

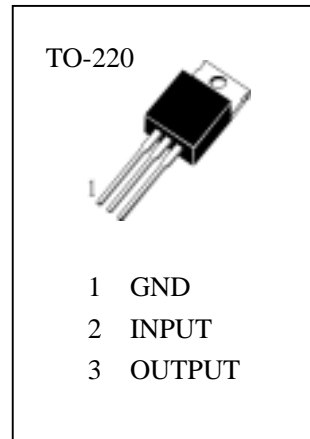


3-TERMINAL 1A NEGATIVE VOLTAGE REGULATORS

The H7912 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

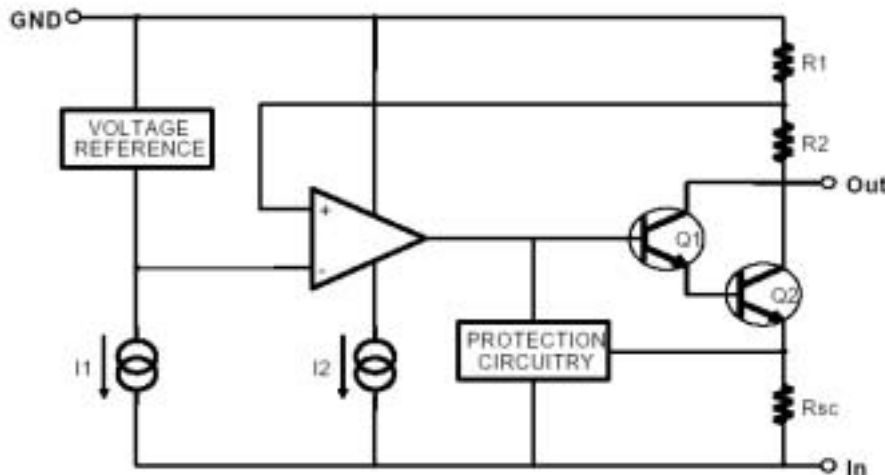
- Output current in Excess of 1A
- Output Voltages of -12V
- Internal Thermal Overload Protection
- Short Circuit Protection
- Output Transistor Safe-Area Compensation



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

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

BLOCK DIAGRAM





(unless otherwise specified , 0 T_J 125 , $I_o=500mA$, $V_i=18V$, $C_i=2.2 \mu F$, $C_o=1 \mu F$)

Symbol	Parameter	Min.	Typ.	Max.	Unit	Conditions
V_o	Output Voltage	-11.5	-12	-12.5	V	$T_J=25$
		-11.4	-12	-12.6		$I_o=5.0mA$ to 1.0A, $P_o \leq 15W$, $V_i=-15.5V$ to -27V
V_o	Line Regulation (Note1)		12	240	mV	$T_J=25$, $V_i=-14.5V$ to -30V
			6	120		$T_J=25$, $V_i=-16V$ to -22V
V_o	Load Regulation (Note1)		12	240	mV	$T_J=25$, $I_o=5.0mA$ to 1.5A
			4	120		$T_J=25$, $I_o=250mA$ to 750mA
I_o	Quiescent Current		3	6	mA	$T_J=25$
I_o	Quiescent Current Change		0.05	0.5	mA	$I_o=5mA$ to 1.0A
			0.1	1.0		$V_i=-15V$ to -30V
V_o/ T	Output Voltage Drift		-0.8		mV/	$I_o=5mA$
V_N	Output Noise Voltage		200		μV	$T_A=25$, $f=10Hz$ to 100kHz
RR	Ripple Rejection	54	60		dB	$f=120Hz$, $V_i=10V$
V_D	Dropout Voltage		2		V	$T_J=25$, $I_o=1A$
I_{SC}	Short Circuit Current		300		mA	$T_J=25$, $V_i=-35V$
I_{PK}	Peak Current		2.2		A	$T_J=25$



Fig.1 Output Voltage

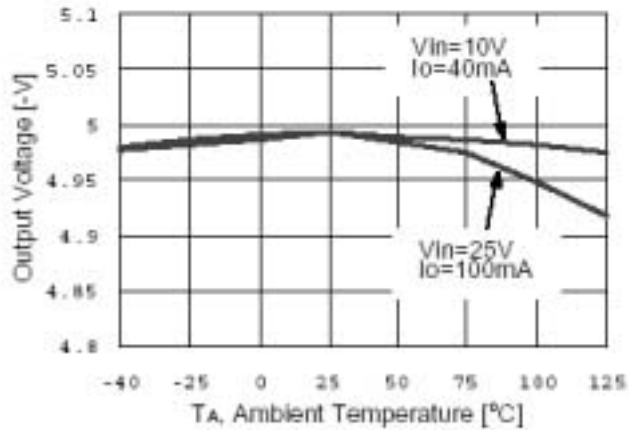


Fig. 2 Load Regulation

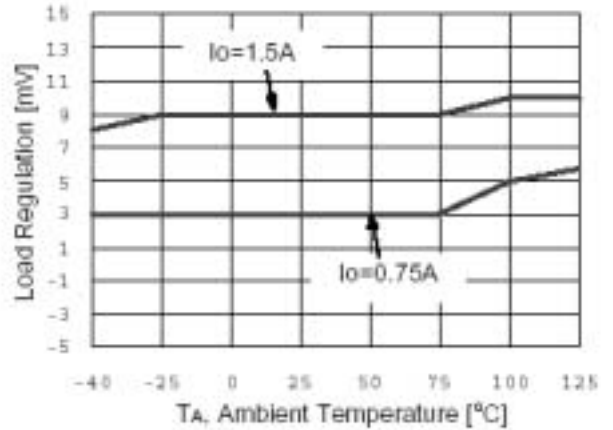


Fig.3 Quiescent Current

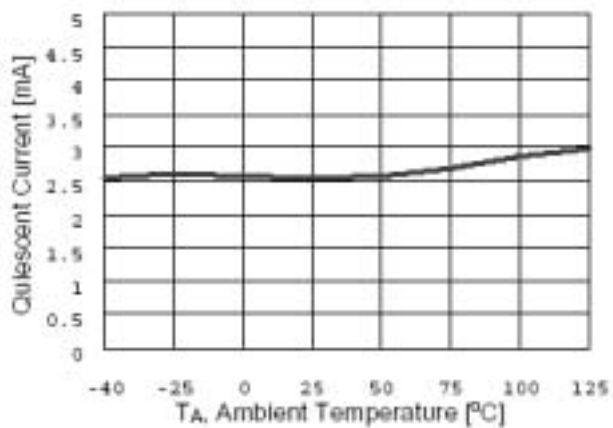


Fig. 4 Dropout Voltage

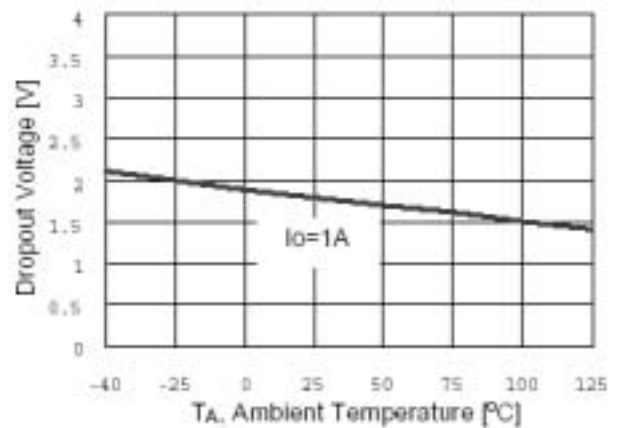


Fig.5 Short Circuit Current

