



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-220 Encapsulate Voltage Regulator

CJ7908 Three-terminal positive voltage regulator

FEATURES

Maximum Output current

 $I_{OM}: 1.5 \text{ A}$

Output voltage

 $V_o: -8 \text{ V}$

TO-220

1 GND

2 .IN

3.OUT

1 2 3

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

Parameter	Symbol	Value	Unit
Input Voltage	V_i	-35	V
Operating Junction Temperature Range	T_{OPR}	-20~+125	°C
Storage Temperature Range	T_{STG}	-55~+150	°C

ELECTRICAL CHARACTERISTICS ($V_i = -23\text{V}$, $I_o = 500\text{mA}$, $0^\circ\text{C} < T_j < 125^\circ\text{C}$, $C_i = 0.33 \mu\text{F}$, $C_o = 0.1 \mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$T_j = 25^\circ\text{C}$	-7.7	-8	-8.3	V
		$-10.5\text{V} \leq V_i \leq -23\text{V}$, $I_o = 5\text{mA} \sim 1\text{A}$ $P_o < 15\text{W}$	-7.6	-8	-8.4	V
Load Regulation	ΔV_o	$T_j = 25^\circ\text{C}$, $I_o = 5\text{mA} \sim 1.5\text{A}$		15	160	mV
		$T_j = 25^\circ\text{C}$, $I_o = 250\text{mA} \sim 750\text{mA}$		5	80	mV
Line regulation	ΔV_o	$-10.5\text{V} \leq V_i \leq -25\text{V}$, $T_j = 25^\circ\text{C}$		12.5	160	mV
		$-11\text{V} \leq V_i \leq -17\text{V}$, $T_j = 25^\circ\text{C}$		4	80	mV
Quiescent Current	I_q	$T_j = 25^\circ\text{C}$		1.5	2	mA
Quiescent Current Change	ΔI_q	$-10.5\text{V} \leq V_i \leq -25\text{V}$			1	mA
	ΔI_q	$5\text{mA} \leq I_o \leq 1\text{A}$			0.5	mA
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{kHz}$		200		μV
Ripple Rejection	RR	$-11.5\text{V} \leq V_i \leq -21.5\text{V}$, $f = 120\text{Hz}$, $T_j = 25^\circ\text{C}$	54	60		dB
Dropout Voltage	V_d	$T_j = 25^\circ\text{C}$, $I_o = 1\text{A}$		1.1		V
Peak Current	I_{pk}	$T_j = 25^\circ\text{C}$		2.1		A

TYPICAL APPLICATION

