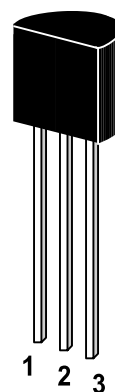


# ST 78L08

3-Terminal positive voltage regulator

8V

- Suitable for TTL, DTL, HTL, C-MOS, Power Supply
- Internal Short-Circuit Current Limiting
- Internal Thermal Overload Protection
- Maximum Output Current of 150mA ( $T_j=25^{\circ}\text{C}$ )
- Available in the Plastic TO-92 Package



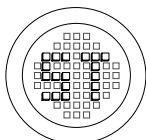
1. Output 2. Common 3. Input

TO-92 Plastic Package  
Weight approx. 0.19g

Absolute Maximum Ratings ( $T_a = 25^{\circ}\text{C}$ )

	Symbol	Rating	Unit
Input Voltage	$V_{IN}$	35	V
Power Dissipation	$P_{tot}$	800	mW
Operating Temperature	$T_{opr}$	-30~75	$^{\circ}\text{C}$
Storage Temperature Range	$T_s$	-55~150	$^{\circ}\text{C}$

G S P FORM A IS AVAILABLE



®

**РАДИОТЕХ**

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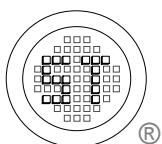
# ST 78L08

## Electrical Characteristics

(Unless otherwise specified,  $V_{IN}=14V$ ,  $I_{OUT}=40mA$ ,  $C_{IN}=0.33\mu F$ ,  $C_{OUT}=0.1\mu F$ ,  $T_J=25^\circ C$ )

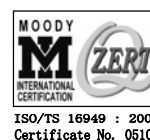
	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output Voltage	$V_{OUT}$		7.7	8	8.3	V
Input Regulation	Reg. line	$10.5V \leq V_{IN} \leq 23V$	-	20	175	mV
		$11V \leq V_{IN} \leq 23V$	-	12	125	
Load Regulation	Reg. load	$1.0mA \leq I_{OUT} \leq 100mA$	-	15	80	mV
		$1.0mA \leq I_{OUT} \leq 40mA$	-	7	40	
Output Voltage	$V_{OUT}$	$10.5V \leq V_{IN} \leq 23V$ $1.0mA \leq I_{OUT} \leq 40mA$	7.6	-	8.4	V
	$V_{OUT}$	$V_{IN}=14V$ $1.0mA \leq I_{OUT} \leq 70mA$	7.6	-	8.4	V
Quiescent Current	$I_B$		-	3.1	6.5	mA
Quiescent Current Change	With line	$\Delta I_B$				mA
	With load					
		$11V \leq V_{IN} \leq 23V$	-	-	1.5	
		$1.0mA \leq I_{OUT} \leq 40mA$	-	-	0.1	
Output Noise Voltage	$V_{NO}$	$T_a=25^\circ C$ , $10Hz \leq f \leq 100KHz$	-	60	-	$\mu V$
Ripple Rejection	RR	$f=120Hz$ , $12V \leq V_{IN} \leq 23V, T_J=25^\circ C$	37	45	-	dB
Dropout Voltage	$ V_{IN}-V_{OUT} $	$T_J=25^\circ C$	-	1.7	-	V
Average Temperature Coefficient of Output Voltage	$TC_{VO}$	$I_{OUT}=5mA$	-	-0.8	-	$mV/^\circ C$

**G S P FORM A IS AVAILABLE**



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Semtech International Holdings Limited, acompany listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001  
Certificate No. 7116



ISO 9001 : 2000  
Certificate No. 000-199-01-002-001

Dated : 07/12/2002