



**TO-251/TO-252-2L Plastic-Encapsulate Transistors**

**CJ7805** Three-terminal positive voltage regulator

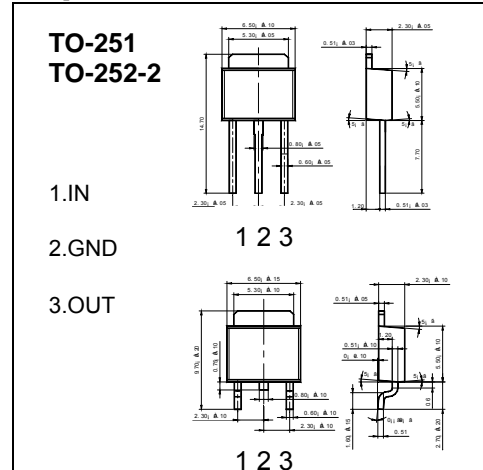
**FEATURES**

Maximum Output current

$I_{OM}$ : 1.5 A

Output voltage

$V_o$ : 5V



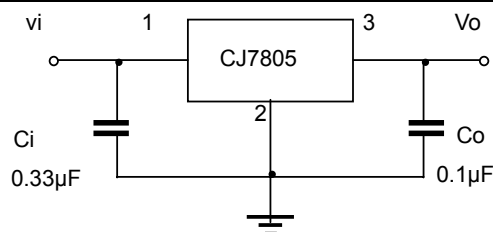
**ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)**

Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	35	V
Operating Junction Temperature Range	$T_{OPR}$	0-+125	°C
Storage Temperature Range	$T_{STG}$	-55-+150	°C

**ELECTRICAL CHARACTERISTICS**( $V_i=10V, I_o=500mA, 0^\circ C < T_j < 125^\circ C, C_i=0.33\mu F, C_o=0.1\mu F$ , unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	$V_o$	$T_j=25^\circ C$	4.8	5.0	5.2	V
		$7V \leq V_i \leq 20V, I_o=5mA-1A$ $P_o < 15W$	4.75	5.00	5.25	V
Load Regulation	$\Delta V_o$	$T_j=25^\circ C, I_o=5mA-1.5A$		9	100	mV
		$T_j=25^\circ C, I_o=250mA-750mA$		4	50	mV
Line regulation	$\Delta V_o$	$7V \leq V_i \leq 25V, T_j=25^\circ C$		4	100	mV
		$8V \leq V_i \leq 12V, T_j=25^\circ C$		1.6	50	mV
Quiescent Current	$I_q$	$T_j=25^\circ C$		5	8	mA
Quiescent Current Change	$\Delta I_q$	$7V \leq V_i \leq 25V$		0.3	1.3	mA
		$5mA \leq I_o \leq 1A$		0.03	0.5	mA
Output Noise Voltage	$V_N$	$10Hz \leq f \leq 100KHz$		42		$\mu V$
Ripple Rejection	RR	$8V \leq V_i \leq 18V, f=120Hz, T_j=25^\circ C$	62	73		dB
Dropout Voltage	$V_d$	$T_j=25^\circ C, I_o=1A$		2		V
Short Circuit Current	$I_{sc}$	$V_i=35V, T_a=25^\circ C$		230		mA
Peak Current	$I_{pk}$	$T_j=25^\circ C$		2.2		A

