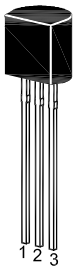
ST 78L07

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} = 12 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}	6.72	7	7.28	V
Input Regulation 9.2 V ≤ V_{IN} ≤ 22 V 10 V ≤ V_{IN} ≤ 22 V		Reg. line	- -	50 45	160 115	mV
Load Regulation 1 mA ≤ I_{OUT} ≤ 100 mA 1 mA ≤ I_{OUT} ≤ 40 mA		Reg. load	- -	13 56	75 40	mV
Output Voltage 9.2 V ≤ V_{IN} ≤ 22 V 1 mA ≤ I_{OUT} ≤ 40 mA		V_{OUT}	6.65	-	7.35	V
Output Voltage V_{IN} = 12 V 1 mA ≤ I_{OUT} ≤ 70 mA		V_{OUT}	6.65	-	7.35	V
Quiescent Current		I_B	-	3.1	6.5	mA
Quiescent Current Change 10 V ≤ V_{IN} ≤ 22 V 1 mA ≤ I_{OUT} ≤ 40 mA	With line With load	ΔI_B	- -	- -	1.5 0.1	mA
Output Noise Voltage at T_a = 25°C, 10 Hz ≤ f ≤ 100 KHz		V_{NO}	-	50	-	µV
Ripple Rejection at f = 120 Hz, 10 V ≤ V_{IN} ≤ 20 V, T_j = 25°C		RR	37	46	-	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}	-	-0.75	-	mV/°C

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