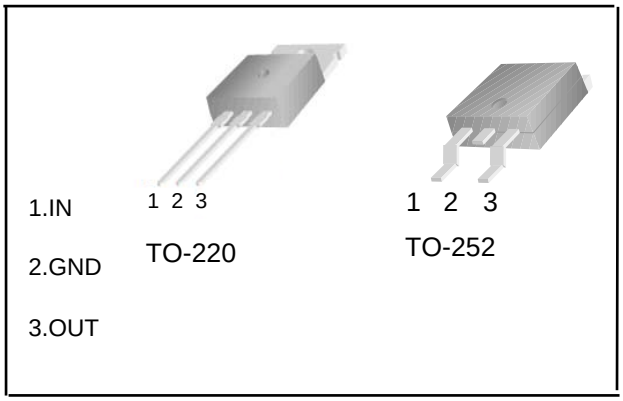
3 TERMINAL 1.5A POSITIVE VOLTAGE REGULATORS

L7805 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
Thermal Resistance from Junction to Air	$R_{\theta JA}$	65	℃/W
Operating Junction Temperature Range	T_{OPR}	-20~+125	℃
Storage Temperature Range	T_{STG}	-65~+150	℃

L7805 ELECTRICAL CHARACTERISTICS

(Refer to test circuits,0<Tj<125℃,Io=500mA,Vi=10V,Ci=0.33μF, Co=0.1μF, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Units
Output voltage	Vo	Tj=25℃	4.8	5.0	5.2	V
		5.0mA<Io<1.0A, P_D <15W Vi=7.5V to 20V	4.75	5.00	5.25	V
Line regulation	ΔVo	Tj=25℃,Vi=7.5V to 25V	-	4.0	100	mV
		Tj=25℃,Vi=8V to 12V	-	1.6	50	mV
Load regulation	ΔVo	Tj=25℃,Io=5.0mA to 1.5A	-	9	100	mV
		Tj=25℃,Io=250mA to 750mA	-	4	50	mV
Quiescent current	IQ	Tj=25℃	-	5.0	8	mA
Quiescent current change	ΔIQ	Io=5mA to 1.0A	-	-	0.5	mA
		Vi=8V to 25V	-	-	0.8	mA
Output voltage drift	ΔVo/ΔT	Io=5mA	-	0.8	-	mV/℃
Output noise voltage	VN	f=10Hz to 100kHz,Ta=25℃	-	42	-	μV
Ripple rejection	RR	f=120Hz, Vi=8V to 18V	62	73	-	dB
Dropout voltage	Vo	Io=1.0A,Tj=25℃	-	2	-	V
Output resistance	Ro	f=1kHz	-	15	-	mΩ
Short circuit current	Isc	Vi=35V,Ta=25℃	-	230	-	mA
peak current	Ipk	Tj=25℃	-	2.2	-	A

