

POSITIVE VOLTAGE REGULATOR

LM78L08

TO-92
Plastic Package



pin 1.Output
2.Ground
3.Input

Fixed Voltage Monolithic Integrated Circuit Voltage Regulators is Desigbed for a Wide Range of Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Input Voltage	V_{IN}	30	V
Power Dissipation	P_D	625	mW
Operating free air, Case, or Virtual Junction Temperature Range	T_j	0 to 150	°C
Storage Temperature Range	T_{stg}	- 65 to +150	°C
Lead Temperature 1.6mm (1/16inch) from Case for 10 seconds	T_L	260	°C

Recommended Operating Conditions

DESCRIPTION	SYMBOL	MIN	TYP	MAX	UNIT
Input Voltage	V_I	10.5		23	V
Output Current	I_O			100	mA
Operating Junction Temperature	T_j	0		125	°C

ELECTRICAL CHARACTERISTICS

(At Specified Virtual Junction Temperature, $V_I=14V$, $I_O=40mA$, (unless specified otherwise)

DESCRIPTION	SYMBOL	*TEST CONDITION	MIN	TYP	MAX	UNIT
Output Voltage	V_O	25°C	7.7		8.3	V
		$I_O=1mA$ to 40mA, 0°C to 125°C $V_I=10.5V$ to 23V, 0°C to 125°C	7.6		8.4	V
		$I_O=1mA$ to 70mA, 0°C to 125°C	7.6		8.4	V
Line Regulation	R_{BGIN}	$V_I=10.5V$ to 23V, 25°C			175	mV
		$V_I=11$ to 23V, 25°C			125	mV
Ripple Rejection	R_R	$V_I=13V$ to 23V, $f=120Hz$, 0°C to 125°C	37			dB
Load Regulation	R_{BGL}	$I_O=1mA$ to 100mA, 25°C			80	mV
		$I_O=1mA$ to 40mA, 25°C			40	mV
Output Noise Voltage	V_{NO}	$f=10Hz$ to 100KHz, 25°C		54		μV
Dropout Voltage	$V_{DIF (min)}$	25°C		1.7		V
Quiescent Current	I_Q	25°C			6.0	mA
		125°C			5.5	mA
Quiescent Current Change	ΔI_{QIN}	$V_I=11V$ to 23V, 0°C to 125°C			1.5	mA
	ΔI_{QL}	$I_O=1mA$ to 40mA, 0°C to 125°C			0.1	mA

*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 0.1μF capccitor across the output

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

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

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