

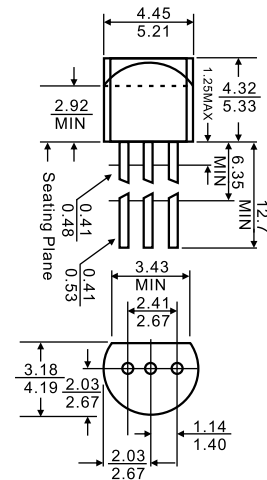
78L12

Three-terminal positive voltage regulator

TO-92



- 1. OUT
- 2. GND
- 3. IN



Dimensions in inches and (millimeters)

Features

- ◇ **Maximum Output current**
 $I_{OM}: 0.1A$
- ◇ **Output voltage**
 $V_o: 12V$
- ◇ **Continuous total dissipation**
 $P_D: 0.625W$

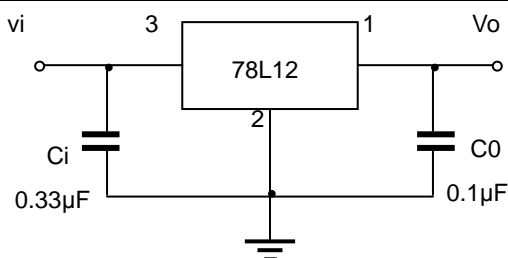
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_I	35	V
Operating Junction Temperature Range	T_{OPR}	0-+125	°C
Storage Temperature Range	T_{STG}	-55-+150	°C

ELECTRICAL CHARACTERISTICS ($V_I=19V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT	
Output voltage	V_o	25°C	11.5	12	12.5	V	
		0-125°C	14V ≤ V_i ≤ 27V, $I_o=1mA-40mA$	11.4	12	12.6	V
			$I_o=1mA-70mA$	11.4	12	12.6	V
Load Regulation	ΔV_o	$I_o=1mA-100mA$	25°C	22	100	mV	
		$I_o=1mA-40mA$	25°C	13	50	mV	
Line regulation	ΔV_o	14.5V ≤ V_i ≤ 27V	25°C	55	250	mV	
		16V ≤ V_i ≤ 27V	25°C	49	200	mV	
Quiescent Current	I_q	25°C		4.3	6.5	mA	
Quiescent Current Change	ΔI_q	16V ≤ V_i ≤ 27V	0-125°C		1.5	mA	
	ΔI_q	1mA ≤ I_o ≤ 40mA	0-125°C		0.1	mA	
Output Noise Voltage	V_N	10Hz ≤ f ≤ 100KHz	25°C	70		uV	
Ripple Rejection	RR	15V ≤ V_i ≤ 25V, $f=120Hz$	0-125°C	37	42	dB	
Dropout Voltage	V_d	25°C		1.7		V	

TYPICAL APPLICATION



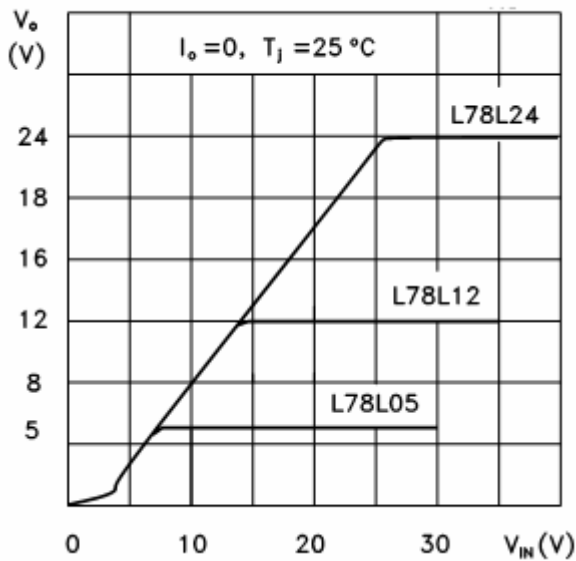
Note : Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

