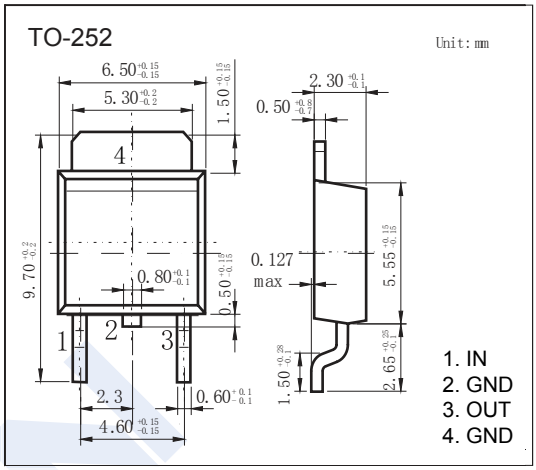
Three Terminal Positive Voltage Regulator

78M08



■ Features

- Maximum Output Current Io= 500mA
- Output Voltage Vo=8V
- Internal Thermal Overload Protection
- Internal Short Circuit Current Limiting
- Output Transistor Safe Operating Area Protection

■ Absolute Maximum Ratings Over Operating Temperature Range(unless otherwise noted)

Parameter	Symbol	Rating	Unit
Input Voltage	V_I	35	V
Maximum Output Current	I_O	0.5	A
Operating Virtual Junction Temperature	T_J	0 to 125	℃
Storage Temperature Range	T_{stg}	-65 to 150	
Lead Temperature 1.6mm(1/16 inch) from case for 10 seconds		260	

■ Electrical Characteristics at Specified Virtual Junction Temperature, Vi=14V, Io=350mA(unless otherwise noted)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Output Voltage	V_O		25℃	7.7	8.0	8.3	V
		10.5V≤Vi≤23V, Io= 5.0mA~350mA	0 to 125℃	7.6	8.0	8.4	
Line Regulation	△ V_O	10.5V≤Vi≤25V, Io=200mA	25℃			150	mV
		11V≤Vi≤25V, Io=200mA				75	
Load Regulation	△ V_O	Io= 5.0mA~500mA	25℃			160	
		Io= 5.0mA~200mA				80	
Quiescent Current	I_Q		25℃			8.0	mA
			125℃			7.5	
Quiescent Current Change	△ I_Q	10.5V≤Vi≤25V	0 to 125℃			1.0	
		5mA≤Io≤350mA				0.5	
Output Noise Voltage	V_N	10Hz≤F≤100kHz, Ta=25℃	25℃		52		uV
Ripple Rejection	R_R	11.5V≤Vi≤21.5V, F=120Hz	25℃	62	80		dB
Dropout Voltage	V_d		25℃		2		V

* Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately. All characteristics are measured with a 0.33μF capacitor across the input and a 0.1μF capacitor across the output.

** This specification applies only for dc power dissipation permitted by absolute maximum ratings.