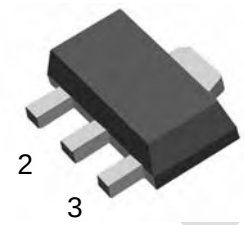
WEJ78L09 Three-terminal positive voltage regulator

SOT-89

1. OUT
2. GND
3. IN



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)

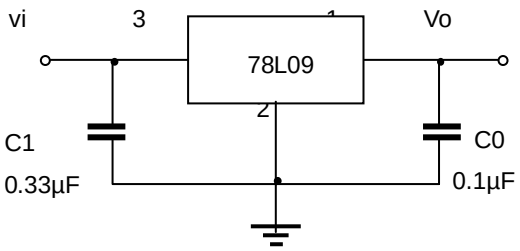
Parameter	Symbol	Value	Units
Input Voltage	V_I	30	V
Operating Junction Temperature Range	T_{OPR}	0~+125	℃
Storage Temperature Range	T_{STG}	-55~+150	℃

ELECTRICAL CHARACTERISTICS

(VI=15V,Io=40mA,0℃<Tj<125℃,C1=0.33μF,Co=0.1μF, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	Vo	Tj=25℃	8.64	9.0	9.36	V
		12V≤V_I≤24V, Io=1mA~40mA	8.55	9.0	9.45	V
		11.5V≤V_I≤V_{MAX}, Io=1mA~70mA	8.55	9.0	9.45	V (note)
Load Regulation	ΔVo	Tj=25℃, Io=1mA~100mA		19	90	mV
		Tj=25℃, Io=1mA~40mA		11	40	mV
Line regulation	ΔVo	12V≤V_I≤24V, Tj=25℃		45	175	mV
		13V≤V_I≤24V, Tj=25℃		40	125	mV
Quiescent Current	Iq			4.1	6.0	mA
Quiescent Current Change	ΔIq	8V≤V_I≤20V			1.5	mA
	ΔIq	1mA≤I_O≤40mA			0.1	mA
Output Noise Voltage	V_N	10Hz≤f≤100KHz		58		uV
Ripple Rejection	RR	15V≤V_I≤25V,f=120Hz,Tj=25℃		45		dB
Dropout Voltage	Vd	Tj=25℃		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.