

7805

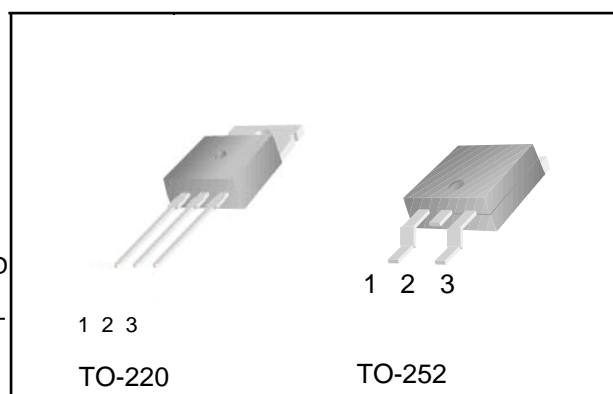
3 TERMINAL 1.0A POSITIVE VOLTAGE REGULATORS

7805 Three-terminal positive voltage regulator

FEATURES

- Maximum output current
 I_{OM} : 1.0 A
- Output voltage
 V_O : 5V

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
Thermal Resistance from Junction to Air	$R_{\theta JA}$	65	$^{\circ}C/W$
Operating Junction Temperature Range	T_{OPR}	-20~+125	$^{\circ}C$
Storage Temperature Range	T_{STG}	-65~+150	$^{\circ}C$

7805 ELECTRICAL CHARACTERISTICS

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

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Units
Output voltage	V_o	$T_j = 25^{\circ}C$	4.8	5.0	5.2	V
		$5.0mA < I_o < 1.0A$, $P_o < 15W$ $V_i = 8V$ to 20V	4.75	5.00	5.25	V
Line regulation	ΔV_o	$T_j = 25^{\circ}C$, $V_i = 7.5V$ to 20V		4	100	mV
		$T_j = 25^{\circ}C$, $V_i = 8V$ to 12V		2	50	mV
Load regulation	ΔV_o	$T_j = 25^{\circ}C$, $I_o = 5.0mA$ to 1.0A		9	100	mV
		$T_j = 25^{\circ}C$, $I_o = 250mA$ to 750mA		4	50	mV
Quiescent current	I_q	$T_j = 25^{\circ}C$		4.2	8	mA
Quiescent current change	ΔI_q	$I_o = 5mA$ to 1.0A		0.03	0.5	mA
		$V_i = 8V$ to 25V, $I_o = 500mA$		0.3	0.8	mA
Output voltage drift	$\Delta V_o / \Delta T$	$I_o = 5mA$		0.8		mV/ $^{\circ}C$
Output noise voltage	V_N	$f = 10Hz$ to 100kHz, $T_a = 25^{\circ}C$		42		$\mu V/V_o$
Ripple rejection	RR	$f = 120Hz$, $V_i = 8V$ to 18V	62	73		dB
Dropout voltage	V_o	$I_o = 1.0A$, $T_j = 25^{\circ}C$		2		V
Output resistance	R_o	$f = 1kHz$		15		m Ω
Short circuit current	I_{sc}	$V_i = 35V$, $T_a = 25^{\circ}C$		200		mA

