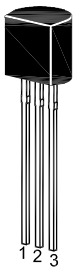
ST 78L12

3-Terminal positive voltage regulator

Features

- Internal short-circuit current limiting
- Internal thermal overload protection
- Maximum output current of 100 mA (T_j = 25°C)



1. Output 2. Common 3. Input
TO-92 Plastic Package

Absolute Maximum Ratings (T_a = 25°C)

Parameter	Symbol	Value	Unit
Input Voltage	V_{IN}	35	V
Power Dissipation	P_{tot}	800	mW
Operating Temperature	T_{opr}	- 30 to + 75	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

Electrical Characteristics (Unless otherwise specified, V_{IN} = 19 V, I_{OUT} = 40 mA, C_{IN} = 0.33 µF, C_{OUT} = 0.1 µF, T_j = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Output Voltage	V_{OUT}	11.5	12	12.5	V
Input Regulation 14.5 V ≤ V_{IN} ≤ 27 V 16 V ≤ V_{IN} ≤ 27 V	Reg. line	 - -	 120 100	 250 200	mV
Load Regulation 1 mA ≤ I_{OUT} ≤ 100 mA 1 mA ≤ I_{OUT} ≤ 40 mA	Reg. load	 - -	 20 10	 100 50	mV
Output Voltage 14.5 V ≤ V_{IN} ≤ 27 V 1 mA ≤ I_{OUT} ≤ 40 mA	V_{OUT}	11.4	-	12.6	V
Output Voltage V_{IN} = 19 V 1 mA ≤ I_{OUT} ≤ 70 mA	V_{OUT}	11.4	-	12.6	V
Quiescent Current	I_B	-	3.2	6.5	mA
Quiescent Current Change 16 V ≤ V_{IN} ≤ 27 V With line 1 mA ≤ I_{OUT} ≤ 40 mA With load	ΔI_B	 - -	 - -	 1.5 0.1	mA
Output Noise Voltage at T_a = 25°C, 10 Hz ≤ f ≤ 100 KHz	V_{NO}	-	80	-	µV
Ripple Rejection at f = 120 Hz, 15 V ≤ V_{IN} ≤ 25 V, T_j = 25°C	RR	36	41	-	dB
Dropout Voltage at T_j = 25°C	$\lvert V_{IN}-V_{OUT} \rvert$	-	1.7	-	V
Average Temperature Coefficient of Output Voltage at I_{OUT} = 5 mA	TC_{VO}	-	1	-	mV/°C