



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOT-23-3L Encapsulate Three Terminal Voltage Regulator**CJ78L09** Three-terminal positive voltage regulator**FEATURES**

Maximum Output current

 I_{OM} : 0.1 A

Output voltage

 V_O : 9 V

Operating and storage junction temperature range

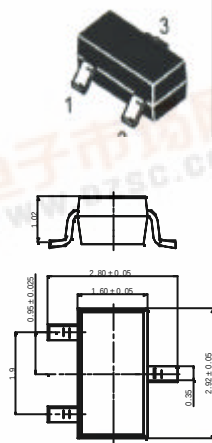
 T_J, T_{stg} : -55 to +150

SOT-23-3L

1. OUT

2. IN

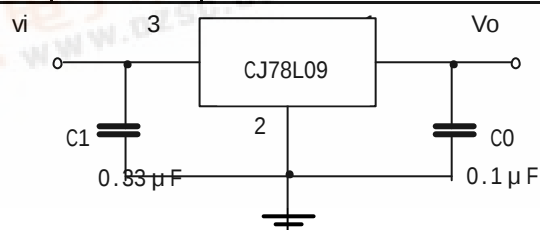
3. GND

**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}	0—+125	
Storage Temperature Range	T_{STG}	-55—+150	

ELECTRICAL CHARACTERISTICS ($V_I=15V, I_O=40mA, 0 < T_J < 125^\circ C, C_1=0.33 \mu F, C_O=0.1 \mu F$, 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
		$7V \leq V_I \leq 20V, I_O=1mA-40mA$	8.55	9.0	9.45	V
		$7V \leq V_I \leq V_{MAX}, I_O=1mA-70mA$	8.55	9.0	9.45	V (note)
Load Regulation	V_O	$T_J=25^\circ C, I_O=1mA-100mA$		19	90	mV
		$T_J=25^\circ C, I_O=1mA-40mA$		11	40	mV
Line regulation	V_O	$12V \leq V_I \leq 24V, T_J=25^\circ C$		45	175	mV
		$13V \leq V_I \leq 24V, T_J=25^\circ C$		40	125	mV
Quiescent Current	I_q			4.1	6.0	mA
Quiescent Current Change	I_q	$8V \leq V_I \leq 20V$			1.5	mA
	I_q	$1mA \leq V_I \leq 40mA$			0.1	mA
Output Noise Voltage	V_n	$10Hz \leq f \leq 100KHz$		58		μV
Ripple Rejection	RR	$15V \leq V_I \leq 25V, f=120Hz, T_J=25^\circ C$		45		dB
Dropout Voltage	V_d	$T_J=25^\circ C$		1.7		V

TYPICAL APPLICATION

Note 1: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators

