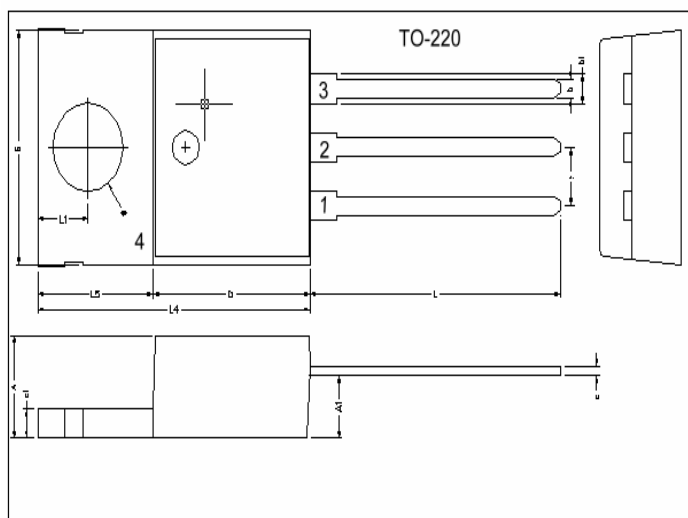


GE7805 3-TERMINAL POSITIVE VOLTAGE REGULATOR

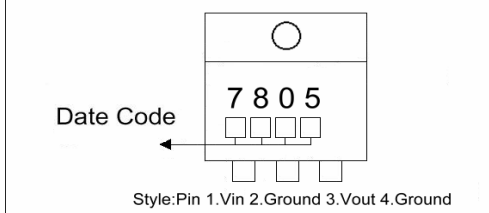
Description

The GE7805 series of three-terminal positive regulators are available in the TO-220 package and with several fixed output voltages, making it useful in a wide range of applications. These regulators can provide local on-card regulation, eliminating the distribution problems associated with single point regulation. Each type employs internal current limiting, thermal shut-down and safe operating area protection, making it essentially indestructible. If adequate heat sinking is provided, they can deliver can be used with external components to obtain adjustable voltages and currents. GE7805 is characterized for operation from 0°C to +125°C, and if operating temperature will always high, please refer the power dissipation curve.

Package Dimensions



Marking :



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.40	4.80	c1	1.25	1.45
b	0.76	1.0	b1	1.17	1.47
c	0.36	0.50	L	13.25	14.25
D	8.60	9.00	e	2.54 REF.	
E	9.80	10.4	L1	2.60	2.89
L4	14.7	15.3	Ø	3.71	3.96
L5	6.20	6.60	A1	2.60	2.80

Absolute Maximum Ratings

Parameter	Ratings	Unit
Input Voltage	35V	V
Operating Junction Temperature Range	0 ~ +125	°C
Storage Temperature Range	-55 ~ +150	°C
Maximum Junction Temperature	125	°C
Output Current	1	A
Lead Temperature(Soldering 10S)	230	°C
Total Power Dissipation	Internal limit	W

Electrical Characteristics

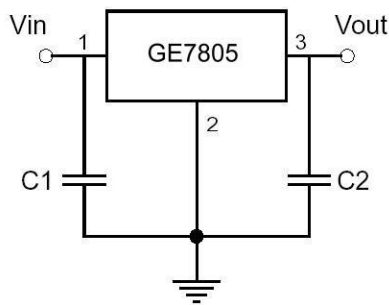
(Refer to the test circuits, Tj=0 to 125°C, Io=500mA, Vi=10V, Ci=0.33uF, Co=0.1uF unless otherwise specified)

Rank A (3%)				Unit	Test Conditions
Symbol	Min.	Typ.	Max.		
VO	4.85	5	5.15	V	Tj=25°C
	4.85	5	5.15		PD≤15W, 5mA ≤ Io ≤ 1A
ΔVO (Line Regulation)	-	4	50	mV	Tj=25°C, 7V ≤ Vin ≤ 25V
	-	1.6	25		Tj=25°C, 8V ≤ Vin ≤ 12V
ΔVO (Load Regulation)	-	-	100	mV	5mA ≤ Io ≤ 1A
	-	-	50		250mA ≤ Io ≤ 750mA
IQ	-	5.5	8	mA	Tj=25°C
Δ IQ	-	-	0.5	mA	5mA ≤ Io ≤ 1A
	-	-	1.3		7V ≤ Vin ≤ 25V
Vn	-	40	200	uV	Tj=25°C, 10Hz ≤ f ≤ 100KHz
RR	-	68	-	dB	8V ≤ Vin ≤ 18V, f=120Hz
VD	-	2	-	V	Tj=25°C, Io=1A
Isc	-	250	-	mA	Tj=25°C
Ipk	1.7	-	-	A	Tj=25°C
ΔVo / ΔTj	-	-0.8	-	mV/°C	Io=5mA

Refer to the test circuits, $T_j=0$ to 125°C , $I_o=500\text{mA}$, $V_i=19\text{V}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$ unless otherwise specified

