

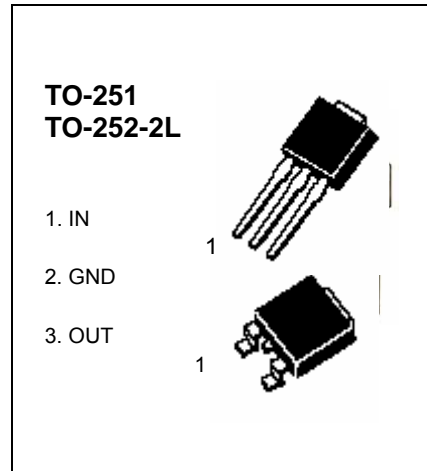


# TO-251/252 Encapsulate Voltage Regulator

**CJ7912** Three-terminal negative voltage regulator

**FEATURES**

- Maximum Output current  $I_{OM}$ : 1.5 A
- Output voltage  $V_o$ : - 12 V
- Continuous total dissipation  
 $P_D$ : 1.25 W ( $T_J = 25\text{ }^\circ\text{C}$ )



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

Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	-35	V
Thermal resistance junction-air	$R\theta_{JA}$	65	$^\circ\text{C}/\text{W}$
Thermal resistance junction-cases	$R\theta_{JC}$	5	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_{OPR}$	0-150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65-150	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS( $V_i = -19\text{V}$ ,  $I_o = 500\text{mA}$ ,  $0^\circ\text{C} < T_J < 125^\circ\text{C}$ ,  $C_i = 0.33\mu\text{F}$ ,  $C_o = 0.1\mu\text{F}$ , unless otherwise specified )**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	$V_o$	$T_J = 25^\circ\text{C}$	-11.5	-12	-12.5	V
		$-14.5\text{V} \leq V_i \leq -27\text{V}$ , $I_o = 5\text{mA} - 1\text{A}$ $P \leq 15\text{W}$	-11.4	-12	-12.6	V
Load Regulation	$\Delta V_o$	$T_J = 25^\circ\text{C}$ , $I_o = 5\text{mA} - 1.5\text{A}$		15	200	mV
		$T_J = 25^\circ\text{C}$ , $I_o = 250\text{mA} - 750\text{mA}$		5	75	mV
Line regulation	$\Delta V_o$	$-14.5\text{V} \leq V_i \leq -30\text{V}$ , $T_J = 25^\circ\text{C}$		5	80	mV
		$-16\text{V} \leq V_i \leq -22\text{V}$ , $T_J = 25^\circ\text{C}$		3	30	mV
Quiescent Current	$I_q$	$T_J = 25^\circ\text{C}$		2	3	mA
Quiescent Current Change	$\Delta I_q$	$-14.5\text{V} \leq V_i \leq -30\text{V}$			0.5	mA
	$\Delta I_q$	$5\text{mA} \leq I_o \leq 1\text{A}$			0.5	mA
Output Noise Voltage	$V_N$	$10\text{Hz} \leq f \leq 100\text{KHz}$		300		$\mu\text{V}$
Output voltage drift	$\Delta V_o / \Delta T$	$I_o = 5\text{mA}$		-0.8		$\text{mV}/^\circ\text{C}$
Ripple Rejection	RR	$-15\text{V} \leq V_i \leq -25\text{V}$ , $f = 120\text{Hz}$ , $T_J = 25^\circ\text{C}$	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**

