



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

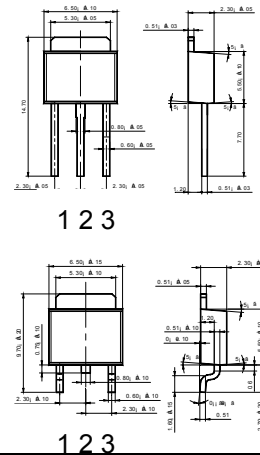
V_o : 5V

TO-251
TO-252-2

1.IN

2.GND

3.OUT



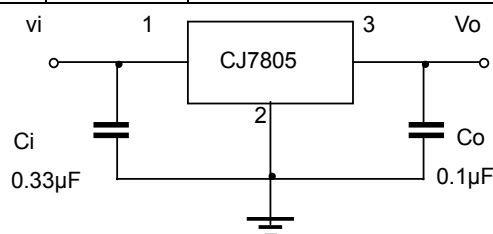
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

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

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

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

TYPICAL APPLICATION



Typical Performance Characteristics

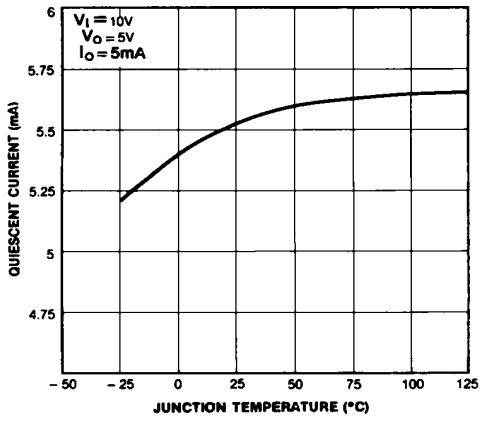


Figure 1. Quiescent Current

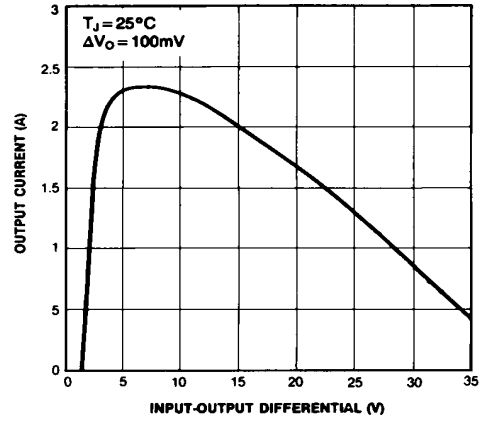


Figure 2. Peak Output Current

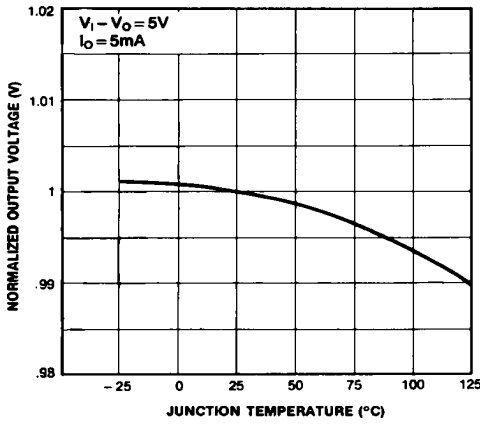