TEST CIRCUITS

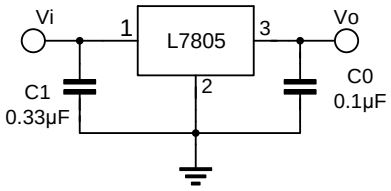


FIG.1 DC PARAMETERS

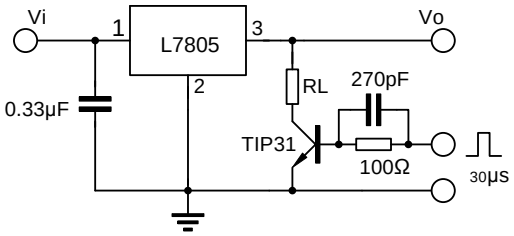


FIG.2 LOAD REGULATION

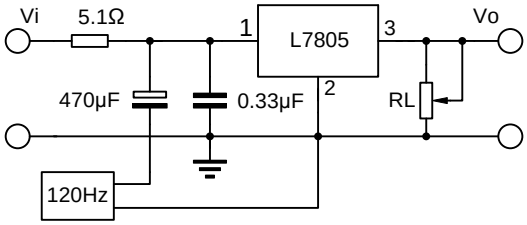
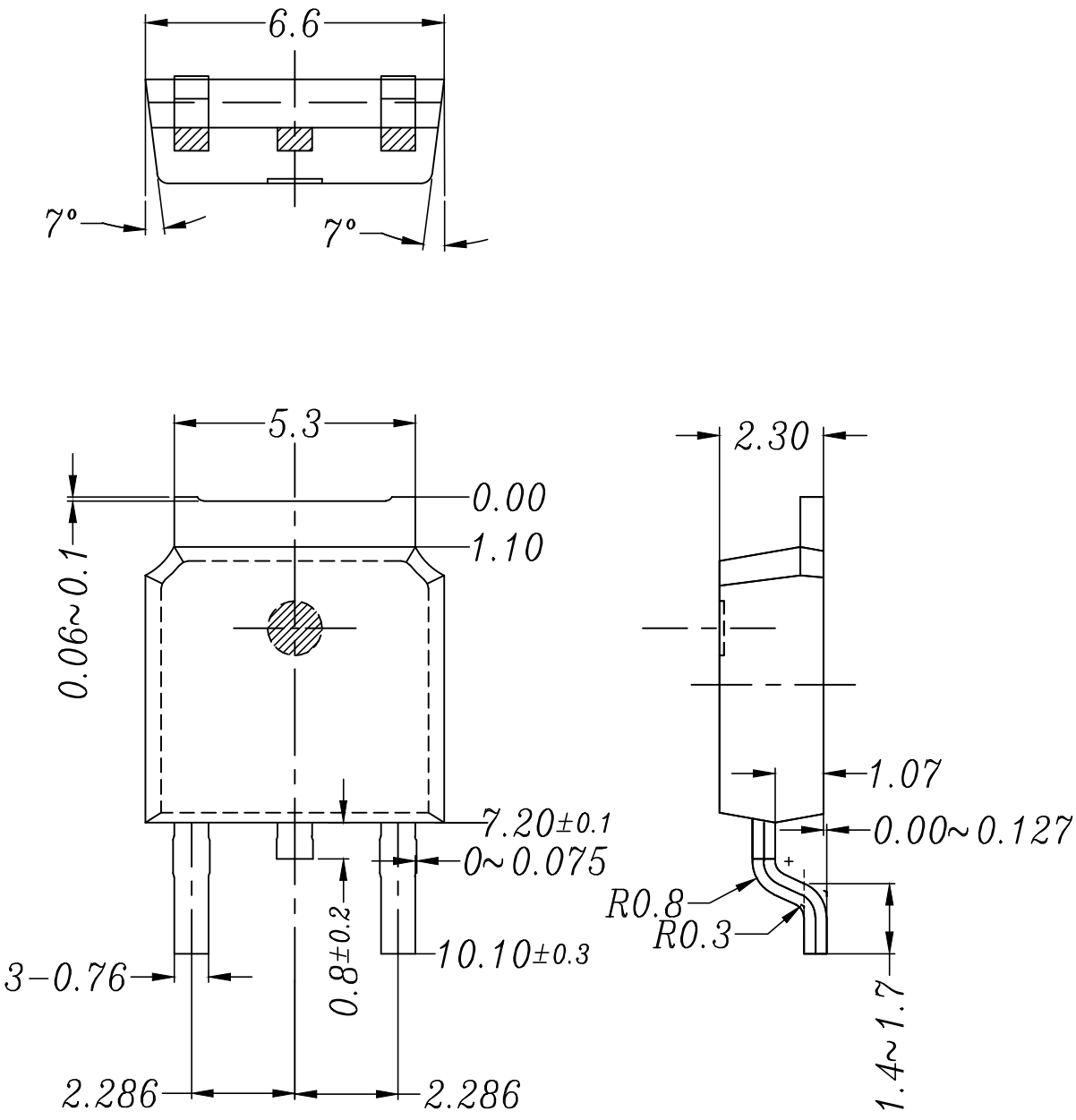


FIG.3 RIPPLE REJECTION

Package Outline Dimensions (Units: mm)



Package Outline Dimensions (Units: mm)