**TYPICAL APPLICATION**



# Typical Performance Characteristics

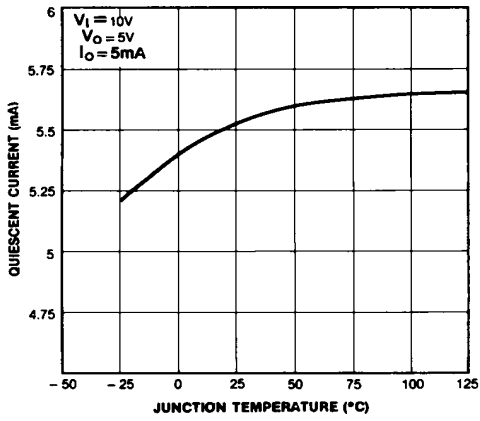


Figure 1. Quiescent Current

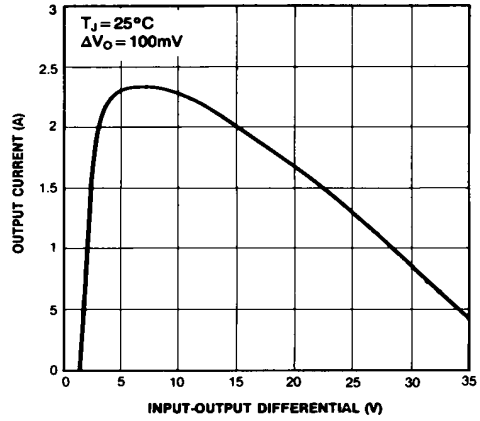


Figure 2. Peak Output Current

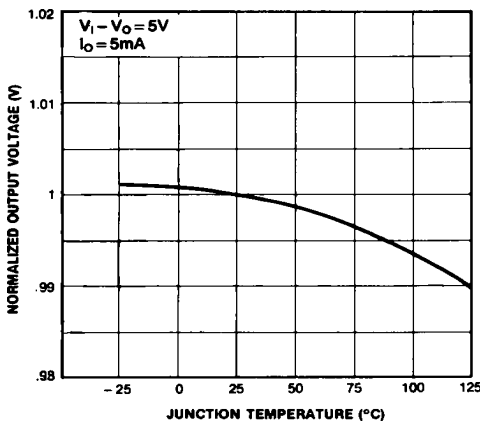


Figure 3. Output Voltage

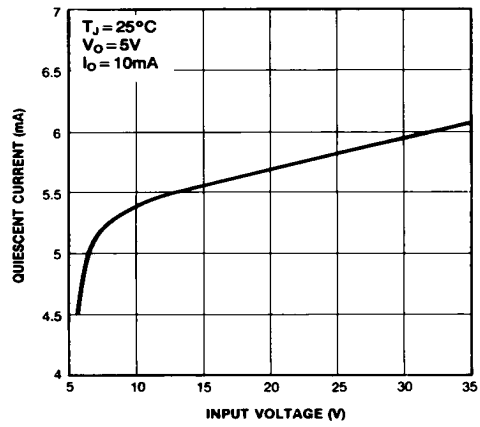
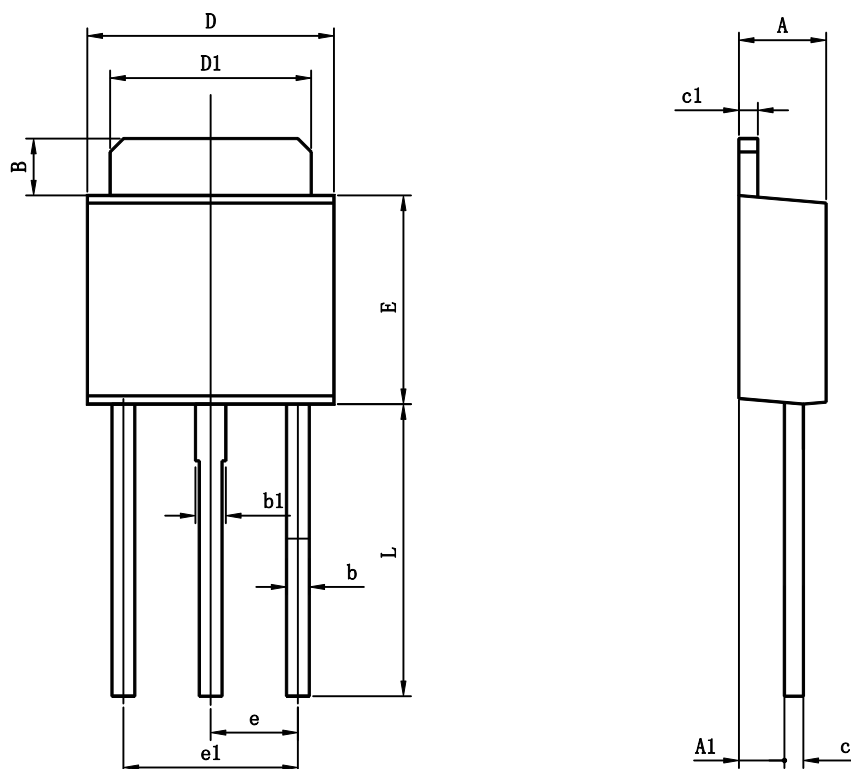


