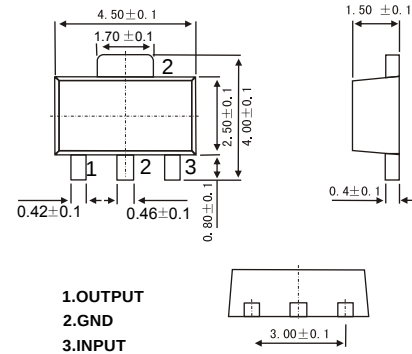


SOT-89

FEATURES

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

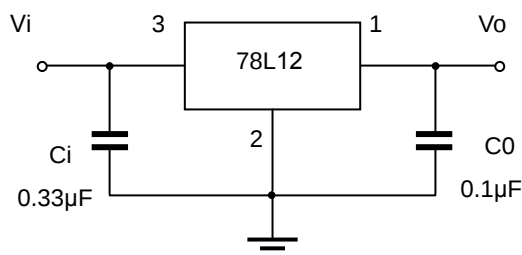

Dimensions In Millimeters
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	30	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	166.7	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_{OPR}	-40~+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($V_i=10\text{V}$, $I_o=40\text{mA}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, unless otherwise specified)

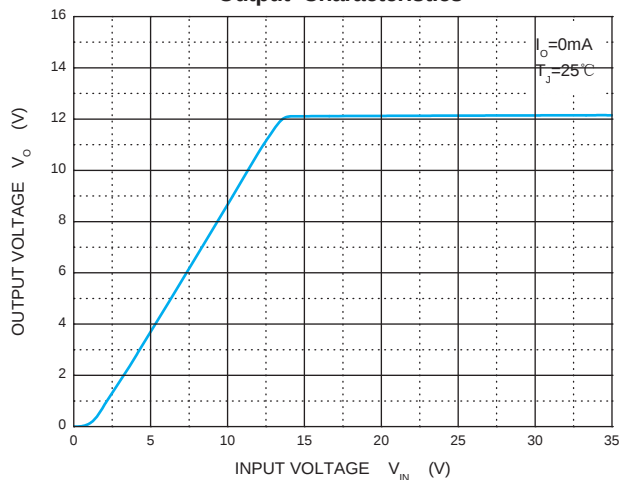
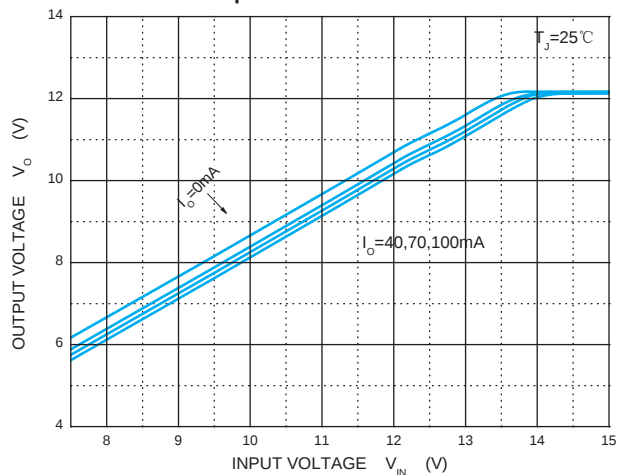
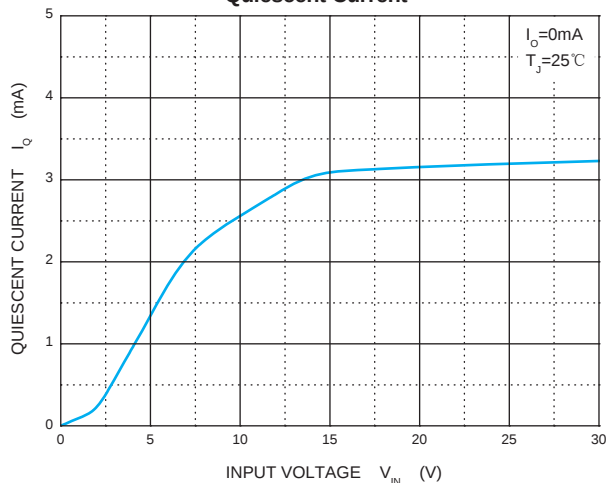
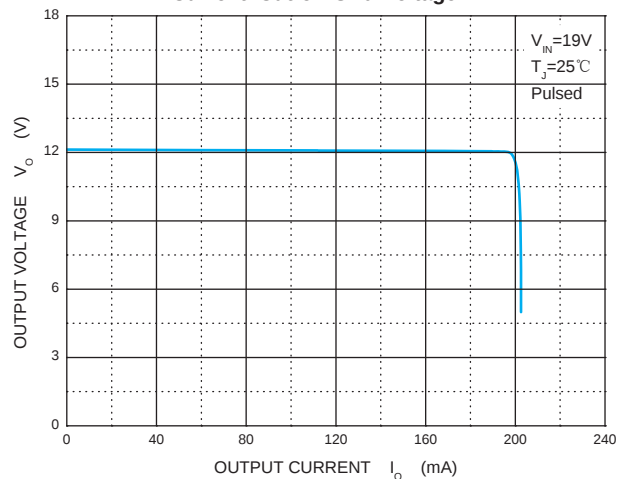
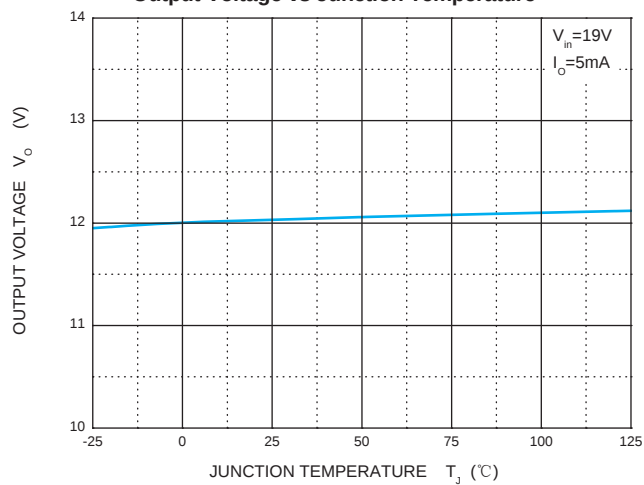
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	V_o	25°C	11.5	12	12.5	V
		$14\text{V} \leq V_i \leq 27\text{V}$, $I_o=1\text{mA}-40\text{mA}$	11.4	12	12.6	V