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TEST CIRCUITS

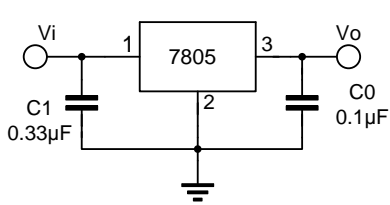


FIG.1 DC PARAMETERS

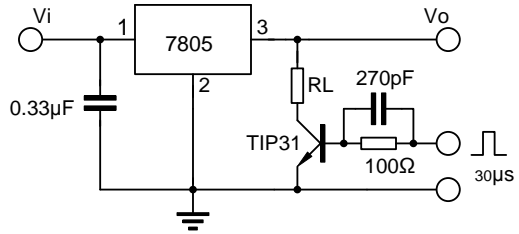


FIG.2 LOAD REGULATION

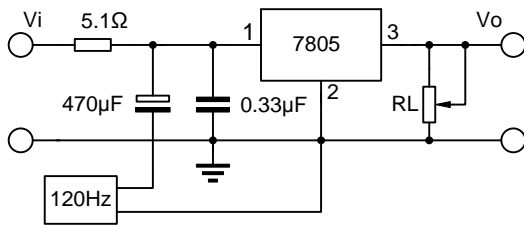


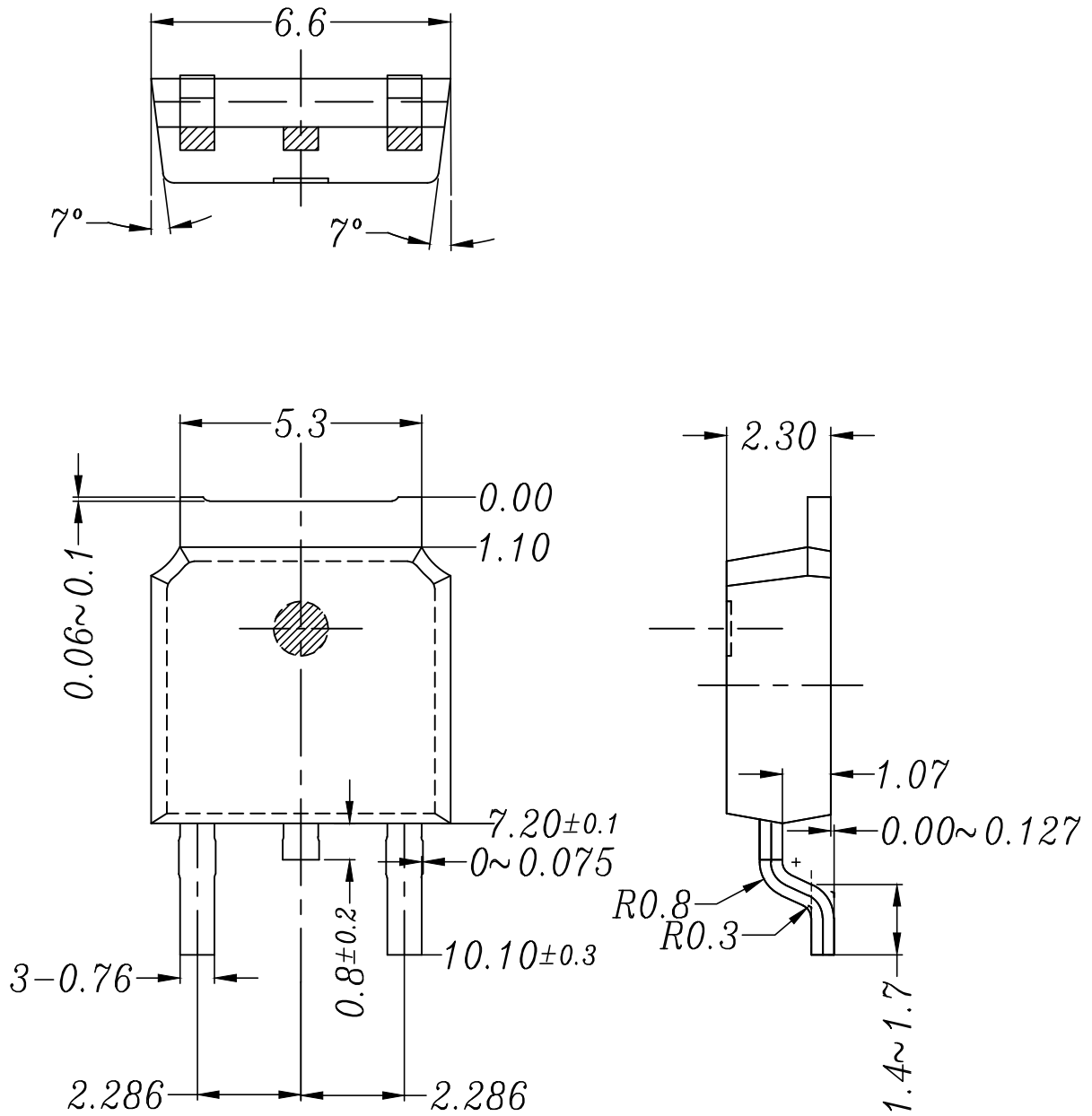
FIG.3 RIPPLE REJECTION

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TO-252 Package Outline Dimensions

Package Outline Dimensions (Units: mm)



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3 TERMINAL 1.0A POSITIVE VOLTAGE REGULATORS

TO-220 Package Outline Dimensions

Package Outline Dimensions (Units: mm)

