

TO-220 Encapsulate Voltage Regulator

FS7912CTG Three-terminal negative voltage regulator

FEATURES

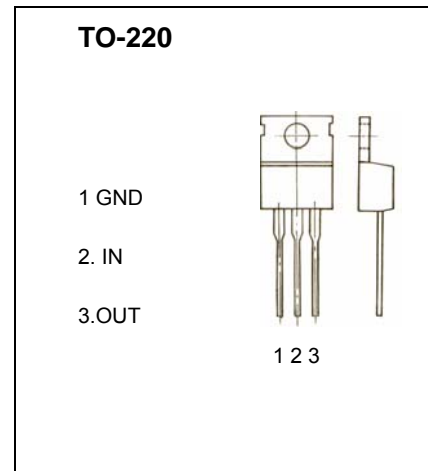
Maximum Output current I_{OM} : 1.5 A

Output voltage V_o : - 12 V

Continuous total dissipation

P_D : 2 W ($T_J = 25^\circ\text{C}$)

15 W ($T_C = 25^\circ\text{C}$)



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

Parameter	Symbol	Value	Unit
Input Voltage	V_i	-35	V
Thermal resistance 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	ΔV_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	ΔV_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	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		μV
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

