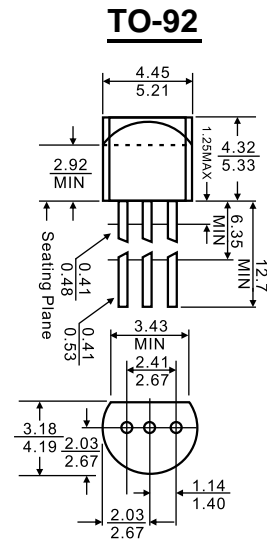




1. OUT
2. GND
3. IN

Features

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



Dimensions in inches and (millimeters)

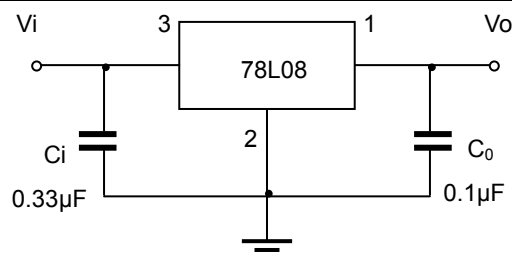
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

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

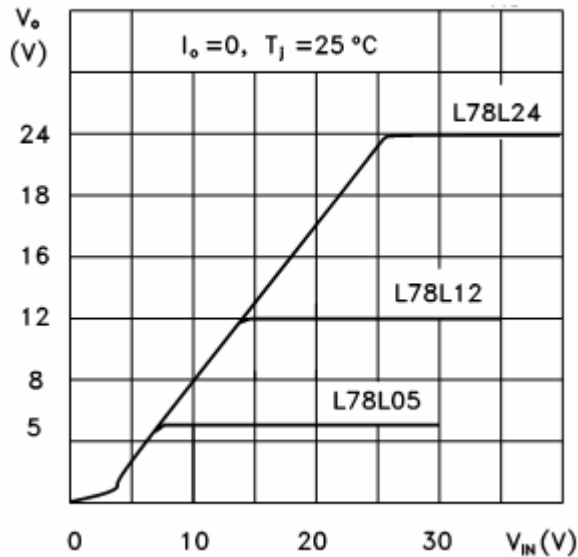
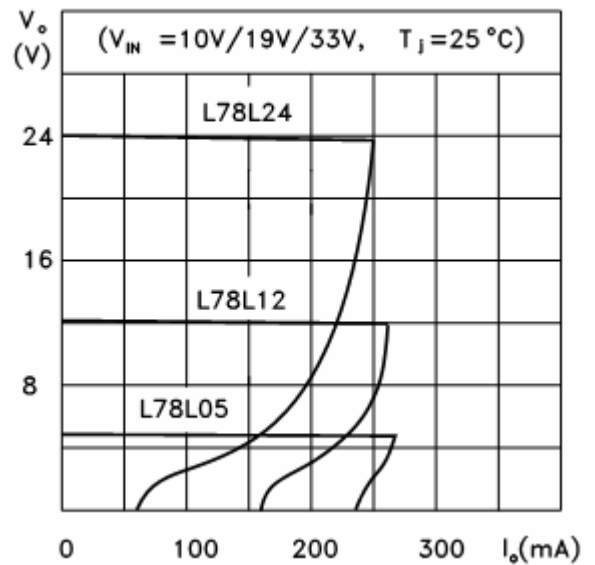
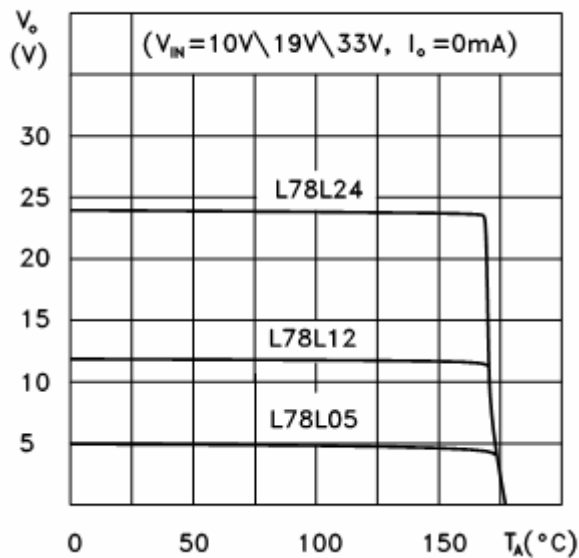
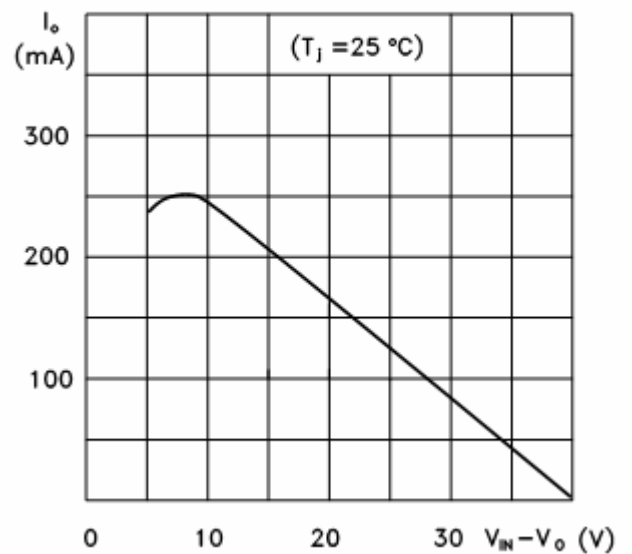
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT	
Output voltage	V_o	25°C	7.7	8.0	8.3	V	
		0-125°C	$10.5\text{V} \leq V_i \leq 23\text{V}$, $I_o=1\text{mA} \sim 40\text{mA}$	7.6	8.0	8.4	V
			$I_o=1\text{mA} \sim 70\text{mA}$	7.6	8.0	8.4	V
Load Regulation	ΔV_o	$I_o=1\text{mA} \sim 100\text{mA}$	25°C	18	80	mV	
		$I_o=1\text{mA} \sim 40\text{mA}$	25°C	10	40	mV	
Line regulation	ΔV_o	$10.5\text{V} \leq V_i \leq 23\text{V}$	25°C	42	175	mV	
		$11\text{V} \leq V_i \leq 23\text{V}$	25°C	36	125	mV	
Quiescent Current	I_q	25°C		4	6	mA	
Quiescent Current Change	ΔI_q	$11\text{V} \leq V_i \leq 23\text{V}$	0-125°C		1.5	mA	
		$1\text{mA} \leq I_o \leq 40\text{mA}$	0-125°C		0.1	mA	
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$	25°C	54		uV	
Ripple Rejection	RR	$13\text{V} \leq V_i \leq 23\text{V}$, $f=120\text{Hz}$	0-125°C	37	46	dB	
Dropout Voltage	V_d	25°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.

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