Figure 4. Quiescent Current



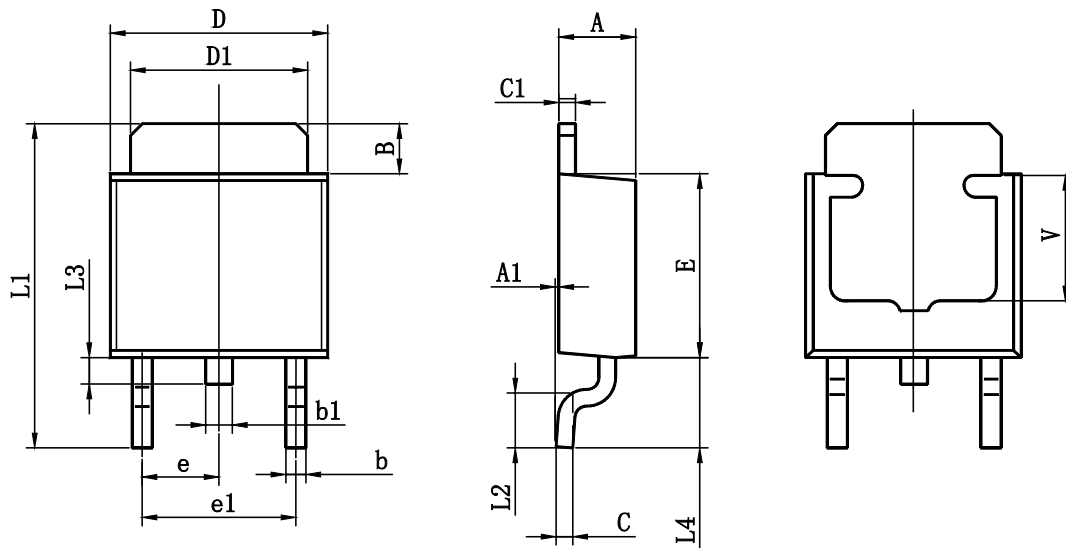
## TO-251 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.200	2.400	0.087	0.094
A1	1.020	1.270	0.040	0.050
B	1.350	1.650	0.053	0.065
b	0.500	0.700	0.020	0.028
b1	0.700	0.900	0.028	0.035
c	0.430	0.580	0.017	0.023
c1	0.430	0.580	0.017	0.023
D	6.350	6.650	0.250	0.262
D1	5.200	5.400	0.205	0.213
E	5.400	5.700	0.213	0.224
e	2.300TYP		0.091TYP	
e1	4.500	4.700	0.177	0.185
L	7.500	7.900	0.295	0.311



TO-252-2L PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
B	1.350	1.650	0.053	0.065
b	0.500	0.700	0.020	0.028
b1	0.700	0.900	0.028	0.035
c	0.430	0.580	0.017	0.023
c1	0.430	0.580	0.017	0.023
D	6.350	6.650	0.250	0.262
D1	5.200	5.400	0.205	0.213
E	5.400	5.700	0.213	0.224
e	2.300TYP		0.091TYP	
e1	4.500	4.700	0.177	0.185
L1	9.500	9.900	0.374	0.390
L2	1.400	1.780	0.055	0.070
L3	0.650	0.950	0.026	0.037
L4	2.550	2.900	0.100	0.114
V	3.80REF		0.150REF	