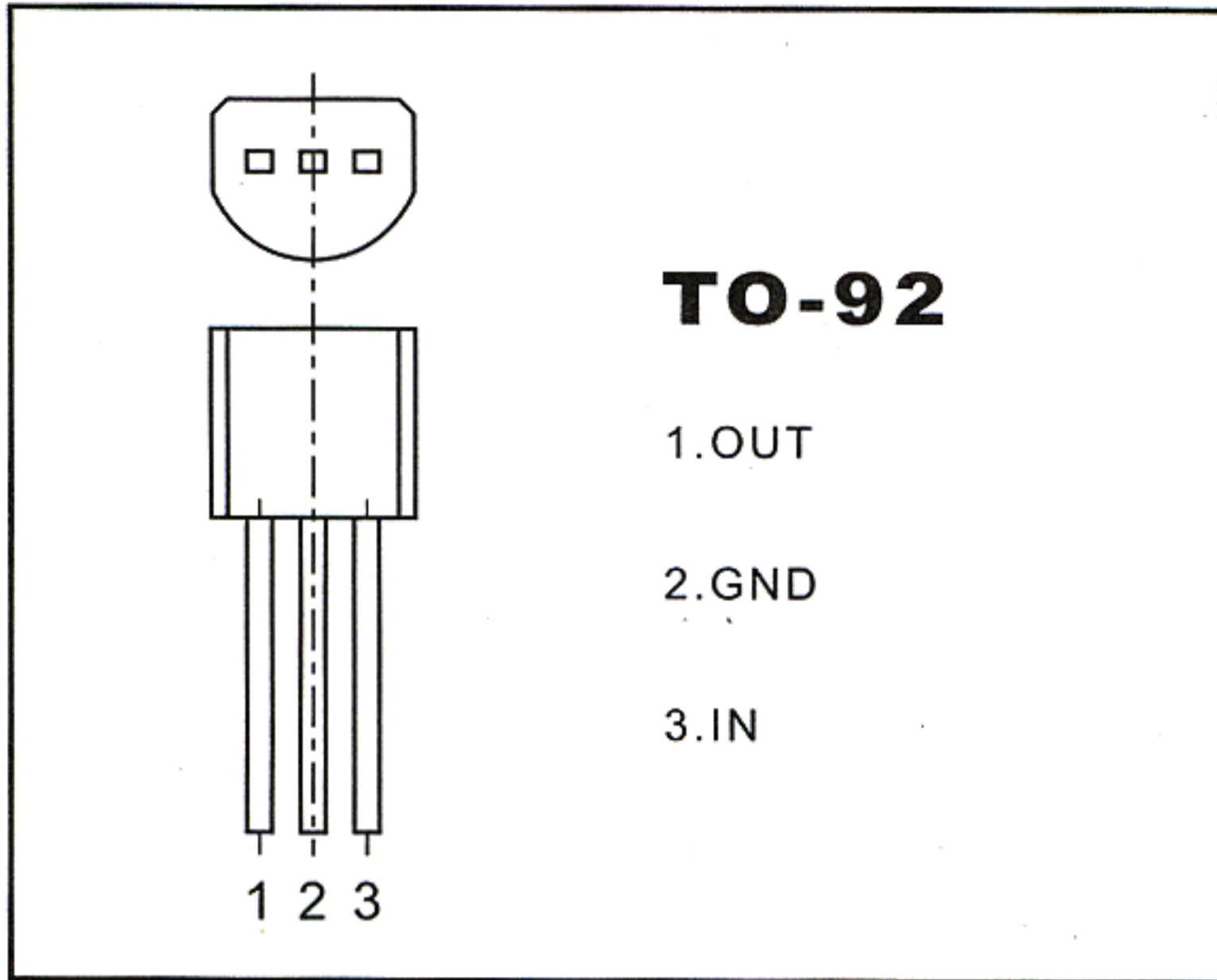


Three-Terminal Low Current Voltage Regulators

CJ78L09 Three-terminal positive voltage regulator



FEATURES

Maximum Output current

I_{OM} : 0.1 A

Output voltage

V_o : 9 V

ABSOLUTE MAXIMUM RATINGS

(Operating temperature range applies unless otherwise specified)

