



SOT-23-3L Encapsulate Three Terminal Voltage Regulator

CJ78L08 Three-terminal positive voltage regulator

FEATURES

Maximum Output current

I_{OM} : 0.1 A

Output voltage

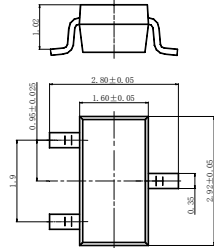
V_o : 8 V

SOT-23-3L

1. OUT

2. IN

3. GND



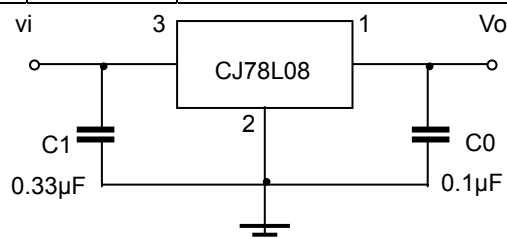
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

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

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$T_j=25^\circ C$	7.7	8.0	8.3	V
		$10.5V \leq V_I \leq 23V, I_o=1mA \sim 40mA$	7.6	8.0	8.4	V
		$10.5V \leq V_I \leq 23V, I_o=1mA \sim 70mA$	7.6	8.0	8.4	V (note)
Load Regulation	ΔV_o	$T_j=25^\circ C, I_o=1mA \sim 100mA$		18	80	mV
		$T_j=25^\circ C, I_o=1mA \sim 40mA$		10	40	mV
Line regulation	ΔV_o	$10.5V \leq V_I \leq 23V, T_j=25^\circ C$		42	175	mV
		$11V \leq V_I \leq 23V, T_j=25^\circ C$		36	125	mV
Quiescent Current	I_q	$T_j=25^\circ C$		4	6	mA
Quiescent Current Change	ΔI_q	$11V \leq V_I \leq 23V$			1.5	mA
		$1mA \leq I_o \leq 40mA$			0.1	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz$		54		uV
Ripple Rejection	RR	$13V \leq V_I \leq 23V, f=120Hz, T_j=25^\circ C$	37	46		dB
Dropout Voltage	V_d	$T_j=25^\circ C$		1.7		V

TYPICAL APPLICATION



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