



3-TERMINAL 1A NEGATIVE VOLTAGE REGULATORS

The H7906 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.

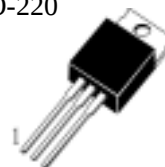
Features

- Output current in Excess of 1A
- Output Voltages of -6V
- Internal Thermal Overload Protection
- Short Circuit Protection
- Output Transistor Safe-Area Compensation

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

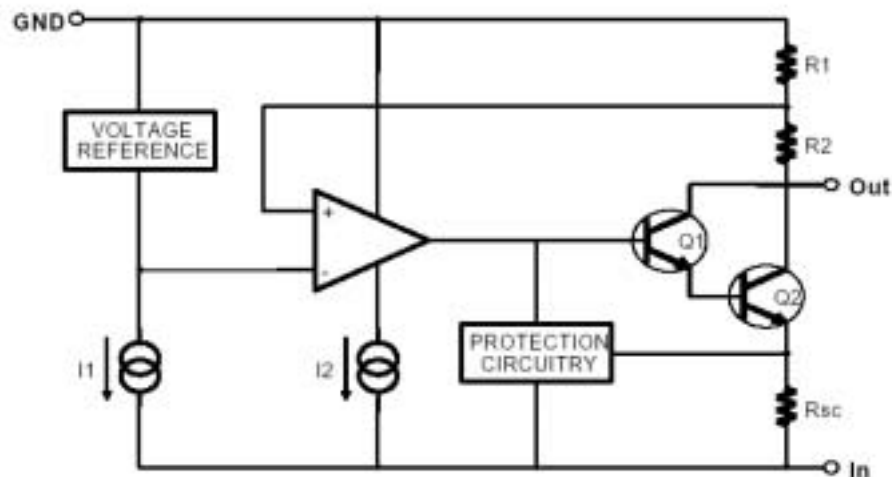
V_I	Input Voltage.....	-35V
$R_{\theta JC}$	Thermal Resistance Junction-Cases.....	5 $^\circ\text{C}/\text{W}$
$R_{\theta JA}$	Thermal Resistance Junction-Air.....	65 $^\circ\text{C}/\text{W}$
T_{OPR}	Operating Temperature Range.....	0~125
T_{STG}	Storage Temperature Range.....	-65~150

TO-220



1—GND
2—INPUT
3—OUTPUT

BLOCK DIAGRAM





(unless otherwise specified , $0 \leq T_J \leq 125$, $I_0=500\text{mA}$, $V_I=11\text{V}$, $C_I=2.2 \mu\text{F}$, $C_O=1 \mu\text{F}$)

Symbol	Parameter	Min.	Typ.	Max.	Unit	Conditions
V_O	Output Voltage	-5.75	-6.0	-6.25	V	$T_J=25$
		-5.7	-6.0	-6.3		$I_0 = 5.0\text{mA}$ to 1.0A , $P_0 \leq 15\text{W}$, $V_I = -9\text{V}$ to -21V
ΔV_O	Line Regulation (Note1)		10	120	mV	$T_J=25$, $V_I = -8\text{V}$ to -25V
			5	60		$T_J=25$, $V_I = -9\text{V}$ to -12V
ΔV_O	Load Regulation (Note1)		10	120	mV	$T_J=25$, $I_0=5.0\text{mA}$ to 1.5A
			3	60		$T_J=25$, $I_0=250\text{mA}$ to 750mA
I_Q	Quiescent Current		3	6	mA	$T_J=25$
ΔI_Q	Quiescent Current Change			0.5	mA	$I_0=5\text{mA}$ to 1.0A
				1.3		$V_I = -9\text{V}$ to -25V
$\Delta V_O / \Delta T$	Output Voltage Drift		-0.5		mV/	$I_0=5\text{mA}$
V_N	Output Noise Voltage		130		μV	$T_A=25$, $f=10\text{Hz}$ to 100kHz
RR	Ripple Rejection	54	60		dB	$f=120\text{Hz}$, $V_I=10\text{V}$
V_D	Dropout Voltage		2		V	$T_J=25$, $I_0=1\text{A}$
I_{SC}	Short Circuit Current		300		mA	$T_J=25$, $V_I = -35\text{V}$,
I_{PK}	Peak Current		2.2		A	$T_J=25$



