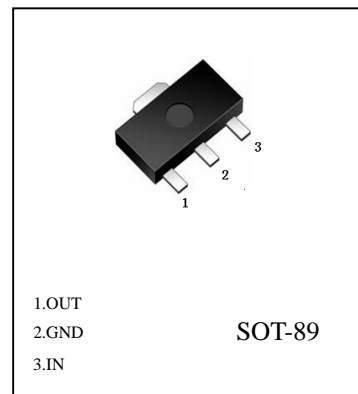


**FEATURES**

 Maximum Output current  $I_O$ : 0.1 A

 Output voltage  $V_O$ : 5 V

 Continuous total dissipation  $P_D$ : 0.5W ( $T_a=25^\circ\text{C}$ )

**78L05**

**ABSOLUTE MAXIMUM RATINGS** (Operating temperature range applies)

Parameter	Symbol	Value	Unit
Input Voltage	$V_I$	30	V
Operating Junction Temperature Range	$T_{OPR}$	0-125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65-150	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS** ( $V_i=10\text{V}$ ,  $I_o=40\text{mA}$ ,  $C_i=0.33\mu\text{F}$ ,  $C_o=0.1\mu\text{F}$ , unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Output voltage	$V_o$	$25^\circ\text{C}$	4.8	5.0	5.2	V	
		0-125 $^\circ\text{C}$	7V $V_i$ 20V, $I_o=1\text{mA}\sim 40\text{mA}$	4.75	5.0	5.25	V
			$I_o=1\text{mA}\sim 70\text{mA}$	4.75	5.0	5.25	V
Load Regulation	$V_o$	$I_o=1\text{mA}\sim 100\text{mA}$	$25^\circ\text{C}$	15	60	mV	
		$I_o=1\text{mA}\sim 40\text{mA}$	$25^\circ\text{C}$	8	30	mV	
Line regulation	$V_o$	7V $V_i$ 20V		32	150	mV	
		8V $V_i$ 20V	$25^\circ\text{C}$	26	100	mV	
Quiescent Current	$I_q$		$25^\circ\text{C}$	3.8	6	mA	
Quiescent Current Change	$I_q$	8V $V_i$ 20V	0-125 $^\circ\text{C}$		1.5	mA	
	$I_q$	1mA $V_i$ 40mA	0-125 $^\circ\text{C}$		0.1	mA	
Output Noise Voltage	$V_N$	10Hz f 100KHz	$25^\circ\text{C}$	42		$\mu\text{V}$	
Ripple Rejection	RR	8V $V_i$ 20V, $f=120\text{Hz}$	0-125 $^\circ\text{C}$	41	49	dB	
Dropout Voltage	$V_d$		$25^\circ\text{C}$	1.7		V	

**78L05 Typical Performance Characteristics**

