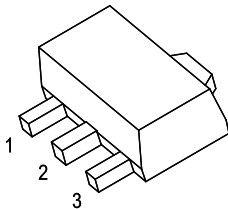


### FEATURES

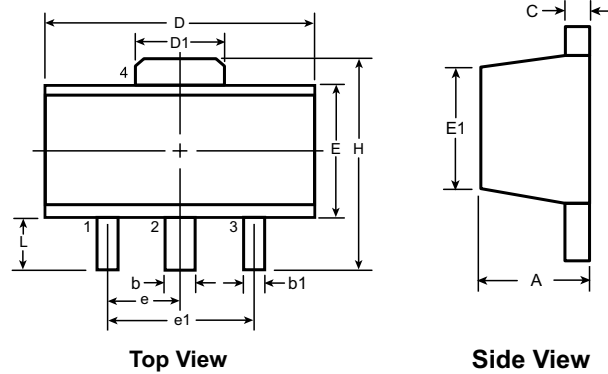
- Maximum Output current  
 $I_{OM}$ : 0.1 A
- Output voltage  
 $V_o$ : 12 V
- Continuous total dissipation  
 $P_D$ : 0.5W

### SOT-89-3L

- 1. OUT
- 2. GND
- 3. IN



### SOT-89 PACKAGE OUTLINE



Symbol	A	b	b1	C	D	D1	E	E1	e	e1	H	L
Dimensions (mm)	MIN	1.40	0.44	0.36	0.3	4.40	1.50	2.29	2.00'	1.50	3.94	0.89
	NOM	-	-	-	-	-	-	-	-	3.00	-	-
	MAX	1.60	0.56	0.48	0.5	4.60	1.75	2.60	2.29	BSC	4.25	1.20

Dimensions in mm

### ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

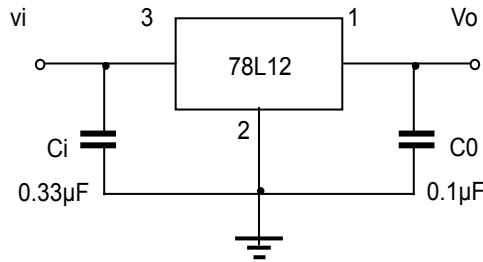
Parameter	Symbol	Value	Units
Input Voltage	$V_I$	35	V
Operating Junction Temperature Range	$T_{OPR}$	0~+150	°C
Storage Temperature Range	$T_{STG}$	-55~+150	°C

# 78L12

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ( $V_i=19V$ ,  $I_o=40mA$ ,  $C_i=0.33\mu F$ ,  $C_o=0.1\mu F$ , unless otherwise specified )

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT	
Output voltage	$V_o$		25°C	11.5	12	12.5	V
		$14V \leq V_i \leq 27V$ , $I_o=1mA-40mA$	0-125°C	11.4	12	12.6	V
		$I_o=1mA-70mA$		11.4	12	12.6	V
Load Regulation	$\Delta V_o$	$I_o=1mA-100mA$	25°C		22	100	mV
		$I_o=1mA-40mA$	25°C		13	50	mV
Line regulation	$\Delta V_o$	$14.5V \leq V_i \leq 27V$	25°C		55	250	mV
		$16V \leq V_i \leq 27V$	25°C		49	200	mV
Quiescent Current	$I_q$		25°C		4.3	6.5	mA
Quiescent Current Change	$\Delta I_q$	$16V \leq V_i \leq 27V$	0-125°C			1.5	mA
	$\Delta I_q$	$1mA \leq I_o \leq 40mA$	0-125°C			0.1	mA
Output Noise Voltage	$V_N$	$10Hz \leq f \leq 100KHz$	25°C		70		$\mu V$
Ripple Rejection	RR	$15V \leq V_i \leq 25V$ , $f=120Hz$	0-125°C	37	42		dB
Dropout Voltage	$V_d$		25°C		1.7		V

