

Three-terminal positive voltage regulator

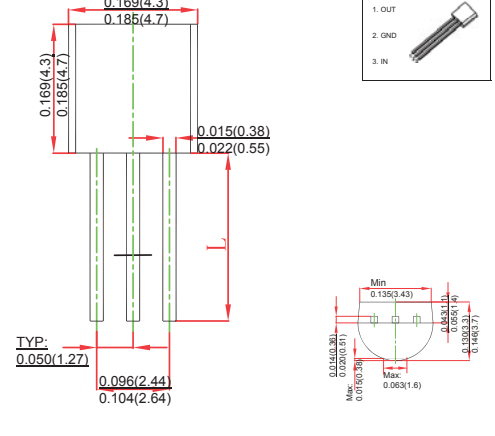
FEATURES

- Maximum output current I_{OM}: 0.1A
- Output voltage V_O: 12V
- Continuous total dissipation
P_D: 0.625 W (T_a= 25 °C)

MECHANICAL DATA

- Case: TO-92 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any

TO-92



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 _{θJA}	166.7	°C/W
Operating Junction Temperature Range	T _{OPR}	-25~+125	°C
Storage Temperature Range	T _{STG}	-65~+150	°C

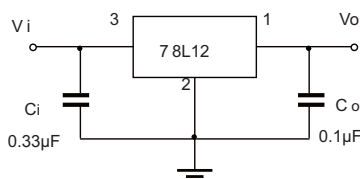
ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE

(V_i=19V, I_o=40mA, C_i=0.33μF, C_o=0.1μF, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Output voltage	V _o	25°C	11.5	12	12.5	V	
		0-125°C	14V ≤ V _i ≤ 27V, I _o = 1mA-40mA	11.4	12	12.6	V
			I _o = 1mA-70mA	11.4	12	12.6	V
Load Regulation	ΔV _o	I _o = 1mA-100mA	25°C	22	100	mV	
		I _o = 1mA-40mA	25°C	13	50	mV	
Line regulation	ΔV _o	14.5V ≤ V _i ≤ 27V	25°C	55	250	mV	
		16V ≤ V _i ≤ 27V	25°C	49	200	mV	
Quiescent Current	I _q	25°C		4.3	6.5	mA	
Quiescent Current Change	ΔI _q	16V ≤ V _i ≤ 27V	0-125°C		1.5	mA	
		1mA ≤ I _o ≤ 40mA	0-125°C		0.1	mA	
Output Noise Voltage	V _N	10Hz ≤ f ≤ 100KHz	25°C	70		μV/V _o	
Ripple Rejection	RR	15V ≤ V _i ≤ 25V, f = 120Hz	0-125°C	37	42	dB	
Dropout Voltage	V _d	25°C		1.7		V	

* Pulse test.

