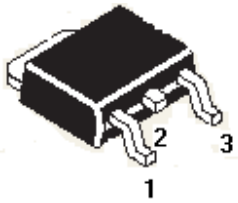
3-TERMINAL POSITIVE VOLTAGE REGULATOR

CL7806DT



Pin: 1 Input
2 Ground
3 Output

TO-252 (DPAK)
Surface Mount
Plastic Package

Maximum Output Current (I_{OM}): 1.5A

Output Voltage (V_O): 6V

Continuous Total Dissipation (P_D): 1.25W (T_A = 25°C)

ABSOLUTE MAXIMUM RATINGS (Operating Temperature Range applies unless otherwise specified)

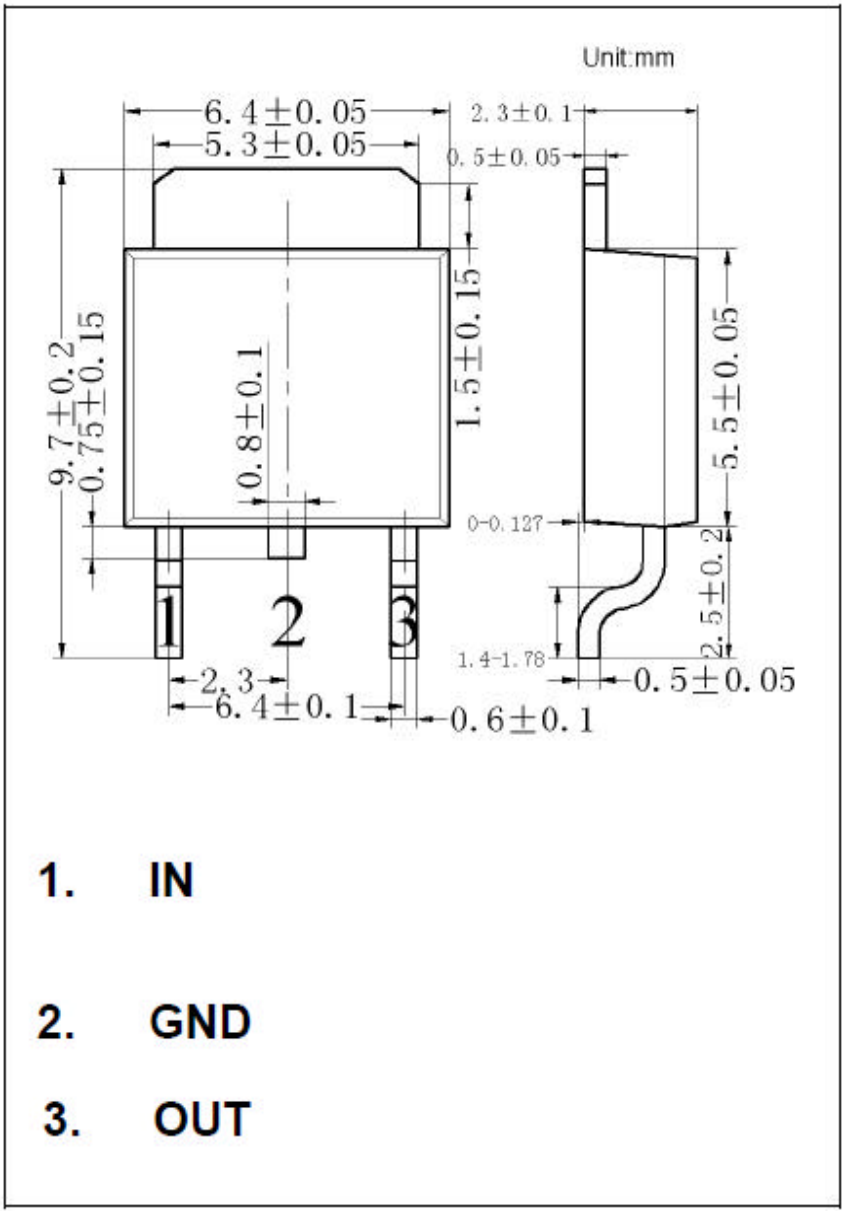
PARAMETER	SYMBOL	VALUE	UNIT
Input Voltage	V_I	35	V
Thermal Resistance from Junction to Ambient	$R_{th\ J\text{-}A}$	80	℃/W
Operating Junction Temperature Range	T_{OPR}	-25 to +125	ºC
Storage Temperature Range	T_{STG}	- 65 to +150	ºC

ELECTRICAL CHARACTERISTICS (at Specified Virtual Temperature)

(Io=500mA, Vi=11V, Ci=0.33µF, Co=0.1µF, unless otherwise specified)

DESCRIPTION	SYMBOL	TEST CONDITIONS		MIN	TYP	MAX	UNIT
Output Voltage	V_O	V_I=8V ~ 21V	25°C	5.75	6.0	6.25	V
		I_O=5.0mA ~ 1A	-25°C ~ 125°C	5.7	6.0	6.3	
Line Regulation	ΔV_O	V_I=8V ~ 25V	25°C		5	120	mV
		V_I=9V ~ 13V	25°C		1.5	60	mV
Load Regulation	ΔV_O	I_O=5mA ~ 1.5A	25°C		14	120	mV
		I_O=250mA ~ 750mA	25°C		4	60	mV
Quiescent Current	I_Q		25°C		4.3	8.0	mA
Quiescent Current Change	ΔI_Q	I_O=5mA ~ 1A	0 ~ 125℃			0.5	mA
		V_I=8V ~ 25V	0 ~ 125℃			1.3	mA
Output Voltage Drift	$\Delta V_O/\Delta T$	I_O=5mA	0 ~ 125℃		- 0.8		mV/ºC
Output Noise Voltage	V_N	f = 10Hz to 100KHz	25°C		45		µV
Ripple Rejection	R_R	V_i=9V ~ 19V, f=120Hz	0 ~ 125℃	59	75		dB
Dropout Voltage	V_{Drop}	I_O=1A	25°C		2		V
Output Resistance	R_O	f=1KHz	25°C		10		mΩ
Short Circuit Current	I_{SC}		25°C		550		mA
Peak Current	I_{PK}		25°C		2.2		A

TO-252 (DPAK) Package outline and Dimension



1. IN
2. GND
3. OUT

Notes

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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Continental Device India Pvt. Limited
C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-2579 6150, 4141 1112 Fax + 91-11-2579 5290, 4141 1119
email@cdil.com www.cdil.com
CIN No. - U32109DL1964PLC004291