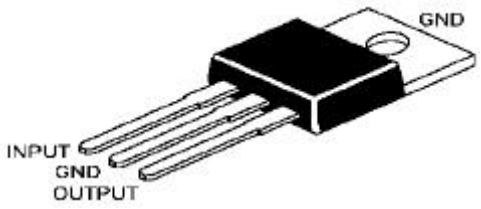
3-TERMINAL POSITIVE VOLTAGE REGULATOR

LM7808

TO-220
Plastic Package



The Voltages available allow these Regulators to be used in Logic Systems, Instrumentation, Hi-Fi Audio Circuits and other Solid State Electronic Equipment

ABSOLUTE MAXIMUM RATINGS (T_a=25ºC)

DESCRIPTION	SYMBOL	VALUE	UNIT
Input Voltage	V_{IN}	35	V
Power Dissipation at T_a=25ºC	P_D	2	W
Power Dissipation at T_c=25ºC	P_D	15	W
Operating Free Air, Case, or Virtual JunctionTemperature Range	T_j	0 to +150	ºC
Storage Temperature Range	T_{stg}	- 65 to +150	ºC
Lead Temperature 1.6mm (1/16 inch) from Case for 10 seconds	T_L	260	ºC

Recommended Operating Conditions

DESCRIPTION	SYMBOL	MIN	TYP	MAX	UNIT
Input Voltage	V_I	10.5		25	V
Output Current	I_O			1.5	A
Operating Junction Temperature	T_j	0		125	ºC

ELECTRICAL CHARACTERISTICS (T_a=25ºC unless specified otherwise)

V_{IN}=14V, I_O=500mA, T_a=25ºC

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Output Voltage	V_O	25ºC	7.7		8.3	V
		I_O=5mA ~ 1A V_{IN}=10.5 ~ 23V, $P_D \leq$15W, 0ºC ~125ºC	7.6		8.4	V
Line Regulation	R_{EGV}	V_{IN}=10.5 ~ 25V, 25ºC			160	mV
		V_{IN}=11 ~ 17V, 25ºC			80	mV
Ripple Rejection	R_R	V_{IN}=11.5 ~ 21.5V, f=120Hz, 0ºC~125ºC	55			dB
Load Regulation	R_{EGL}	I_O=5mA ~ 1.5A , 25ºC			160	mV
		I_O=250mA ~ 750mA , 25ºC			80	mV
Output Resistance	$_rO$	f=1KHz, 0ºC~125ºC		0.016		Ω
Temperature Coefficient of Output Voltage	$\Delta V_O/\Delta T$	I_O=5mA, 0ºC~25ºC		-0.8		mV/ºC
Output Noise Voltage	V_{NO}	f=10Hz ~100KHz, 25ºC		52		µV
Dropout Voltage	$V_{DIF\ (min)}$	I_O=1A , 25ºC		2.0		V
Quiescent Current	I_Q	25ºC			8.0	mA
Quiescent Current Change	ΔI_{QIN}	V_{IN}=10.5 ~ 25V, 0ºC~150ºC			1.0	mA
		I_O=5mA ~ 1A, 0ºC~150ºC			0.5	mA
Short Circuit Output Current	I_{SC}	25ºC		450		mA
Peak Output Current	I_{omax}	25ºC		2.2		A

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).

Disclaimer

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