TYPICAL APPLICATION

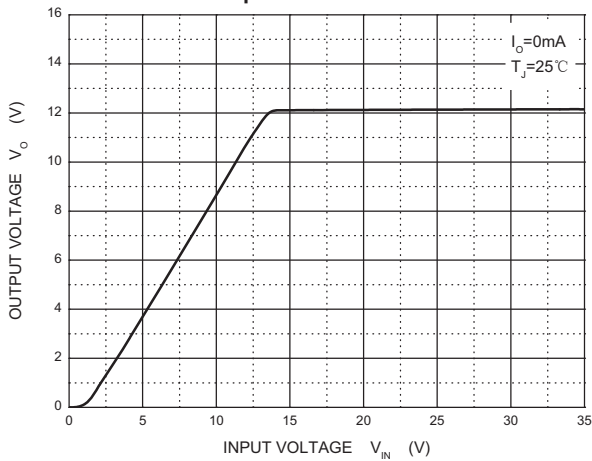


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

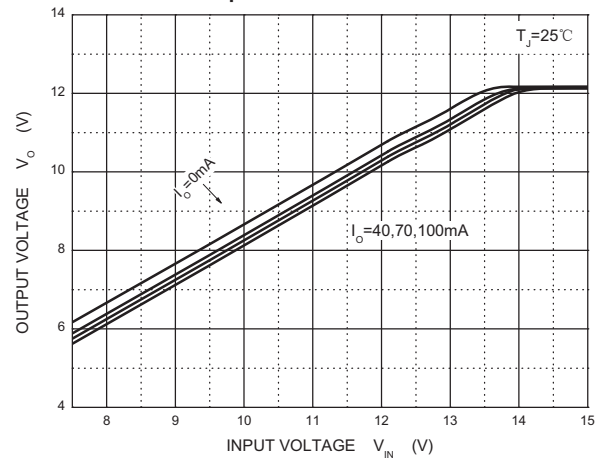
RATINGS AND CHARACTERISTIC CURVES

Typical Characteristics

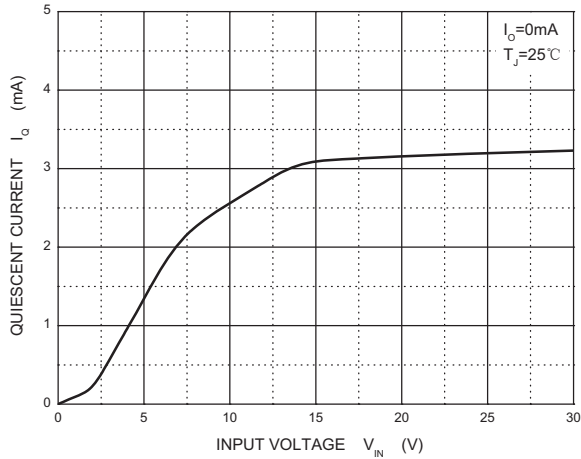
Output Characteristics



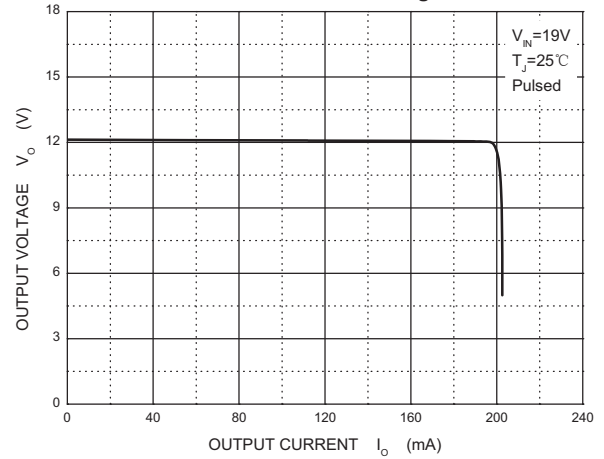
Dropout Characteristics



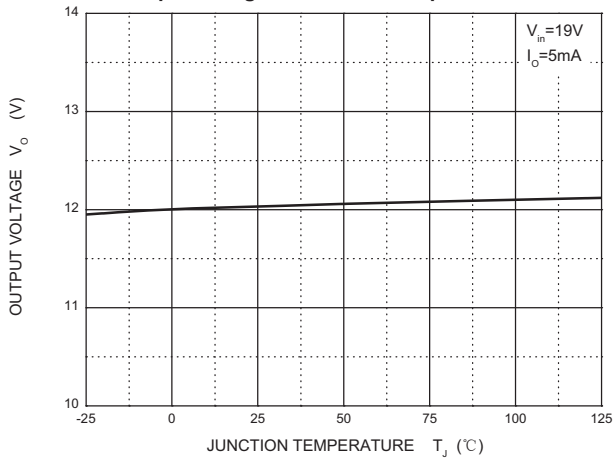
Quiescent Current



Current Cut-off Grid Voltage



Output Voltage vs Junction Temperature



Power Derating Curve

