

Three-terminal positive voltage regulator

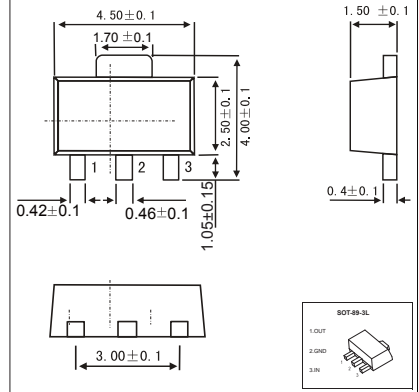
FEATURES

- Maximum output current I_{OM}: 0.1A
- Output voltage V_O: 12V
- Continuous total dissipation
P_D: 0.6 W (T_a = 25 °C)

MECHANICAL DATA

- Case: SOT-89 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any

SOT-89-3L



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

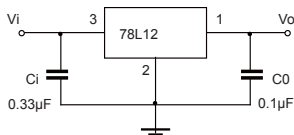
ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE

(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		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
	ΔI _q	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.

■ Typical Characteristics