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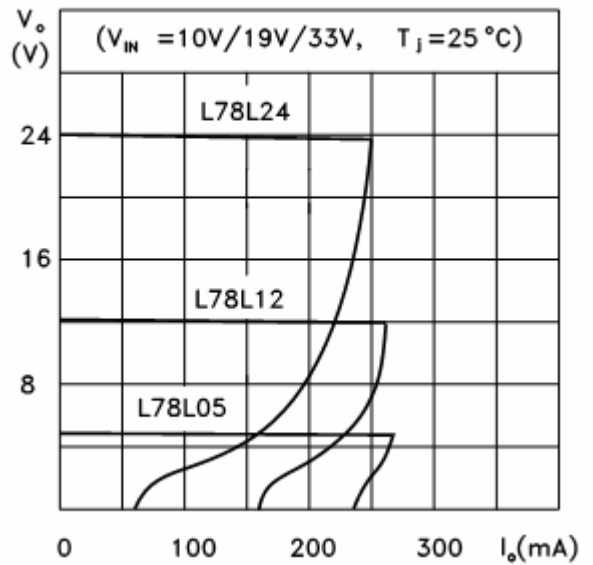
Three-terminal positive voltage regulator

Typical Characteristics

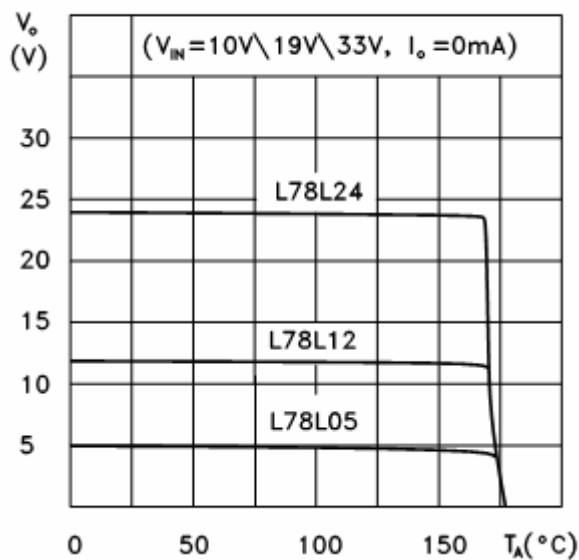
L78L05/12/24 Output Characteristics



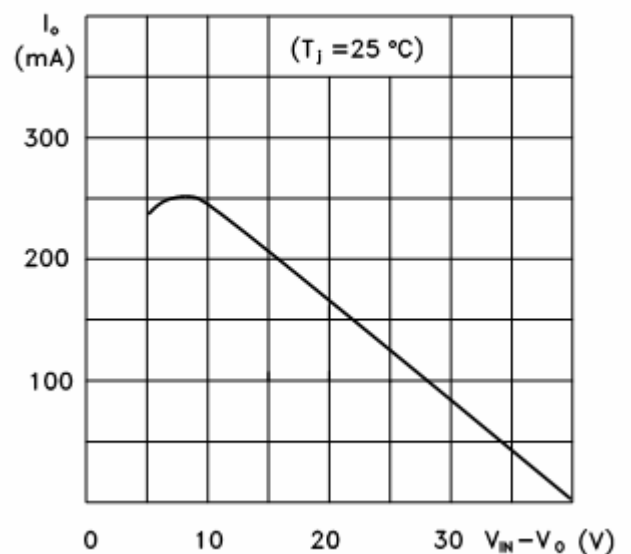
L78L05/12/24 Load Characteristics



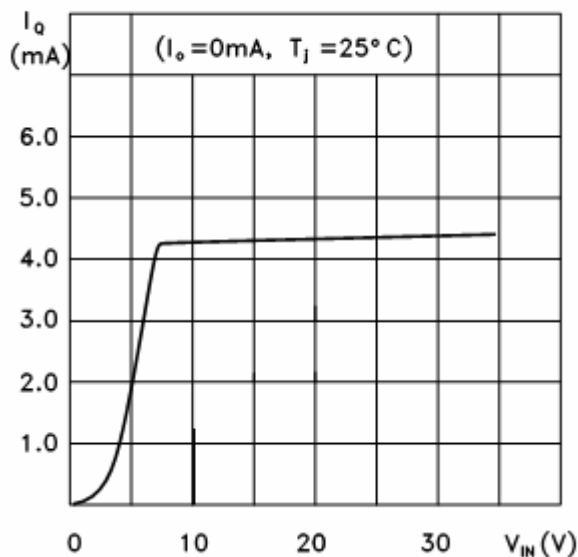
L78L05/12/24 Thermal Shutdown



L78L00 Series Short Circuit Output Current



L78L05 Quiescent Current vs Input Voltage



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