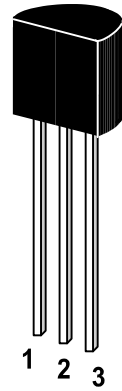


# 78L10

## 3-Terminal positive voltage regulator

10V

- 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**

# 78L10

## Electrical Characteristics

(Unless otherwise specified,  $V_{IN}=16V$ ,  $I_{OUT}=40mA$ ,  $C_{IN}=0.33\mu F$ ,  $C_{OUT}=0.1\mu F$ ,  $T_j=25^\circ C$ )

		Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output Voltage		$V_{OUT}$		9.6	10	10.4	V
Input Regulation		Reg. line	$12.5V \leq V_{IN} \leq 25V$	-	80	230	mV
			$13V \leq V_{IN} \leq 25V$	-	30	170	
Load Regulation		Reg. load	$1.0mA \leq I_{OUT} \leq 100mA$	-	18	90	mV
			$1.0mA \leq I_{OUT} \leq 40mA$	-	8.5	45	
Output Voltage		$V_{OUT}$	$12.5V \leq V_{IN} \leq 25V$ $1.0mA \leq I_{OUT} \leq 40mA$	9.5	-	10.5	V
		$V_{OUT}$	$V_{IN}=16V$ $1.0mA \leq I_{OUT} \leq 70mA$	9.5	-	10.5	V
Quiescent Current		$I_B$		-	3.2	6.5	mA
Quiescent Current Change	With line	$\Delta I_B$	$13V \leq V_{IN} \leq 25V$	-	-	1.5	mA
	With load		$1.0mA \leq I_{OUT} \leq 40mA$	-	-	0.1	
Output Noise Voltage		$V_{NO}$	$T_a=25^\circ C$ , $10Hz \leq f \leq 100KHz$	-	70	-	$\mu V$
Ripple Rejection		RR	$f=120Hz$ , $13V \leq V_{IN} \leq 24V, T_j=25^\circ C$	36	43	-	dB
Dropout Voltage		$ V_{IN}-V_{OUT} $	$T_j=25^\circ C$	-	1.7	-	V
Average Temperature Coefficient of Output Voltage		$TC_{VO}$	$I_{OUT}=5mA$	-	-0.9	-	mV/ $^\circ C$

**G S P FORM A IS AVAILABLE**