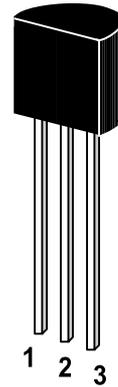


# ST 78L05

3-Terminal positive voltage regulator

5V

- 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



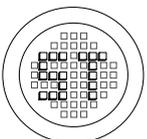
1. Output 2. Common 3. Input

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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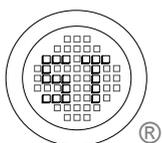
# ST 78L05

## Electrical Characteristics

(Unless otherwise specified,  $V_{IN}=10V$ ,  $I_{OUT}=40mA$ ,  $C_{IN}=0.33\mu F$ ,  $C_{OUT}=0.1\mu F$ ,  $T_j=25^\circ C$ )

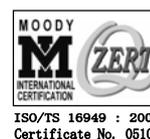
		Symbol	Test Condition	Min	Typ	Max	Unit
Output Voltage		$V_{OUT}$		4.8	5.0	5.2	V
Input Regulation		Reg. line	$7.0V \leq V_{IN} \leq 20V$	-	55	150	mV
			$8.0V \leq V_{IN} \leq 20V$	-	45	100	
Load Regulation		Reg. load	$1.0mA \leq I_{OUT} \leq 100mA$	-	11	60	mV
			$1.0mA \leq I_{OUT} \leq 40mA$	-	5.0	30	
Output Voltage		$V_{OUT}$	$7.0V \leq V_{IN} \leq 20V$ $1.0mA \leq I_{OUT} \leq 40mA$	4.75	-	5.25	V
			$V_{IN}=10V$ $1.0mA \leq I_{OUT} \leq 70mA$	4.75	-	5.25	V
Quiescent Current		$I_B$		-	3.1	6	mA
Quiescent Current Change	With line	$\Delta I_B$	$8.0V \leq V_{IN} \leq 20V$	-	-	1.5	mA
	With load		$1.0mA \leq I_{OUT} \leq 40mA$	-	-	0.1	
Output Noise Voltage		$V_{NO}$	$T_a=25^\circ C$ , $10Hz \leq f \leq 100KHz$	-	40	-	$\mu V$
Ripple Rejection		RR	$f=120Hz$ , $8.0V \leq V_{IN} \leq 18V, T_j=25^\circ C$	41	49	-	dB
Dropout Voltage		$ V_{IN}-V_{OUT} $	$T_j=25^\circ C$	-	1.7	-	V
Average Temperature Coefficient of Output Voltage		$TC_{VO}$	$I_{OUT}=5mA$	-	-0.6	-	$mV/^\circ C$

**G S P FORM A IS AVAILABLE**



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Semtech International Holdings Limited, a company 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. 000-1999-01-002-001

Dated : 07/12/2002