Fig.1 Output Voltage

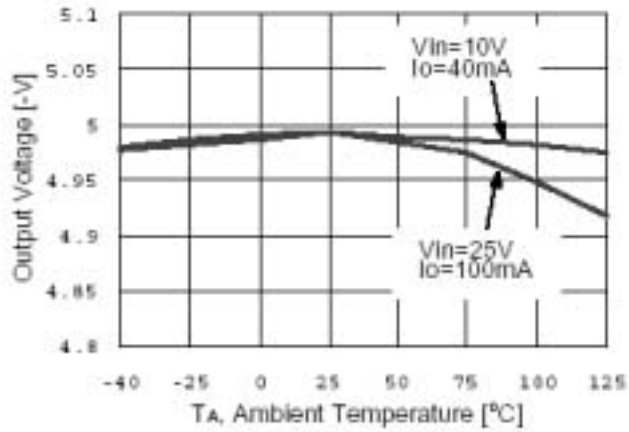


Fig. 2 Load Regulation

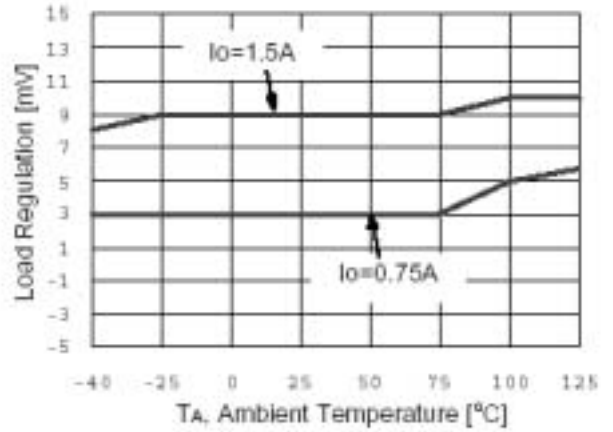


Fig.3 Quiescent Current

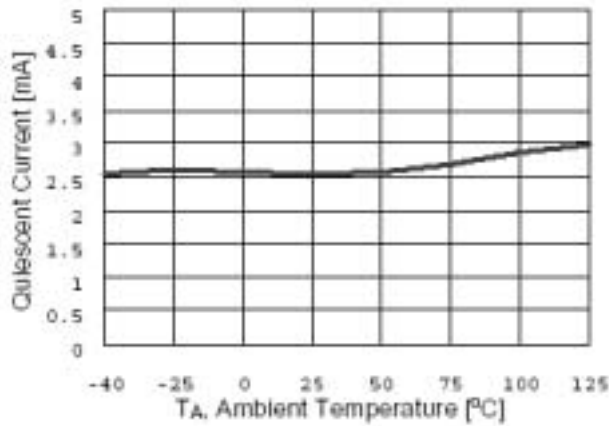


Fig. 4 Dropout Voltage

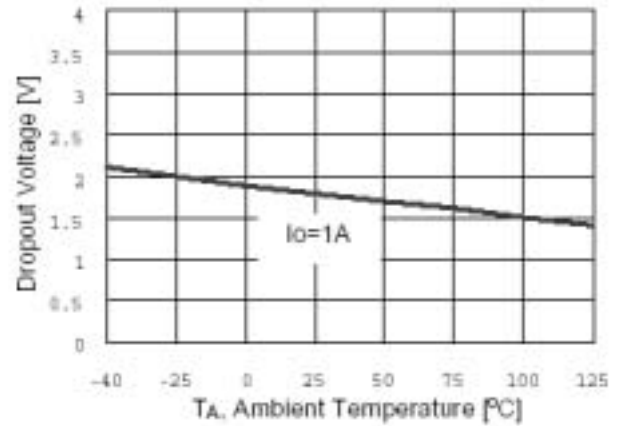


Fig.5 Short Circuit Current

