



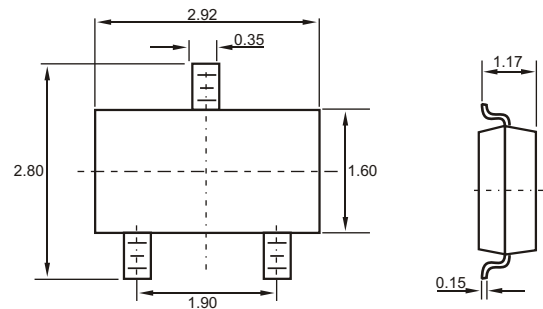
78L12

Three-terminal positive voltage regulator



1.OUT
2.IN
3.GND

SOT-23-3L



Dimensions in inches and (millimeters)

Features

- ✧ **Maximum Output current**
 I_{OM} : 0.1 A
- ✧ **Output voltage**
 V_o : 12 V
- ✧ **Continuous total dissipation**
 P_D : 0.35 W

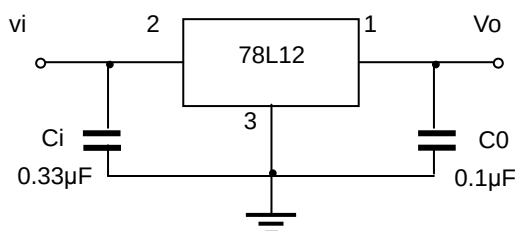
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

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)

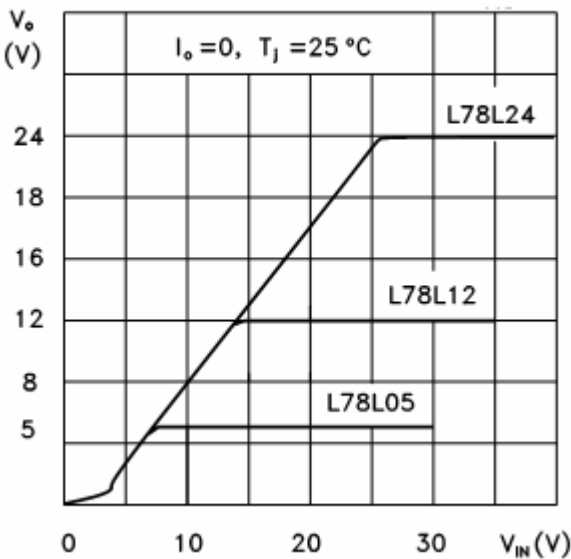
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	25°C	11.5	12	12.5	V
		14V≤ V_I ≤27V, $I_o=1mA-40mA$	11.4	12	12.6	V
		$I_o=1mA-70mA$	11.4	12	12.6	V
Load Regulation	ΔV_o	$I_o=1mA-100mA$	25°C	22	100	mV
		$I_o=1mA-40mA$	25°C	13	50	mV
Line regulation	ΔV_o	14.5V≤ V_I ≤27V	25°C	55	250	mV
		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

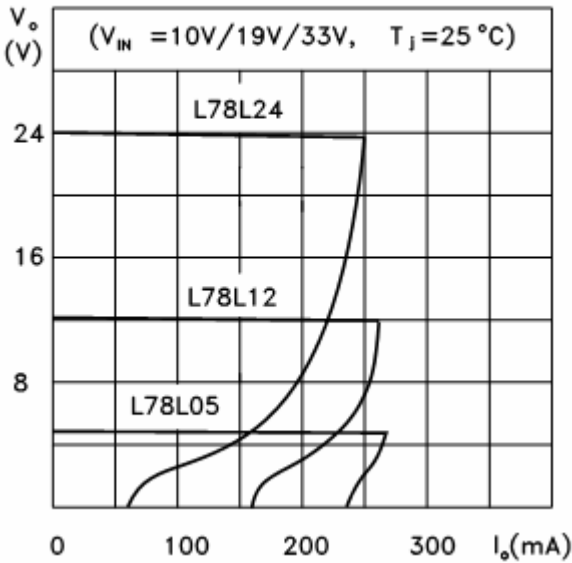


Note : Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

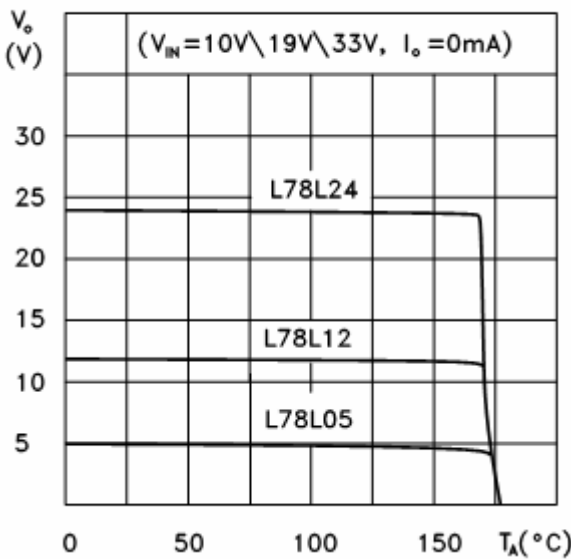
L78L05/12/24 Output Characteristics



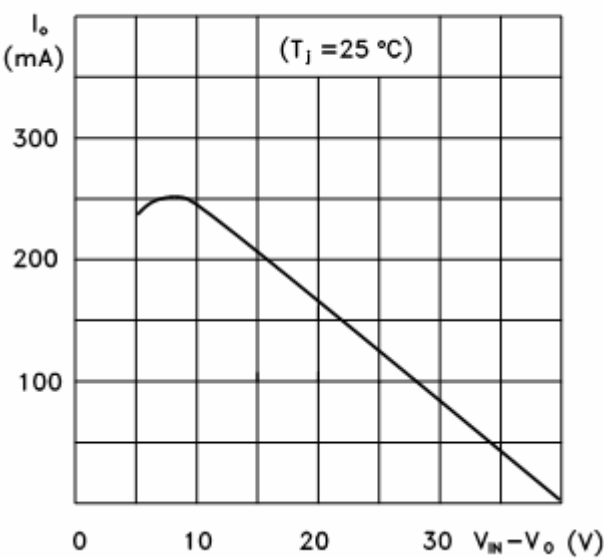
L78L05/12/24 Load Characteristics



L78L05/12/24 Thermal Shutdown



L78L00 Series Short Circuit Output Current



L78L05 Quiescent Current vs Input Voltage

