

AN8060

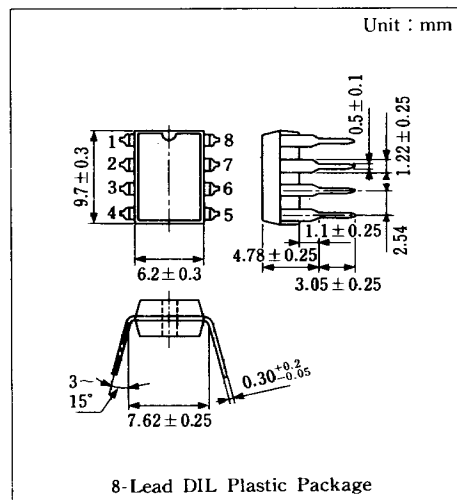
Low-Dropout Type Negative Output (-4V) Regulator with Reset Terminal

■ Outline

The AN8060 is a low-dropout type regulator with output voltage reset function. It has a low supply voltage sensing comparator built-in, so it is best suited for use in a battery operation.

■ Features

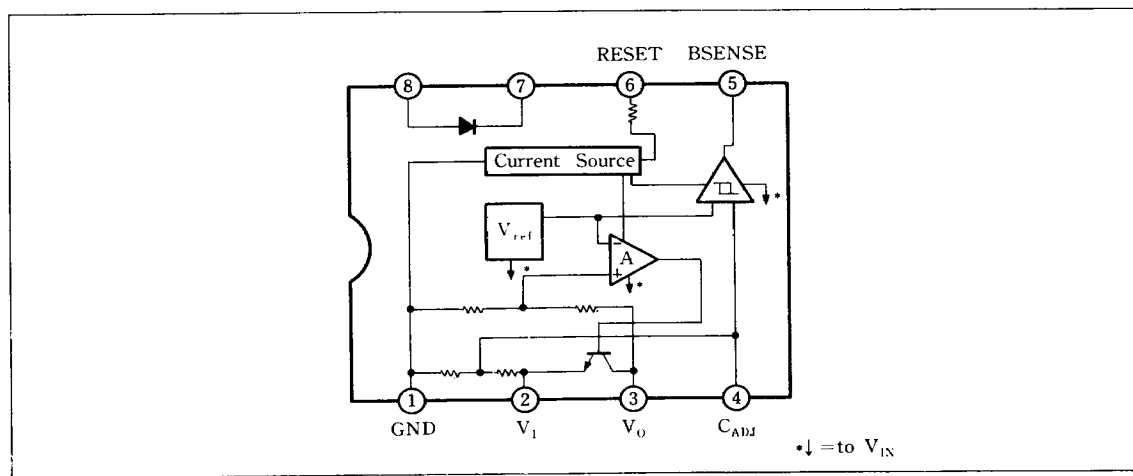
- With reset function :
bias current at resetting $-5\mu\text{A}$
- Small input-output voltage difference :
 $I_o = 30\text{mA}$, 0.2V
- Low Supply Voltage sensing comparator built in



■ Pin

Pin No.	Pin Name
1	GND
2	Input Voltage
3	Output Voltage
4	Low Supply Voltage Sensing Adj.
5	Low Supply Voltage Sensing Output.
6	Reset Pin
7	Diode Pin (Cathode)
8	Diode Pin (Anode)

■ Block Diagram



■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Rating	Unit
Supply Voltage	V_{CC}	$-12 \sim +0.3$	V
Supply Current	I_{CC}	—	mA
Power Dissipation	P_D	500	mW
Operating Ambient Temperature	T_{opr}	$-20 \sim +75$	°C
Storage Temperature	T_{stg}	$-55 \sim +150$	°C

■ Electrical Characteristics (Ta=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Bias Current at Reset	I_{RB}	$V_{RESET}=0V, V_1=-6V$			5	μA
Bias Current at No Load	I_{UB}	$V_1=-6V$		2.5	6	mA
Output Voltage	V_O	$V_1=-6V, I_O=10mA$	-4.08	-3.92	-3.76	V
Output Voltage Tolerance	V_T	$V_1=-4.4 \sim -8V, I_O=1 \sim 30mA$	-4.06		-3.66	V
Line Regulation	V_{IS}	$V_1=-4.4 \sim -7.4V, I_O=10mA$		3.6	60	mV
Load Regulation	V_{LS}	$V_1=-6V, I_O=1 \sim 30mA$		8	60	mV
Input/Output Voltage Difference	V_{IOS}	$V_1=-3.8V, I_O=30mA$		0.1	0.2	V
Reset Pin Input Current(H)	I_{RICH}	$V_1=-6V, V_{RESET}=0V$	-1			μA
Reset Pin Input Current(L)	I_{RICL}	$V_1=-6V, V_{RESET}=-6V$	-200			μA
Low Supply Voltage Sensing Level	V_{RDL}	$I_O=10mA$	-4.55	-4.3	-4.05	V
Output Voltage at Reset	V_{RD}	$V_{RESET}=0V, V_1=-6V$	-0.1			V
Comparator Output Current	I_{CO}	$V_1=-4V, V_{RESET}=-3.6V$	1			mA