		$I_o=1\text{mA}-70\text{mA}$	11.4	12	12.6	V
Load Regulation	ΔV_o	$I_o=1\text{mA}-100\text{mA}$, 25°C		22	100	mV
		$I_o=1\text{mA}-40\text{mA}$, 25°C		13	50	mV
Line regulation	ΔV_o	$14.5\text{V} \leq V_i \leq 27\text{V}$, 25°C		55	250	mV
		$16\text{V} \leq V_i \leq 27\text{V}$, 25°C		49	200	mV
Quiescent Current	I_q	25°C		4.3	6.5	mA
Quiescent Current Change	ΔI_q	$16\text{V} \leq V_i \leq 27\text{V}$, $0-125^\circ\text{C}$			1.5	mA
	ΔI_q	$1\text{mA} \leq I_o \leq 40\text{mA}$, $0-125^\circ\text{C}$			0.1	mA
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$, 25°C		70		$\mu\text{V}/V_o$
Ripple Rejection	RR	$15\text{V} \leq V_i \leq 25\text{V}$, $f=120\text{Hz}$, $0-125^\circ\text{C}$	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

Typical Characteristics

Output Characteristics

Dropout Characteristics

Quiescent Current

Current Cut-off Grid Voltage

Output Voltage vs Junction Temperature

Power Derating Curve
