

FEATURES

Maximum Output current I_O : 0.1 A

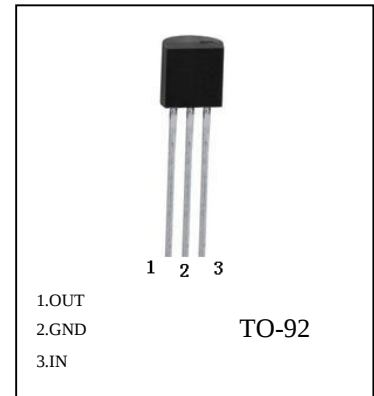
Output voltage V_O : 9V

Continuous total dissipation P_D : 0.625 W ($T_a=25^\circ\text{C}$)

ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies)

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

78L09



ELECTRICAL CHARACTERISTICS ($V_i=10\text{V}$, $I_o=500\text{mA}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	V_O	25°C	8.64	9.0	9.36	V
		$12\text{V} \leq V_i \leq 24\text{V}$, $I_o=1\text{mA}-40\text{mA}$	8.55	9.0	9.45	V
		$I_o=1\text{mA}-70\text{mA}$	8.55	9.0	9.45	V
Load Regulation	ΔV_O	$I_o=1\text{mA}-100\text{mA}$, 25°C		19	90	mV
		$I_o=1\text{mA}-40\text{mA}$, 25°C		11	40	mV
Line regulation	ΔV_O	$12\text{V} \leq V_i \leq 24\text{V}$, 25°C		45	175	mV
		$13\text{V} \leq V_i \leq 24\text{V}$, 25°C		40	125	mV
Quiescent Current	I_q	25°C		4.1	6.0	mA
Quiescent Current Change	ΔI_q	$13\text{V} \leq V_i \leq 24\text{V}$, $0-125^\circ\text{C}$			1.5	mA
	ΔI_q	$1\text{mA} \leq I_o \leq 40\text{mA}$, $0-125^\circ\text{C}$			0.1	mA
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$, 25°C		58		μV
Ripple Rejection	RR	$15\text{V} \leq V_i \leq 25\text{V}$, $f=120\text{Hz}$, $0-125^\circ\text{C}$		45		dB
Dropout Voltage	V_d	25°C		1.7		V

78L09 Typical Characteristics

