

# 7908 • THREE-TERMINAL NEGATIVE VOLTAGE REGULATOR IC

## FEATURES:

- OUTPUT CURRENT IN EXCESS OF 1A;
- NO EXTERNAL COMPONENTS REQUIRED;
- INTERNAL SHORT CIRCUIT CURRENT LIMITING;
- INTERNAL THERMAL OVERLOAD PROTECTION;
- OUTPUT TRANSISTOR SAFE-AREA COMPENSATION;
- OUTPUT VOLTAGE OFFERED IN 4% TOLERANCE.

## ABSOLUTE MAXIMUM RATINGS (Ta= 25° C)

Characteristic	Symbol	Norm	Unit
Input Voltage	V <sub>in</sub>	V	-35
Maximum Dissipated Power(with heat sink)	P <sub>tot(max)</sub>	W	15
Maximum Dissipated Power(without heat sink)	P <sub>tot(max)</sub>	W	1.5
Thermal Resistance Junction to Case	O <sub>jC</sub>	°C/W	5.0
Thermal Resistance, Junction to Air	O <sub>jA</sub>	°C/W	65
Junction Temperature	T <sub>j</sub>	°C	150

T<sub>c</sub>=-45÷+70°C

## ELECTRICAL CHARACTERISTICS

(V<sub>in</sub>=-14V, I<sub>o</sub>=0.5A, C<sub>i</sub>=2.2mkF, C<sub>o</sub>=1.0mkF, T<sub>j</sub>=0+125°C, unless otherwise noted.)

Characteristic	Symbol	Norm			Unit
		Min	TYP	Max	
Output Voltage(T <sub>j</sub> =25°C)	V <sub>o</sub>	-7.7		-8.3	V
Output Voltage (5.0mA≤I <sub>o</sub> ≤1.0A, P <sub>o</sub> ≤15W) -10,5V≥V <sub>in</sub> ≥-23V	V <sub>o</sub>	-7.6		-8.4	V
Line Regulation(T <sub>j</sub> =+25°C, I <sub>o</sub> =0,1A) -10,5 V≥V <sub>in</sub> ≥-25 V -11V≥V <sub>in</sub> ≥-17 V (T <sub>j</sub> =+25°C, I <sub>o</sub> =0,5A) -10,5 V≥V <sub>in</sub> ≥-25 V -11V≥V <sub>in</sub> ≥-17 V	ΔV <sub>v</sub>			80 40 160 80	mV
Load Regulation(T <sub>j</sub> =+25°C) 5.0mA≤I <sub>o</sub> ≤1.5A 0.25A≤I <sub>o</sub> ≤0.75A	ΔV <sub>i</sub>			160 80	mV
Quiescent Current(T <sub>j</sub> =+25°C)	I <sub>b</sub>			8.0	mA
Quiescent Current Change -10.5 V≥V <sub>in</sub> ≥-25 V 5.0mA≤I <sub>o</sub> ≤1.5 A	ΔI <sub>b</sub>			1.0 0.5	mA
Dropout Voltage (I <sub>o</sub> =1.0A, T <sub>j</sub> =+25°C)	V <sub>i</sub> -V <sub>o</sub>		2.0		V
Average Temperature Coefficient of Output Voltage	TCV <sub>o</sub>		0,5		mV/°C