Figure 3. Output Voltage

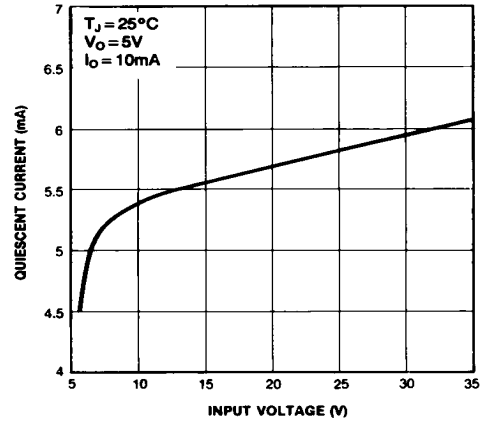
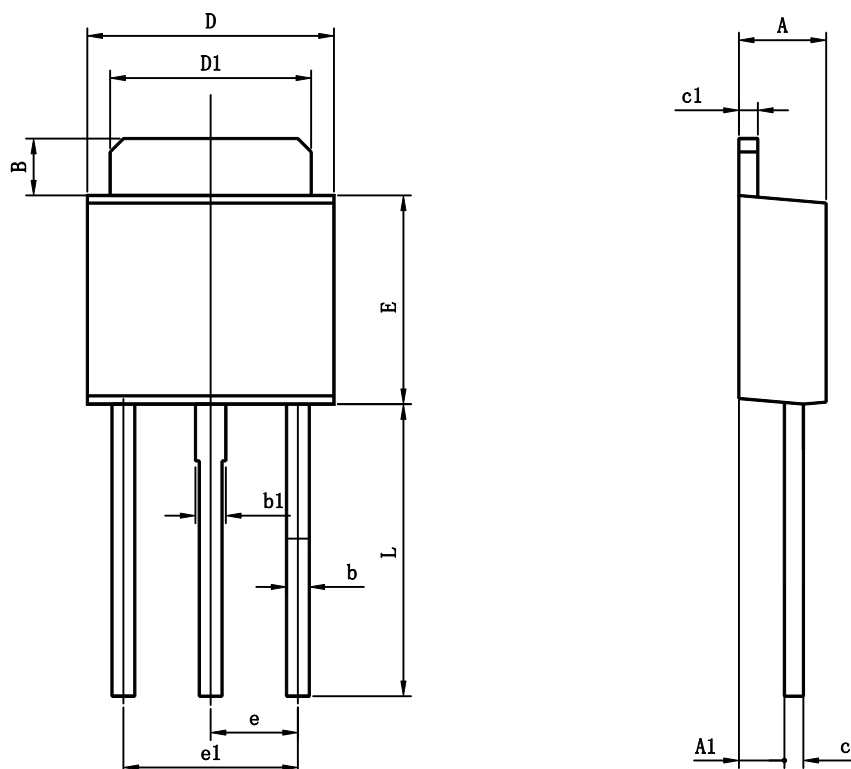


Figure 4. Quiescent Current



TO-251 PACKAGE OUTLINE DIMENSIONS

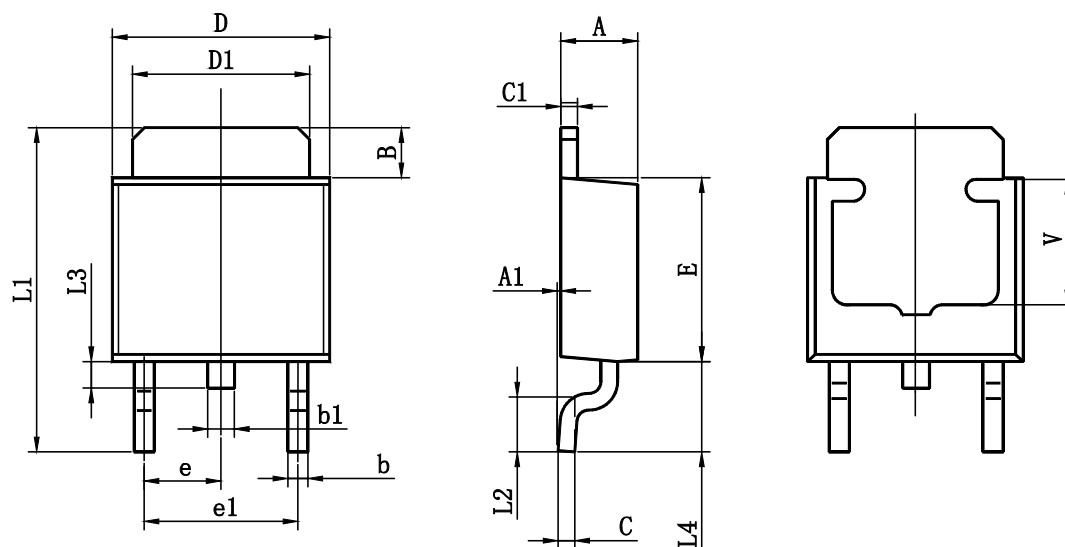


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.200	2.400	0.087	0.094
A1	1.020	1.270	0.040	0.050
B	1.350	1.650	0.053	0.065
b	0.500	0.700	0.020	0.028
b1	0.700	0.900	0.028	0.035
c	0.430	0.580	0.017	0.023
c1	0.430	0.580	0.017	0.023
D	6.350	6.650	0.250	0.262
D1	5.200	5.400	0.205	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

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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	