

SOT-89 Three-terminal positive voltage regulator

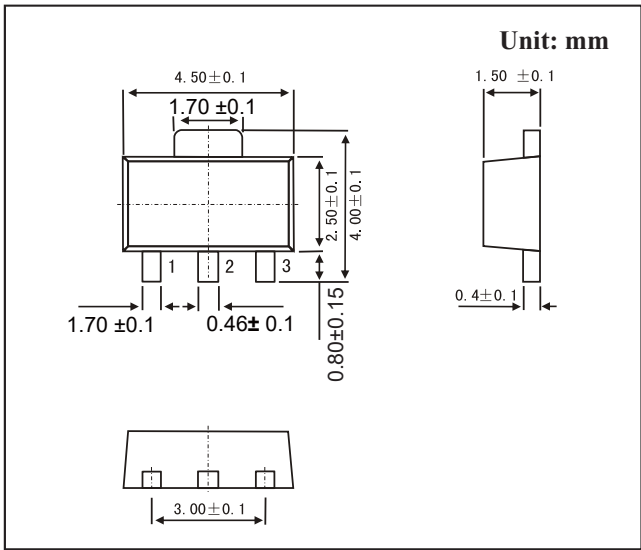
FEATURES

- Maximum output current IOM: 0.1A
- Output voltage VO: 8V
- Continuous total dissipation

PD: 0.6 W ($T_a = 25^\circ\text{C}$)

MECHANICAL DATA

- Case: SOT-89 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	30	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	166.7	°C/W
Operating Junction Temperature Range	T_{OPR}	-25~+125	°C
Storage Temperature Range	T_{STG}	-65~+150	°C

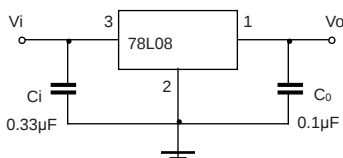
ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE

($V_i=14V$, $I_o=40mA$, $C_i=0.33\mu F$, $C_o=0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	V_o	25°C	7.7	8.0	8.3	V
		10.5V ≤ V_i ≤ 23V, $I_o=1mA \sim 40mA$	7.6	8.0	8.4	V
		0-125°C, $I_o=1mA \sim 70mA$	7.6	8.0	8.4	V
Load Regulation	ΔV_o	$I_o=1mA \sim 100mA$, 25°C		18	80	mV
		$I_o=1mA \sim 40mA$, 25°C		10	40	mV
Line regulation	ΔV_o	10.5V ≤ V_i ≤ 23V, 25°C		42	175	mV
		11V ≤ V_i ≤ 23V, 25°C		36	125	mV
Quiescent Current	I_q	25°C		4	6	mA
Quiescent Current Change	ΔI_q	11V ≤ V_i ≤ 23V, 0-125°C			1.5	mA
	ΔI_q	1mA ≤ I_o ≤ 40mA, 0-125°C			0.1	mA
Output Noise Voltage	V_N	10Hz ≤ f ≤ 100KHz, 25°C		54		μV/ V_o
Ripple Rejection	RR	13V ≤ V_i ≤ 23V, f=120Hz, 0-125°C	37	46		dB
Dropout Voltage	V_d	25°C		1.7		V

* Pulse test.

TYPICAL APPLICATION



Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

RATINGS AND CHARACTERISTIC CURVES

■ Typical Characteristics