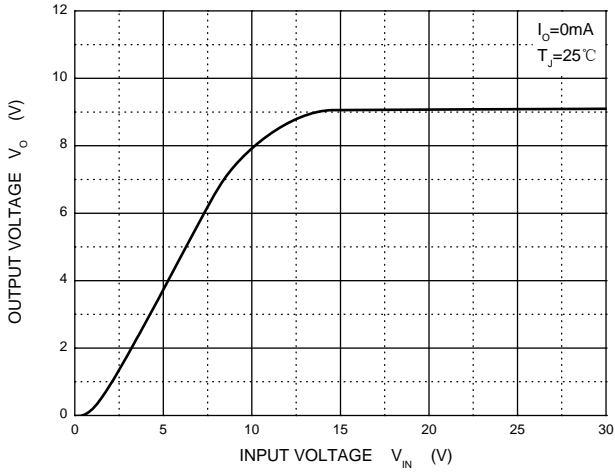
## TYPICAL APPLICATION



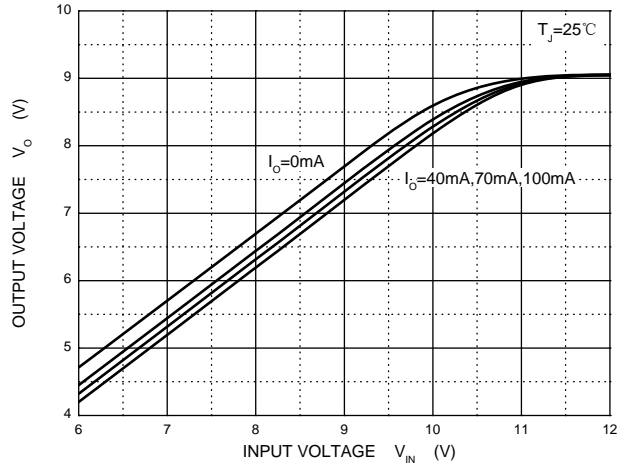
Note : Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

# RATING AND CHARACTERISTIC CURVES (78L12)

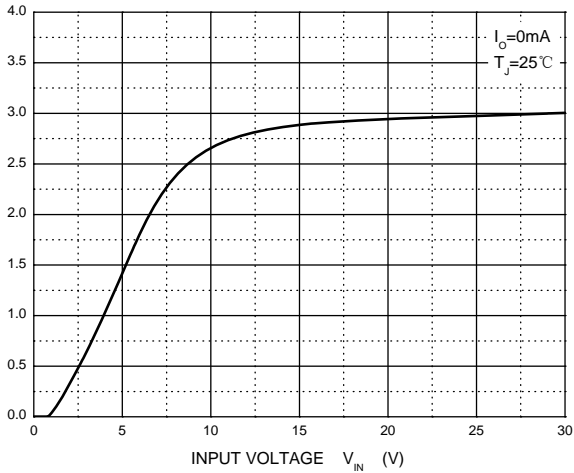
### Output Characteristics



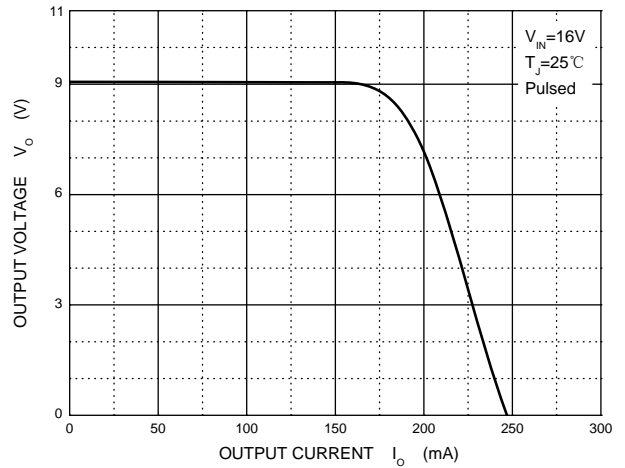
### Dropout Characteristics



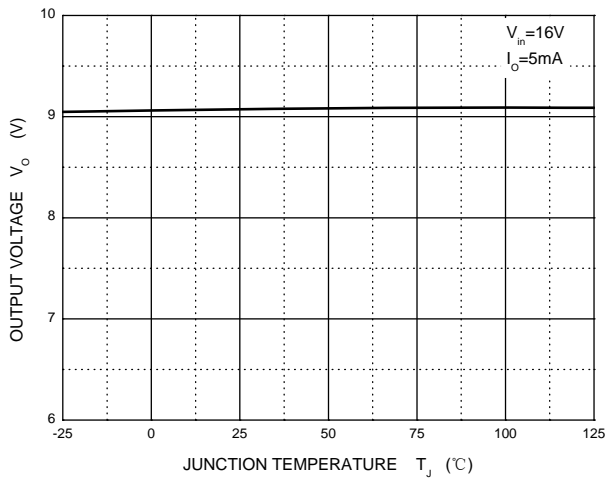
### Quiescent Current vs Input Voltage



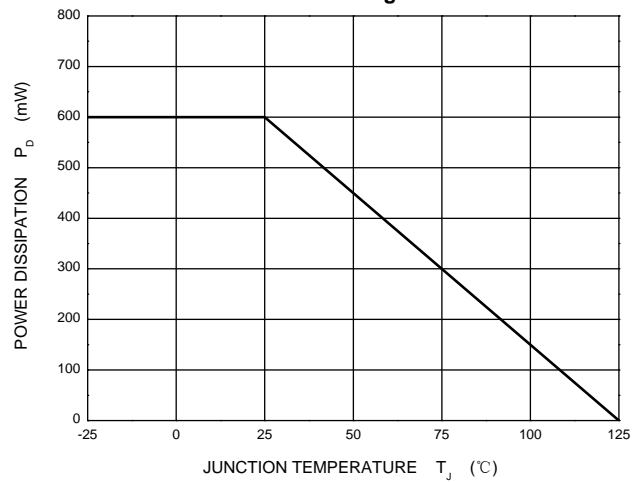
### Current Cut-off Grid Voltage



### Output Voltage vs Junction Temperature



### Power Derating Curve



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