Rank B (5%)				Unit	Test Conditions
Symbol	Min.	Typ.	Max.		
VO	4.75	5	5.25	V	$T_j=25^{\circ}\text{C}$
	4.75	5	5.25		$\text{PD}\leq 15\text{W}$, $5\text{mA}\leq I_o\leq 1\text{A}$
ΔVO (Line Regulation)	-	4	100	mV	$T_j=25^{\circ}\text{C}$, $7\text{V}\leq V_{in}\leq 25\text{V}$
	-	1.6	50		$T_j=25^{\circ}\text{C}$, $8\text{V}\leq V_{in}\leq 12\text{V}$
ΔVO (Load Regulation)	-	-	100	mV	$5\text{mA}\leq I_o\leq 1\text{A}$
	-	-	50		$250\text{mA}\leq I_o\leq 750\text{mA}$
IQ	-	5.5	8	mA	$T_j=25^{\circ}\text{C}$
ΔIQ	-	-	0.5	mA	$5\text{mA}\leq I_o\leq 1\text{A}$
	-	-	1.3		$7\text{V}\leq V_{in}\leq 25\text{V}$
Vn	-	100	300	μV	$T_j=25^{\circ}\text{C}$, $10\text{Hz}\leq f\leq 100\text{KHz}$
RR	62	73	-	dB	$8\text{V}\leq V_{in}\leq 18\text{V}$, $f=120\text{Hz}$
VD	-	2.5	-	V	$T_j=25^{\circ}\text{C}$, $I_o=1\text{A}$
Isc	-	250	-	mA	$T_j=25^{\circ}\text{C}$
Ipk	1.7	-	-	A	$T_j=25^{\circ}\text{C}$
$\Delta\text{Vo} / \Delta\text{Tj}$	-	-0.8	-	$\text{mV}/^{\circ}\text{C}$	$I_o=5\text{mA}$

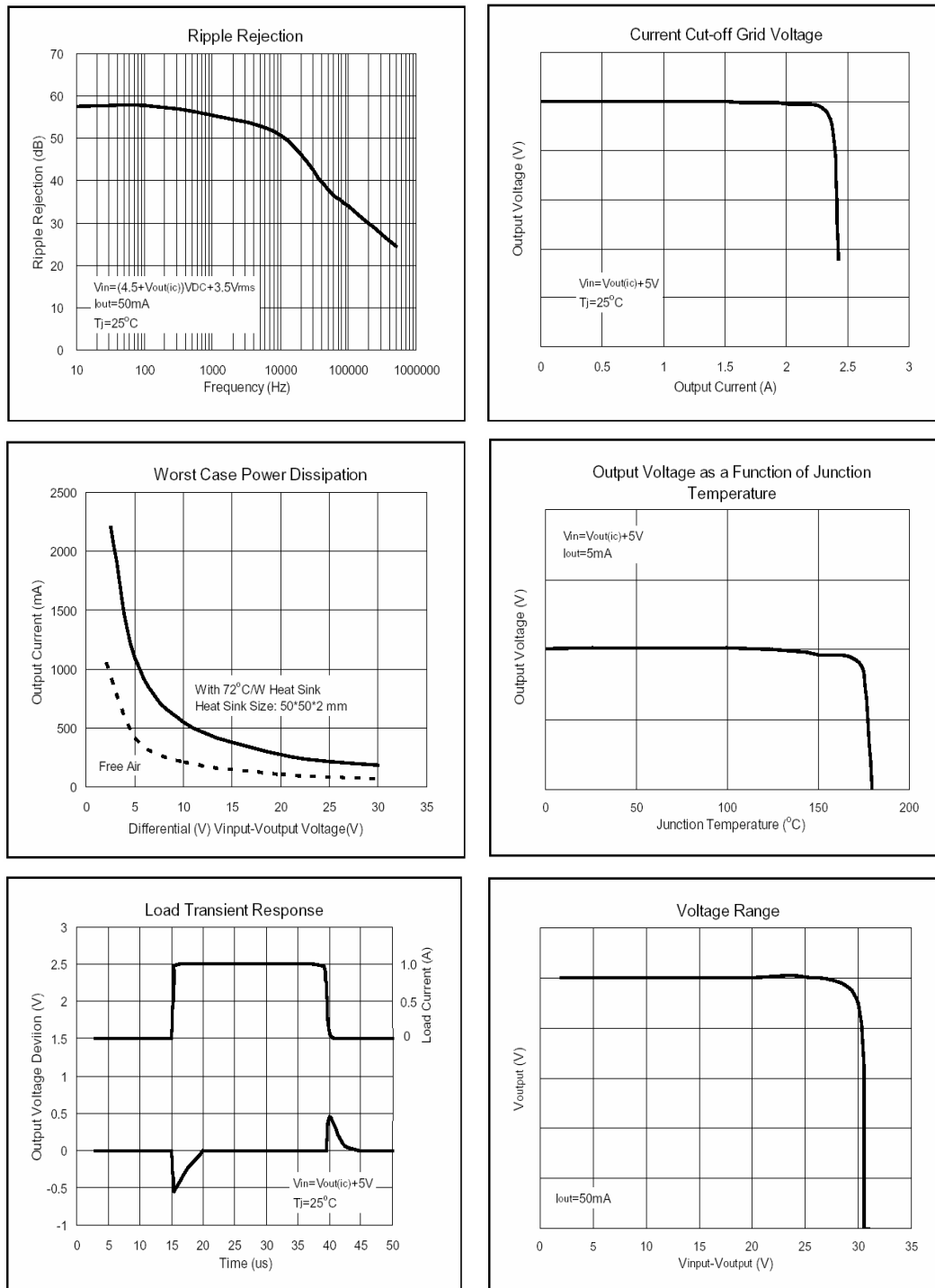
Typical Application



Note:

C1 and C2 are required if regulator is located far from power supply filter and load, or oscillation may induced on the loop.

Characteristics Curve



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