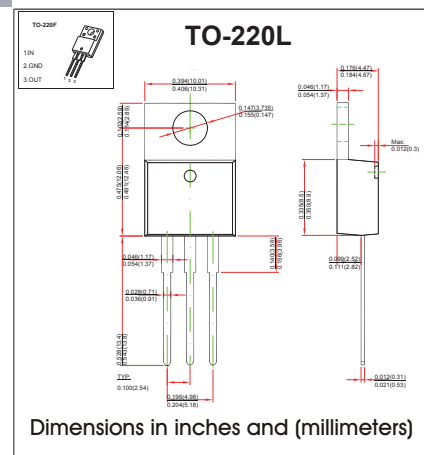# Three-terminal positive voltage regulator

FEATURES

- Maximum output current IOM:1.5 A
- Output voltage VO: 15 V
- Continuous total dissipation   PD:
1.5W（T a = 25 ℃）

MECHANICAL DAT

- Case: TO-220L Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any

TO-220L

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

| Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	66.7	℃/W
Operating Junction Temperature Range	T_{OPR}	-25~+125	℃
Storage Temperature Range	T_{STG}	-65~+150	℃

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JINCTION TEMPERATURE
(Vi=23V,Io=500mA,Ci=0.33 F, Co=0.1 F, unless otherwise specified)

Parameter	Symbol	Test conditions		MIN	TYP	MAX	UNIT
Output voltage	Vo		25℃	14.4	15	15.6	V
		17.5V≤V$_i$≤30V, Io=5mA-1A	−25−125℃	14.25	15	15.75	V
Load Regulation	△Vo	Io=5mA-1.5A	25℃		12	300	mV
		Io=250mA-750mA	25℃		4	150	mV
Line regulation	△Vo	17.5V≤V$_i$≤30V	25℃		12	300	mV
		20V≤V$_i$≤26V	25℃		3	150	mV
Quiescent Current	Iq		25℃		4.3	8	mA
Quiescent Current Change	△Iq	17.5V≤V$_i$≤30V	−25−125℃			1	mA
	△Iq	5mA≤I$_O$≤1A				0.5	mA
Output voltage drift	△Vo/△T	I$_O$=5mA	−25−125℃		-1		mV/℃
Output Noise Voltage	V_N	10Hz≤f≤100KHz	25℃		90		µV/Vo
Ripple Rejection	RR	18.5V≤V$_i$≤28.5V,f=120Hz	−25−125℃	54	70		dB
Dropout Voltage	Vd	Io=1A	25℃		2		V
Output resistance	R_O	f=1KH$_Z$	25℃		19		mΩ
Short Circuit Current	Isc		25℃		230		mA
Peak Current	Ipk		25℃		2.1		A

* Pulse test.

TYPICAL APPLICATION
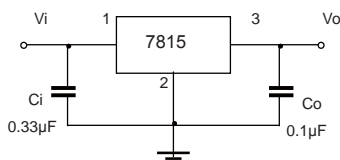
Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

TYPICAL APPLICATION

Output Characteristics

$I_O=0mA$
$T_j=25℃$

OUTPUT VOLTAGE V_O (V)

INPUT VOLTAGE V_{IN} (V)

Dropout Characteristics

$T_j=25℃$

OUTPUT VOLTAGE V_O (V)

I_O=0mA、250mA、500mA、750mA、1A、1.5A

INPUT VOLTAGE V_{IN} (V)

Quiescent Current vs Input Voltage

$I_O=0mA$
$T_j=25℃$

QUIESCENT CURRENT I_Q (mA)

INPUT VOLTAGE V_{IN} (V)

Current Cut-off Grid Voltage

$V_{IN}=23V$
$T_j=25℃$
Pulsed

OUTPUT VOLTAGE V_O (V)

OUTPUT CURRENT I_O (A)

Output Voltage vs Junction Temperature

$V_{in}=23V$
$I_O=5mA$

OUTPUT VOLTAGE V_O (V)

JUNCTION TEMPERATURE T_J (℃)

Power Derating Curve

POWER DISSIPATION P_D (W)

JUNCTION TEMPERATURE T_J (℃)