

$V_O = 5V$
 $R_O = 15m\Omega$

3-Terminal Positive Voltage Regulator

Description/ Features

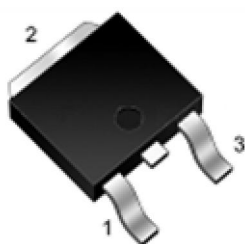
The MK7805 series of three terminal positive regulators is available in the TO-252 package and with several fixed output voltages, making them useful in a wide range of applications. If adequate heat sinking is provided, they can deliver over 1.5A output current. Although designed primarily as fixed voltage regulators, these devices can be used with external components to obtain adjustable voltages and currents.

- Output Current up to 1.5A
- Short Circuit Protection
- Thermal overload protection
- Output Transistor Safe Operating Area Protection

Major Ratings and Characteristics

Characteristics	Values	Units
V_O	5	V
R_O	15	$m\Omega$
I_{pk}	1.5	A
T_J	125	$^{\circ}C$
T_{stg}	-65 ~ 150	$^{\circ}C$

Case Styles



- 1、 Input
- 2、 Ground
- 3、 Output

Ordering Information

Part Number	Package	Packaging
MK7805	TO-252	Reel

Absolute Maximum Rating (Tamb = 25°C)

Parameter	Symbol	Value	Unit
Input voltage	V _O =5V to 18V	35	V
	V _O =24V	40	
Thermal resistance junction-air	R _(JA)	62.5	°C/W
Thermal resistance junction-cases	R _{θJC}	3	°C/W
Operating Temperature	Topr	-20 ~125	°C
Storage Temperature	Tstg	-65 ~150	°C

Electrical Characteristics(Tamb=25°C)

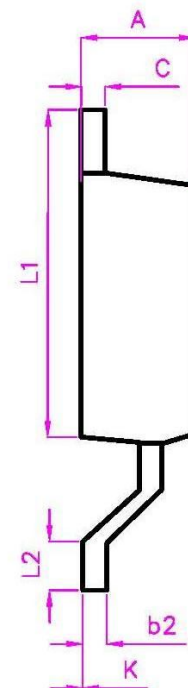
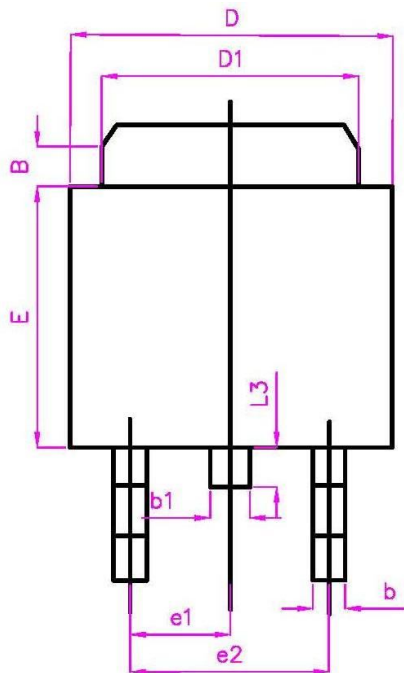
(Refer to test circuits, 0<T_j<125°C, I_o=500mA, V_i=10V, C_i=0.33μF, C_o=0.1μF, unless otherwise specified)

Characteristic	Symbol	Test Condition	MIN.	TYP.	MAX.	Unit
Output Voltage	V _o	T _j =25°C	4.8	5	5.2	V
Output Voltage	V _o	I _o =5mA to 1A P _o ≤15W V _i =7.5V to 20V	4.75	5	5.25	V
Line Regulation	ΔV _o	V _i =7.5V to 25V T _j =25°C	-	4	100	mV
		V _i =8V to 12V T _j =25°C	-	1.6	50	
Load Regulation	ΔV _o	I _o =5.0mA to 1.5A T _j =25°C	-	9	100	mV
		I _o =250mA to 750mA T _j =25°C	-	4	50	
Quiescent Current	I _Q	T _j =25°C	-	5	8	mA
Quiescent Current Change	ΔI _Q	I _o =5.0mA to 1.0A	-	-	0.5	mA
		V _i =8V to 25V	-	-	0.8	
Ripple rejection	R _R	f=120Hz, V _i =8V to 18V	62	73	-	dB
Dropout Voltage	V _o	I _o =1.0A, T _j =25°C	-	2	-	V
Output Noise Voltage	V _N	f=10Hz to 100KHz T _a =25°C	-	42	-	μV
Output Resistance	R _o	f=1KHz	-	15	-	mΩ
Short Circuit Current	I _{sc}	V _i =35V, T _a =25°C	-	230	-	mA
Peak Current	I _{PK}	T _j =25°C	-	2.2	-	A
Output voltage Drift	ΔV _o /ΔT	I _o =5.0mA	-	0.8	-	mV/°C

TO-252 Mechanical Data

UNIT.: mm

Symbol	MIN.	NOM.	MAX.	Symbol	MIN.	NOM.	MAX.
A	2.10	-	2.50	E	5.30	-	6.30
B	0.85	-	1.25	e1	2.25	-	2.35
b	0.50	-	0.80	e2	4.45	-	4.75
b1	0.50	-	0.90	L1	9.20	-	10.60
b2	0.45	-	0.70	L2	0.90	-	1.75
C	0.45	-	0.70	L3	0.60	-	1.10
D	6.30	-	6.75	K	-0.1	-	0.10
D1	5.10	-	5.50				



Data and specifications subject to change without notice.

This product has been designed and qualified for Industrial Level and Lead-Free.

Qualification Standards can be found on GS's Web site.

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