

78L08

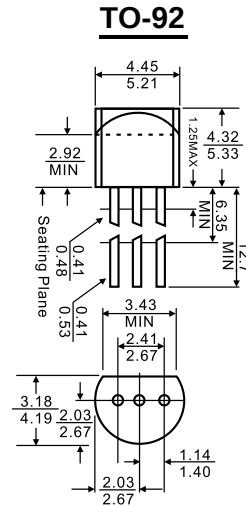
Three-terminal positive voltage regulator



1. OUT
2. GND
3. IN

Features

- ✧ Maximum Output current
 I_{OM} : 0.1 A
- ✧ Output voltage
 V_o : 8 V
- ✧ Continuous total dissipation
 P_D : 0.625W



Dimensions in inches and (millimeters)

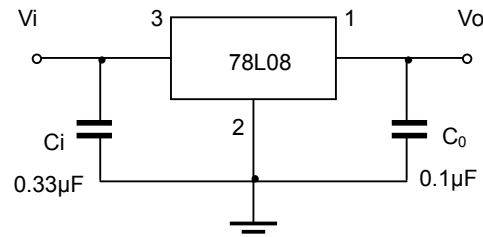
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Units
Input Voltage	V_I	30	V
Operating Junction Temperature Range	T_{OPR}	-40~+125	°C
Storage Temperature Range	T_{STG}	-65~+150	°C

ELECTRICAL CHARACTERISTICS ($V_i=14V$, $I_o=40mA$, $C_i=0.33\mu F$, $C_o=0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$25^\circ C$	7.7	8.0	8.3	V
		$10.5V \leq V_i \leq 23V$, $I_o=1mA \sim 40mA$	7.6	8.0	8.4	V
		$I_o=1mA \sim 70mA$	7.6	8.0	8.4	V
Load Regulation	ΔV_o	$I_o=1mA \sim 100mA$		18	80	mV
		$I_o=1mA \sim 40mA$		10	40	mV
Line regulation	ΔV_o	$10.5V \leq V_i \leq 23V$		42	175	mV
		$11V \leq V_i \leq 23V$		36	125	mV
Quiescent Current	I_q	$25^\circ C$		4	6	mA
Quiescent Current Change	ΔI_q	$11V \leq V_i \leq 23V$			1.5	mA
	ΔI_q	$1mA \leq I_o \leq 40mA$			0.1	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz$		54		uV
Ripple Rejection	RR	$13V \leq V_i \leq 23V$, $f=120Hz$	37	46		dB
Dropout Voltage	V_d	$25^\circ C$		1.7		V

TYPICAL APPLICATION



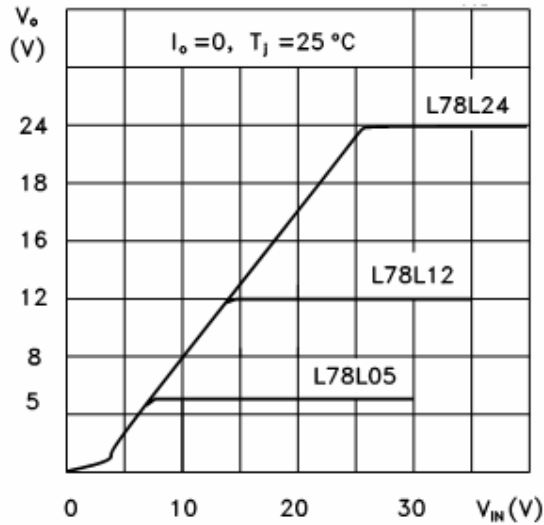
Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

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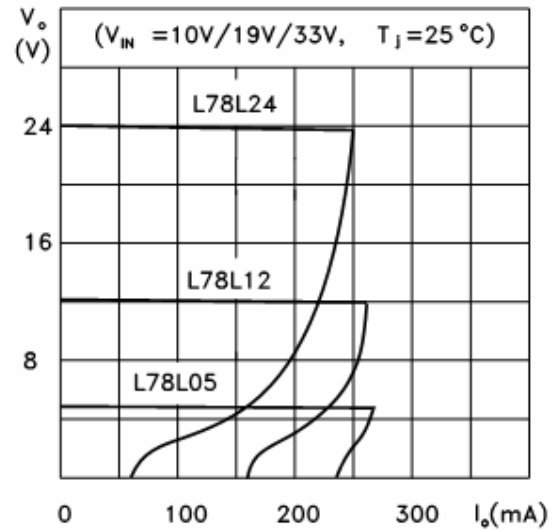
Three-terminal positive voltage regulator

Typical Characteristics

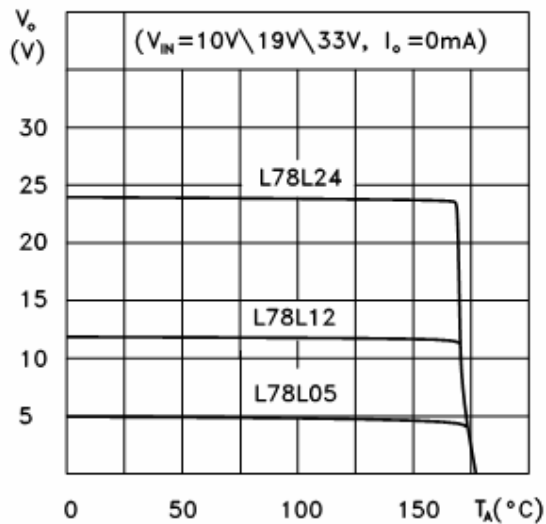
L78L05/12/24 Output Characteristics



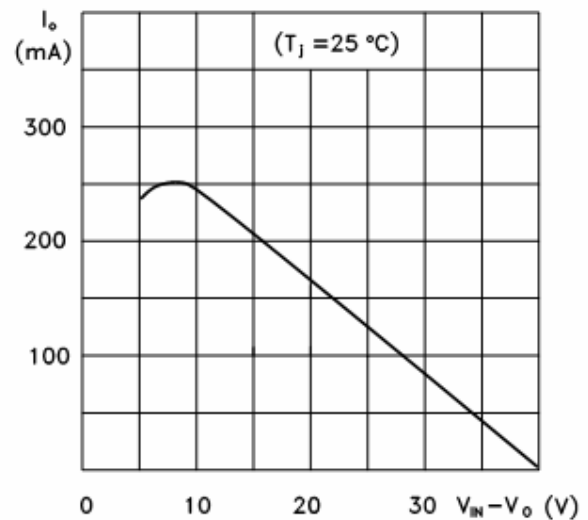
L78L05/12/24 Load Characteristics



L78L05/12/24 Thermal Shutdown



L78L00 Series Short Circuit Output Current



L78L05 Quiescent Current vs Input Voltage

