

WEJ78L08 Three-terminal positive voltage regulator

FEATURE

Maximum Output current

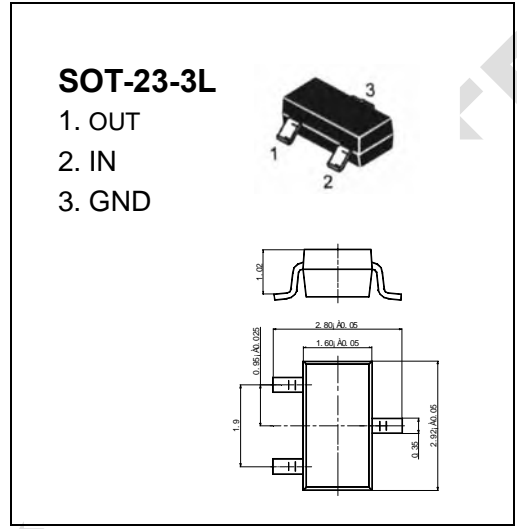
$$I_{OM}: 0.1 \text{ A}$$

Output voltage

$$V_o: 8 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55^{\circ}\text{C to } +150^{\circ}\text{C}$$



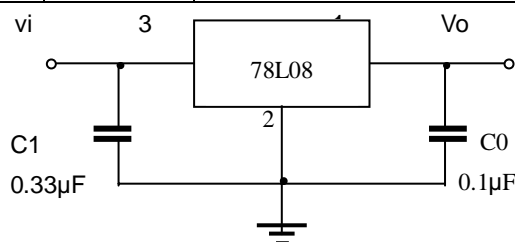
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Units
Input Voltage	V_I	30	V
Operating Junction Temperature Range	T_{OPR}	0~+125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($V_I=14\text{V}, I_o=40\text{mA}, 0^{\circ}\text{C}<T_J<125^{\circ}\text{C}, C_1=0.33\mu\text{F}, C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$T_J=25^{\circ}\text{C}$	7.7	8.0	8.3	V
		$10.5\text{V}\leq V_I\leq 23\text{V}, I_o=1\text{mA}\sim 40\text{mA}$	7.6	8.0	8.4	V
		$10.5\text{V}\leq V_I\leq V_{MAX}, I_o=1\text{mA}\sim 70\text{mA}$	7.6	8.0	8.4	V (note)
Load Regulation	ΔV_o	$T_J=25^{\circ}\text{C}, I_o=1\text{mA}\sim 100\text{mA}$		18	80	mV
		$T_J=25^{\circ}\text{C}, I_o=1\text{mA}\sim 70\text{mA}$		10	40	mV
Line regulation	ΔV_o	$10.5\text{V}\leq V_I\leq 23\text{V}, T_J=25^{\circ}\text{C}$		42	175	mV
		$11\text{V}\leq V_I\leq 23\text{V}, T_J=25^{\circ}\text{C}$		36	125	mV
Quiescent Current	I_q	25°C		4	6	mA
Quiescent Current Change	ΔI_q	$11\text{V}\leq V_I\leq 23\text{V}$			1.5	mA
	ΔI_q	$1\text{mA}\leq V_I\leq 40\text{mA}$			0.1	mA
Output Noise Voltage	V_N	$10\text{Hz}\leq f\leq 100\text{KHz}$		54		μV
Ripple Rejection	RR	$13\text{V}\leq V_I\leq 23\text{V}, f=120\text{Hz}, T_J=25^{\circ}\text{C}$	39	70		dB
Dropout Voltage	V_d	$T_J=25^{\circ}\text{C}$		1.7		V

TYPICAL APPLICATION



Note 1: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.