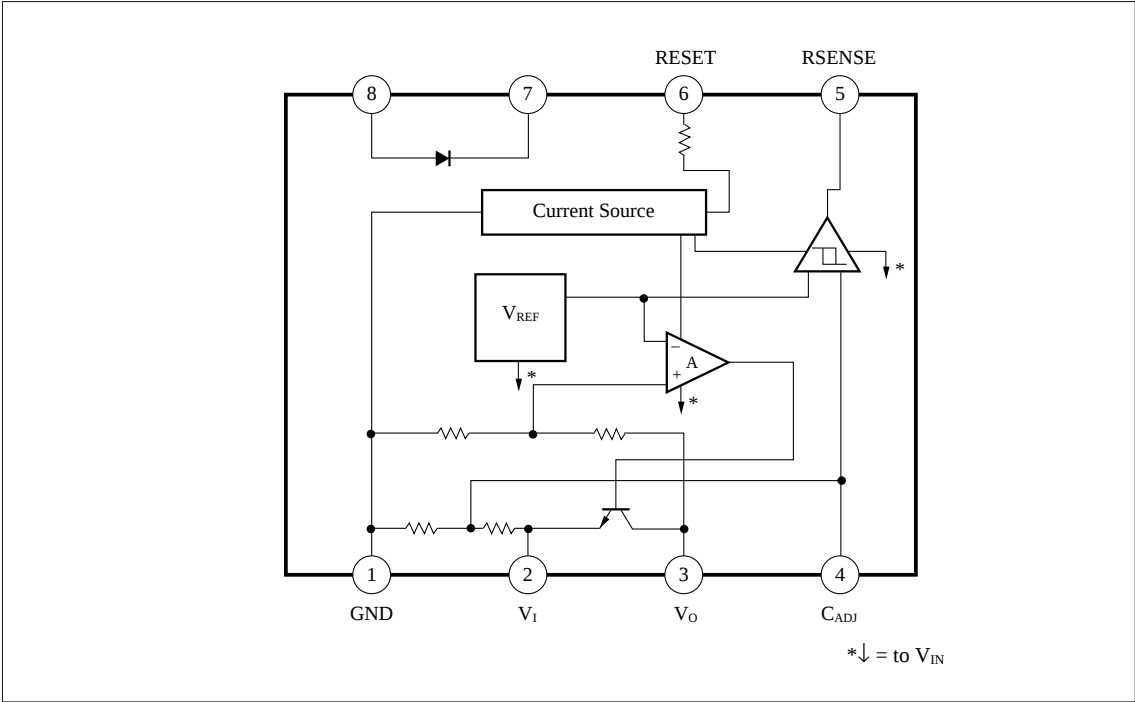
- With reset function : bias current at resetting −5μA
- Small input-output voltage difference : $I_O=30\text{mA}$, 0.2V
- Low Supply Voltage sensing comparator built-in

Pin Descriptions

Pin No.	Symbol	Pin name
1	GND	GND
2	V_I	Input voltage
3	V_O	Output voltage
4	C_{ADJ}	Low supply voltage sensing adj.
5	RSENSE	Low supply voltage sensing output
6	RESET	Reset pin
7	D_{IC}	Diode pin (Cathode)
8	D_{IA}	Diode pin (Anode)



■ Block Diagram



■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V _{CC}	−12 to + 0.3	V
Supply current	I _{CC}	—	mA
Power dissipation	P _D	AN8060	mW
		AN8060S	
Operating ambient temperature	T _{opr}	−20 to + 75	°C
Storage temperature	T _{stg}	AN8060	°C
		AN8060S	

■ Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	min	typ	max	Unit
Bias current at reset	I _{RB}	V _{RESET} =0V, V _I = −6V	—	—	5	μA
Bias current at no load	I _{UB}	V _I = −6V	—	2.5	6	mA
Output voltage	V _O	V _I = −6V, I _O =10mA	−4.08	−3.92	−3.76	V
Output voltage tolerance	V _T	V _I = −4.4 to −8V, I _O =1 to 30mA	−4.06	—	−3.66	V
Stable input voltage	V _{IS}	V _I = −4.4 to −7.4V, I _O =10mA	—	3.6	60	mV
Stable lock voltage	V _{LS}	V _I = −6V, I _O =1 to 30mA	—	8	60	mV
Input/Output voltage difference	V _{IOS}	V _I = −3.8V, I _O =30mA	—	0.1	0.2	V
Reset pin input current (H)	I _{RICH}	V _I = −6V, V _{RESET} =0V	−1	—	—	μA
Reset pin input current (L)	I _{RICL}	V _I = −6V, V _{RESET} = −6V	−200	—	—	μA
Low supply voltage sending level	V _{RDL}	I _O =10mA	−4.55	−4.3	−4.05	V
Output voltage at reset	V _{RO}	V _{RESET} =0V, V _I = −6V	− 0.1	—	—	V
Comparator output current	I _{CO}	V _I = −4V, V _{RSENSE} = −3.6V	1	—	—	mA

■ Characteristics Curve

