

7912 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 : 1.5 W ($T_a = 25^\circ\text{C}$)



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

Parameter	Symbol	Value	Unit
Input Voltage	V_i	-35	V
Thermal Resistance from Junction to Air	$R_{\theta JA}$	83.3	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_{OPR}	-40~+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i = -19\text{V}$, $I_o = 500\text{mA}$, $C_i = 2.2\mu\text{F}$, $C_o = 1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	V_o	$T_J = 25^\circ\text{C}$	-11.64	-12	-12.36	V
		$-14.5\text{V} \leq V_i \leq -27\text{V}$, $I_o = 5\text{mA} - 1\text{A}$	-11.4	-12	-12.6	V
Load Regulation	ΔV_o	$I_o = 5\text{mA} - 1.5\text{A}$, $T_J = 25^\circ\text{C}$ 25°C		15	200	mV
		$I_o = 250\text{mA} - 750\text{mA}$, $T_J = 25^\circ\text{C}$ 25°C		5	75	mV
Line Regulation	ΔV_o	$-14.5\text{V} \leq V_i \leq -30\text{V}$, $T_J = 25^\circ\text{C}$ 25°C		5	80	mV
		$-16\text{V} \leq V_i \leq -22\text{V}$, $T_J = 25^\circ\text{C}$ 25°C		3	30	mV
Quiescent Current	I_q	$T_J = 25^\circ\text{C}$ 25°C		2	3	mA
Quiescent Current Change	ΔI_q	$-14.5\text{V} \leq V_i \leq -30\text{V}$			0.5	mA
	ΔI_q	$5\text{mA} \leq I_o \leq 1\text{A}$			0.5	mA
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$		300		$\mu\text{V}/V_o$
Output Voltage Drift	$\Delta V_o / \Delta T$	$I_o = 5\text{mA}$		-0.8		$\text{mV}/^\circ\text{C}$
Ripple Rejection	RR	$-15\text{V} \leq V_i \leq -25\text{V}$, $f = 120\text{Hz}$	54	60		dB
Dropout Voltage	V_d	$I_o = 1\text{A}$, $T_J = 25^\circ\text{C}$ 25°C		1.1		V
Peak Current	I_{pk}	$T_J = 25^\circ\text{C}$ 25°C		2.1		A

* Pulse test.

TYPICAL APPLICATION

