

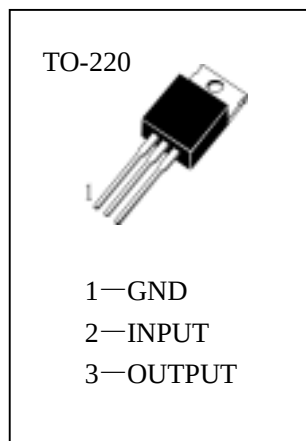


3-TERMINAL 1A NEGATIVE VOLTAGE REGULATORS

The H7918 series of three terminal negative regulators are available in the TO-220 package and with several fixed output voltages, making them useful in a wide range of applications. Each type employs internal current limiting, Thermal shut down and safe area protection, making it essentially indestructible.

Features

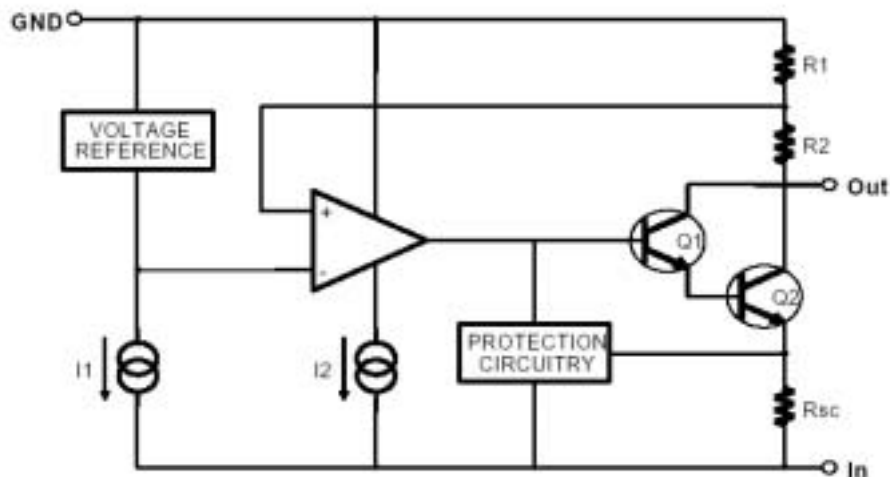
- Output current in Excess of 1A
- Output Voltages of -18V
- Internal Thermal Overload Protection
- Short Circuit Protection
- Output Transistor Safe-Area Compensation



Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

V_I —Input Voltage	-35V
$R_{\theta JC}$ —Thermal Resistance Junction-Cases	5°C/W
$R_{\theta JA}$ —Thermal Resistance Junction-Air	65°C/W
T_{OPR} —Operating Temperature Range	$0\sim 125^\circ\text{C}$
T_{STG} —Storage Temperature Range	$-65\sim 150^\circ\text{C}$

BLOCK DIAGRAM



(unless otherwise specified, $0^{\circ}\text{C} \leq T_J \leq 125^{\circ}\text{C}$, $I_0=500\text{mA}$, $V_I=27\text{V}$, $C_I=2.2\mu\text{F}$, $C_O=1\mu\text{F}$)

Symbol	Parameter	Min.	Typ.	Max.	Unit	Conditions
V_O	Output Voltage	-17.3	-18	-18.7	V	$T_J=25^{\circ}\text{C}$
		-17.1	-18	-18.9		$I_0=5.0\text{mA}$ to 1.0A , $P_O \leq 15\text{W}$, $V_I=-22.5\text{V}$ to -33V
ΔV_O	Line Regulation (Note1)		15	360	mV	$T_J=25^{\circ}\text{C}$, $V_I=-21\text{V}$ to -33V
			8	180		$T_J=25^{\circ}\text{C}$, $V_I=-24\text{V}$ to -30V
ΔV_O	Load Regulation (Note1)		15	360	mV	$T_J=25^{\circ}\text{C}$, $I_0=5.0\text{mA}$ to 1.5A
			5	180		$T_J=25^{\circ}\text{C}$, $I_0=250\text{mA}$ to 750mA
I_Q	Quiescent Current		3	6	mA	$T_J=25^{\circ}\text{C}$
ΔI_Q	Quiescent Current Change			0.5	mA	$I_0=5\text{mA}$ to 1.0A
				1.0		$\leq V_I=-22\text{V}$ to -33V
$\Delta V_O/\Delta T$	Output Voltage Drift		-1		mV/ $^{\circ}\text{C}$	$I_0=5\text{mA}$
V_N	Output Noise Voltage		300		μV	$T_A=25^{\circ}\text{C}$, $f=10\text{Hz}$ to 100kHz
RR	Ripple Rejection	54	60		dB	$f=120\text{Hz}$, $\Delta V_I=10\text{V}$
V_D	Dropout Voltage		2		V	$T_J=25^{\circ}\text{C}$, $I_0=1\text{A}$
I_{SC}	Short Circuit Current		300		mA	$T_J=25^{\circ}\text{C}$, $V_I=-35\text{V}$
I_{PK}	Peak Current		2.2		A	$T_J=25^{\circ}\text{C}$