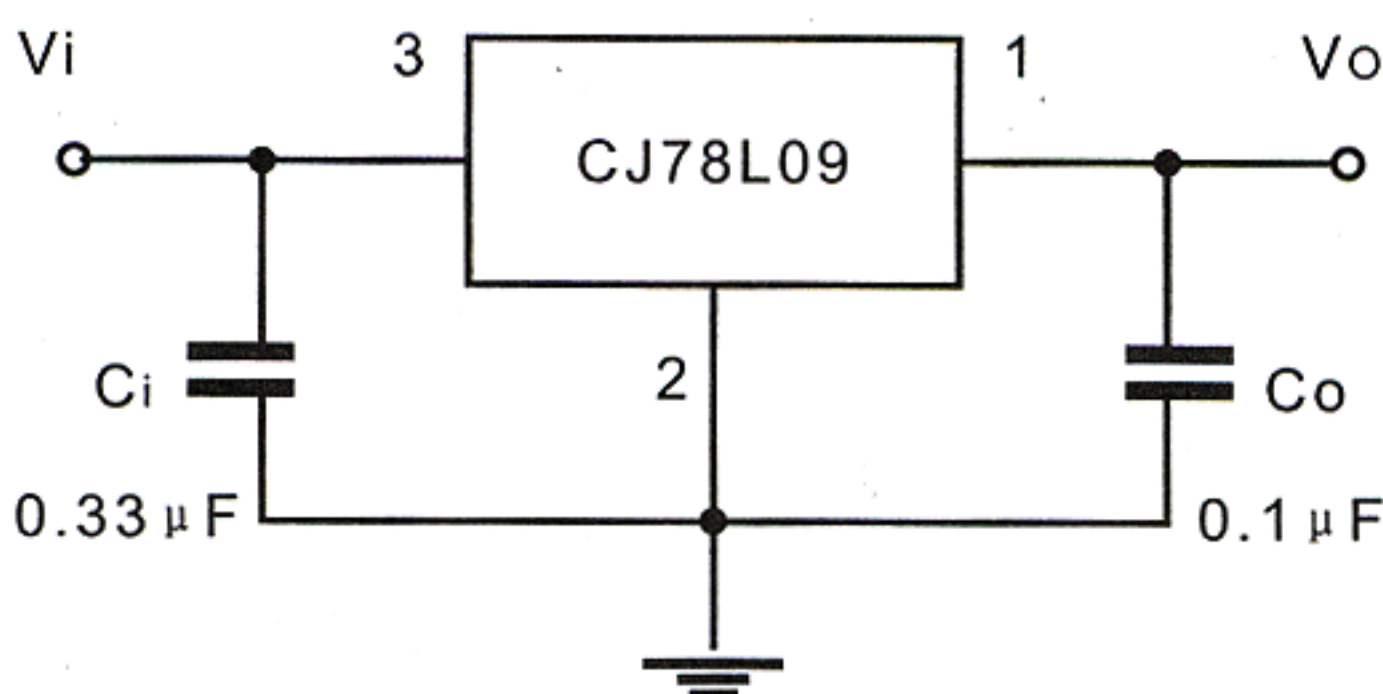
Parameter	Symbol	Value	Units
Input voltage	V_i	30	V
Operating junction temperature range	T_{opr}	-20-+120	°C
Storage temperature range	T_{stg}	-55-+150	°C

UTC78L05 ELECTRICAL CHARACTERISTICS

($V_i=15V$, $I_o=40mA$, $0^\circ C < T_j < 125^\circ C$, $C_1=0.33 \mu F$, $C_o=0.1 \mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$T_j=25^\circ C$	8.64	9.0	9.36	V
		$11.5V \leq V_i \leq 24V$, $I_o=1mA \sim 40mA$	8.55		9.45	V
		$11.5V \leq V_i \leq V_{MAX}$, $I_o=1mA \sim 70mA$	8.55		9.45	V(note)
Load regulation	ΔV_o	$T_j=25^\circ C$, $I_o=1mA \sim 100mA$		20	90	mV
		$T_j=25^\circ C$, $I_o=1mA \sim 40mA$		10	45	mV
Line regulation	ΔV_o	$11.5V \leq V_i \leq 24V$, $T_j=25^\circ C$		90	200	mV
		$13V \leq V_i \leq 24V$, $T_j=25^\circ C$		100	150	mV
Quiescent current	I_q			2.0	6.0	mA
Quiescent current change	ΔI_q	$13V \leq V_i \leq 24V$			1.5	mA
		$1mA \leq I_o \leq 40mA$			0.1	mA
Output noise voltage	V_N	$10Hz \leq f \leq 100KHz$		49		μV
Ripple rejection	RR	$12V \leq V_i \leq 23V$, $f=120Hz$, $T_j=25^\circ C$	38	44		dB
Dropout voltage	V_d	$T_j=25^\circ C$		1.7		V

TYPICAL APPLICATION



Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.