

TO-92 Three-terminal positive voltage regulator

FEATURES

Maximum output current IOM: 0.1A

Output voltage VO: 9V

Continuous total dissipation

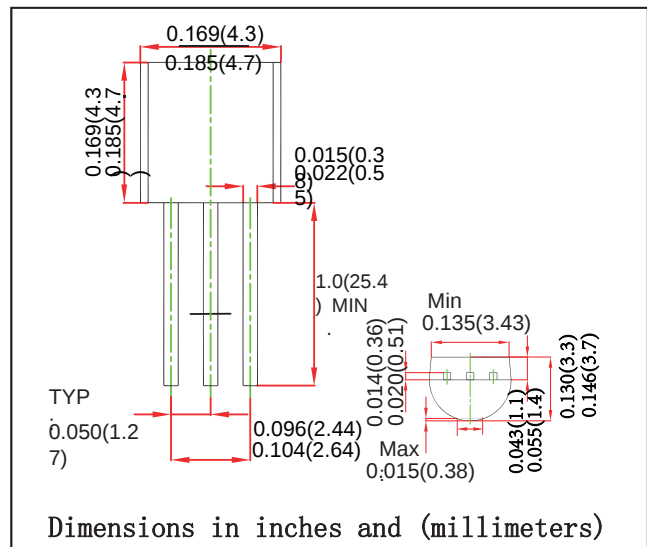
PD: 0.625W ($T_a = 25^\circ\text{C}$)

MECHANICAL DATA

χCase: TO-92 Small Outline Plastic Package

χPolarity: Color band denotes cathode end

χ Mounting Position: Any



ABSOLUTE MAXIMUM RATINGS

(Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	30	V
Thermal resistance from Junction to Ambient	$R_{\theta JA}$	160	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_{OPR}	-25~+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ\text{C}$

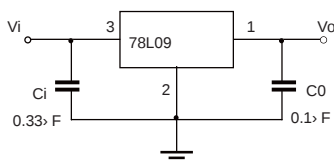
ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE

($V_i=16\text{V}, I_o=40\text{mA}, C_i=0.33\mu\text{F}, C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	V_o	$12\text{V} \leq V_i \leq 24\text{V}, I_o=1\text{mA}-40\text{mA}$	8.64	9.0	9.36	V
		$I_o=1\text{mA}-70\text{mA}$	8.55	9.0	9.45	V
		25°C	8.55	9.0	9.45	V
Load Regulation	ΔV_o	$I_o=1\text{mA}-100\text{mA}$		19	90	mV
		25°C		11	40	mV
Line regulation	ΔV_o	$12\text{V} \leq V_i \leq 24\text{V}$		45	175	mV
		$13\text{V} \leq V_i \leq 24\text{V}$		40	125	mV
Quiescent Current	I_q	25°C		4.1	6.0	mA
Quiescent Current Change	ΔI_q	$13\text{V} \leq V_i \leq 24\text{V}$			1.5	mA
	ΔI_q	$1\text{mA} \leq I_o \leq 40\text{mA}$			0.1	mA
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$		58		7V/Vo
Ripple Rejection	RR	$15\text{V} \leq V_i \leq 25\text{V}, f=120\text{Hz}$		45		dB
Dropout Voltage	V_d	25°C		1.7		V

* Pulse test.

TYPICAL APPLICATION



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

RATINGS AND CHARACTERISTIC CURVES

Typical Characteristics