Fig.1 Output Voltage

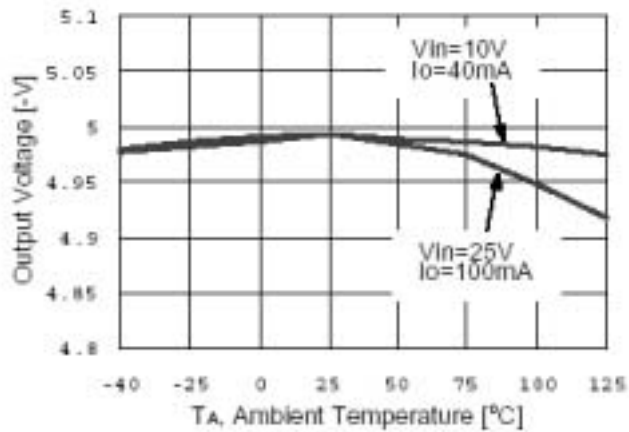


Fig. 2 Load Regulation

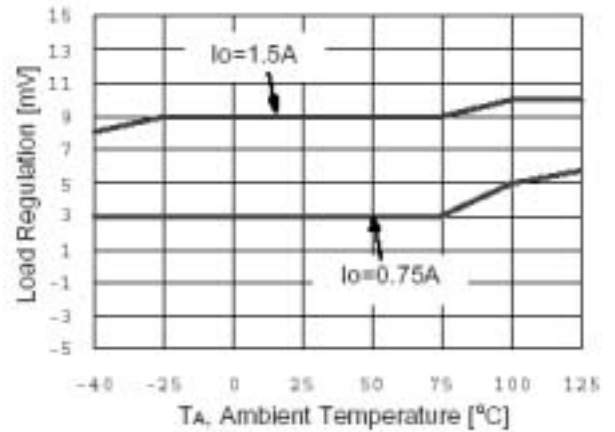


Fig.3 Quiescent Current

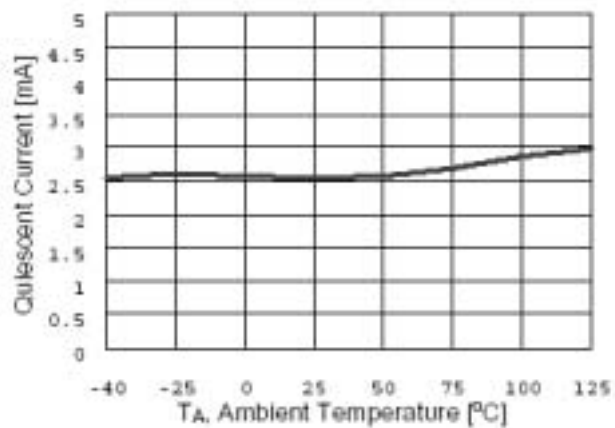


Fig. 4 Dropout Voltage

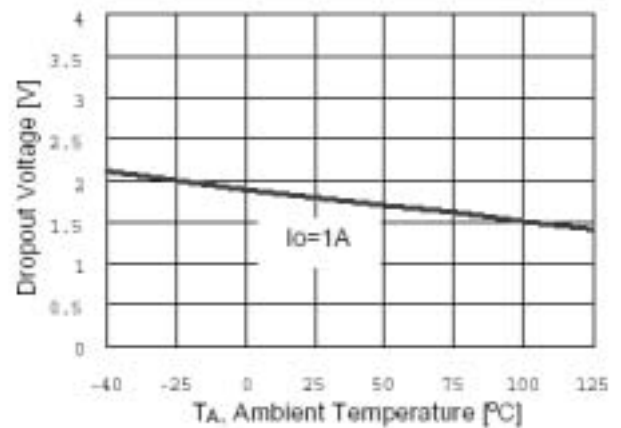


Fig.5 Short Circuit Current

