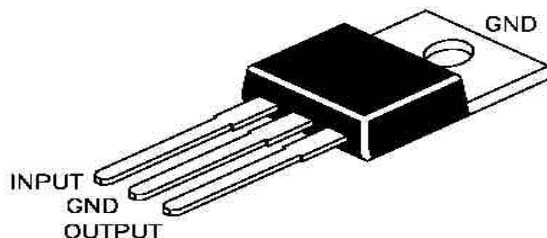


3-TERMINAL POSITIVE VOLTAGE REGULATOR

LM7805

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

DESCRIPTION	SYMBOL	VALUE	UNIT
Input Voltage	V_{IN}	35	V
Continuous Total Dissipation at $T_a=25^\circ\text{C}$ free air Temperature	P_D	2.0	W
Continuous Total Dissipation at $T_c=25^\circ\text{C}$ case Temperature	P_D	15	W
Operating free-air, case, or Virtual Junction Temperature Range	T_{OPR}	0 to 150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to +150	$^\circ\text{C}$
Lead Temperature 1.6mm (1/16 inch) from Case for 10 seconds	T_L	260	$^\circ\text{C}$

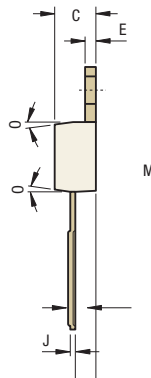
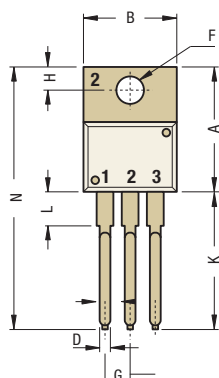
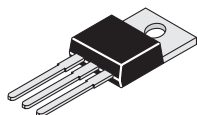
ELECTRICAL CHARACTERISTICS ($T_j=25^\circ\text{C}$ unless specified otherwise)

$V_I=10\text{V}$, $I_O=500\text{mA}$

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Output Voltage	V_O	$T_j=25^\circ\text{C}$	4.90		5.10	V
		$I_O=5\text{mA} \sim 1\text{A}$ $V_I=7\text{V} \sim 20\text{V}$, $P \leq 15\text{W}$ $T_j=0 \sim 125^\circ\text{C}$	4.8		5.20	V
Line Regulation	R_{EGV}	$V_I=7.0 \sim 25\text{V}$ $T_j=25^\circ\text{C}$			100	mV
		$V_I=8.0 \sim 12\text{V}$			50	mV
Ripple Rejection	R_R	$V_I=8.0 \sim 18\text{V}$, $f=120\text{Hz}$ $T_j=0 \sim 125^\circ\text{C}$	62			dB
Load Regulation	R_{EGL}	$I_O=5\text{mA} \sim 1.5\text{A}$ $T_j=25^\circ\text{C}$			100	mV
		$I_O=250\text{mA} \sim 750\text{mA}$			50	mV
Output Resistance	R_O	$f=1\text{KHz}$ $T_j=0 \sim 125^\circ\text{C}$		0.017		Ω
Output Voltage Drift	$\Delta V_O/\Delta T$	$I_O=5\text{mA}$ $T_j=0 \sim 125^\circ\text{C}$		- 1.1		mV/ $^\circ\text{C}$
Output Noise Voltage	V_{NO}	$f=10\text{Hz} \sim 100\text{KHz}$ $T_j=25^\circ\text{C}$		40		μV
Dropout Voltage	V_d	$I_O=1\text{A}$ $T_j=25^\circ\text{C}$		2.0		V
Quiescent Current	I_Q	$T_j=25^\circ\text{C}$			8.0	mA
Quiescent Current Change	ΔI_Q	$V_I=7.0 \sim 25\text{V}$ $T_j=0 \sim 125^\circ\text{C}$			1.3	mA
		$I_O=5\text{mA} \sim 1\text{A}$			0.5	mA
Short Circuit Output Current	I_{SC}	$T_j=25^\circ\text{C}$		750		mA
Peak Output Current	I_{PK}	$T_j=25^\circ\text{C}$		2.2		A

TO-220

Leaded Plastic Package



DIM	Min	Max
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	—	0.90
E	1.15	1.50
F	3.53	4.10
G	2.29	2.79

DIM	Min	Max
H	2.54	3.43
J	0.36	0.61
K	12.00	14.73
L	2.80	6.35
M	2.00	2.92
N	—	31.24
O	7°	

Pin Configurations

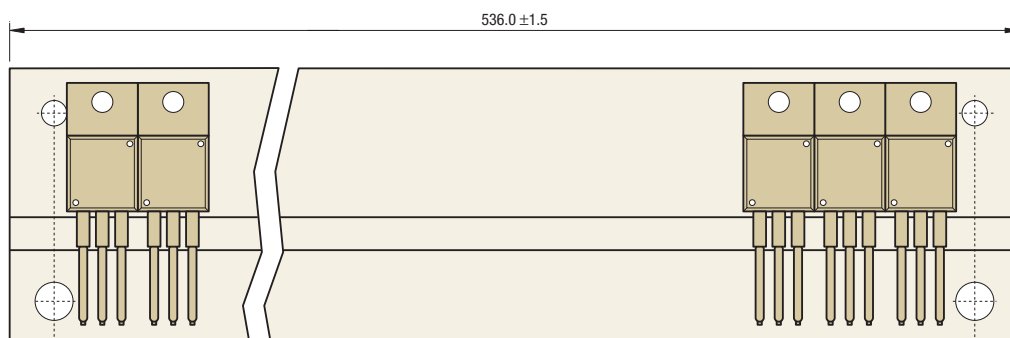
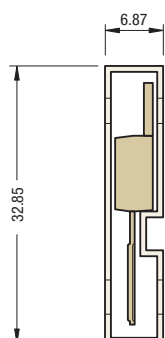
Regulators

Pin 1: In

Pin 2: Ground

Pin 3: Out

TO-220 Series Packaging Tube



Qty: 50 Pcs/Tube

Packaging dimensions, tube dimensions and quantity/tube are approximate and subject to change.

... Packaging Specifications

T & A: Tape and Ammo Pack; T & R: Tape and Reel; Bulk: Loose in Poly Bags; Tube: Tube and Carton; K: 1,000

Package / Case Type	Packaging Type	Std. Packing	Inner Carton			Outer Carton		
			Qty	Size L x W x H	Gross Weight	Qty	Size L x W x H	Gross Weight
				(cm)	(Kg)		(cm)	(Kg)
TO-220	Bulk	1,000	1K	19 x 19 x 8	2.0	10K	46 x 38 x 22	21.6
	Tube	1,000 (50 pcs/tube)	1K	55 x 8 x 10	2.8	10K	55 x 35 x 27	28.3

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

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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