



# TO-92 Plastic-Encapsulate Transistors

## 78L12

### FEATURES

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Maximum Output current

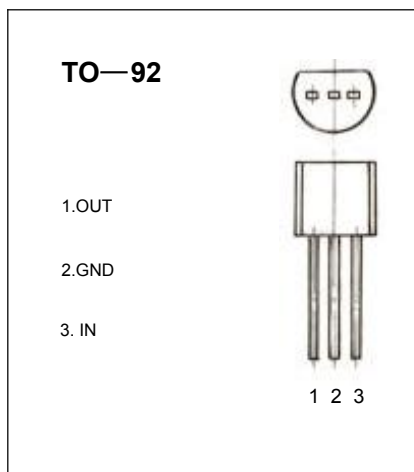
$I_{OM}$ : 0.1 A

Output voltage

$V_o$ : 12 V

Operating and storage junction temperature range

$T_J, T_{stg}$ : -55°C to +150°C



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

Parameter	Symbol	Value	Units
Input Voltage	$V_i$	35	V
Operating Junction Temperature Range	$T_{OPR}$	-40~125	°C
Storage Temperature Range	$T_{STG}$	-65~150	°C

ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	$V_o$	$I_o=40\text{mA}$ $T_j=25^\circ\text{C}$	11.5	12	12.5	V
Output voltage	$V_o$	$14\text{V} \leq V_i \leq 27\text{V}$ , $I_o=1\text{mA} \sim 40\text{mA}$	11.4	12	12.6	V
Output voltage	$V_o$	$19\text{V} \leq V_i \leq V_{MAX}$ , $I_o=1\text{mA} \sim 70\text{mA}$	11.4	12	12.6	V
Load Regulation	$\Delta V_o$	$T_j=25^\circ\text{C}$ , $I_o=1\text{mA} \sim 100\text{mA}$		22	100	mV
Load Regulation	$\Delta V_o$	$T_j=25^\circ\text{C}$ , $I_o=1\text{mA} \sim 40\text{mA}$		13	50	mV
Line regulation	$\Delta V_o$	$14.5\text{V} \leq V_i \leq 27\text{V}$ , $T_j=25^\circ\text{C}$		55	250	mV
Line regulation	$\Delta V_o$	$16\text{V} \leq V_i \leq 27\text{V}$ , $T_j=25^\circ\text{C}$		49	200	mV
Quiescent Current Change	$\Delta I_q$	$16\text{V} \leq V_i \leq 27\text{V}$			1.5	mA
Quiescent Current Change	$\Delta I_q$	$1\text{mA} \leq V_i \leq 40\text{mA}$			0.1	mA
Output Noise Voltage	$V_N$	$10\text{Hz} \leq f \leq 100\text{KHz}$		70		uV
Ripple Rejection	RR	$15\text{V} \leq V_i \leq 25\text{V}$ , $f=120\text{Hz}$ , $T_j=25^\circ\text{C}$	37	42		dB
Dropout Voltage	$V_d$	$T_j=25^\circ\text{C}$		1.7		V

