



TIGER ELECTRONIC CO.,LTD

TO-92 Encapsulate Three-terminal Voltage Regulator

LM78L12 Three-terminal positive voltage regulator

FEATURES

Maximum Output current

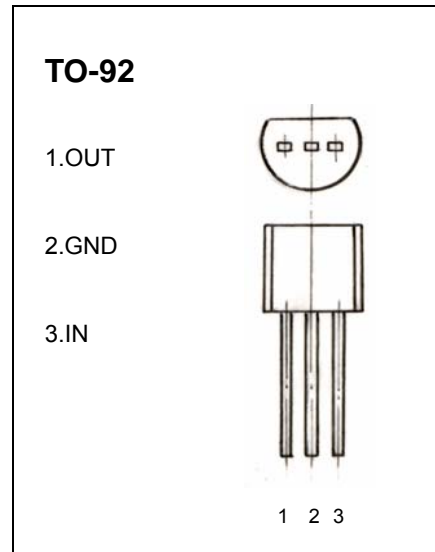
I_{OM} : 0.1A

Output voltage

V_o : 12 V

Continuous total dissipation

P_D : 0.625 W



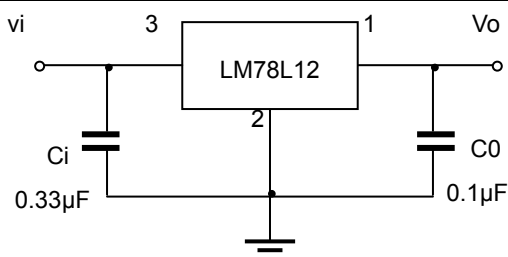
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

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

TYPICAL APPLICATION

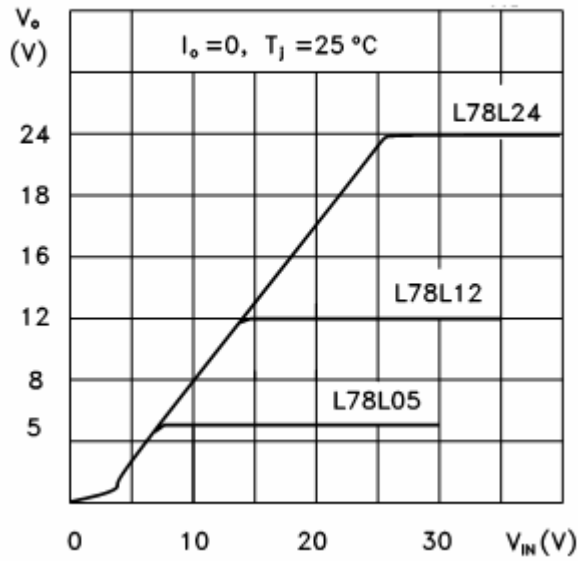


Note : Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

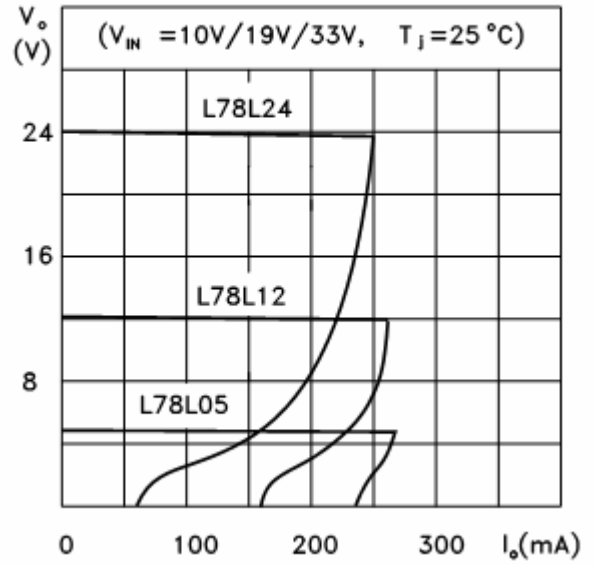
Typical Characteristics

LM78LXX

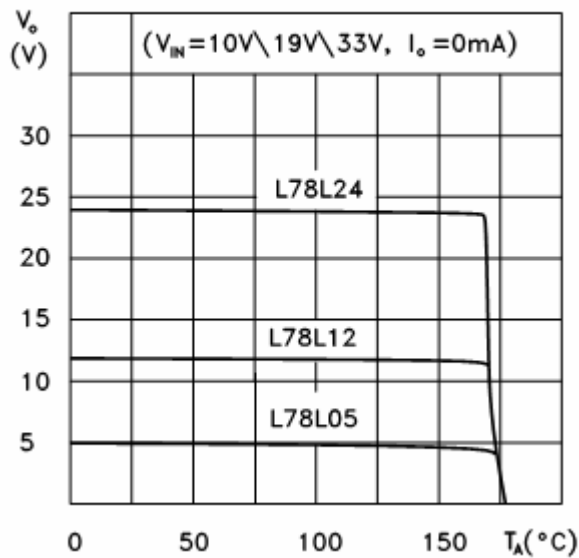
L78L05/12/24 Output Characteristics



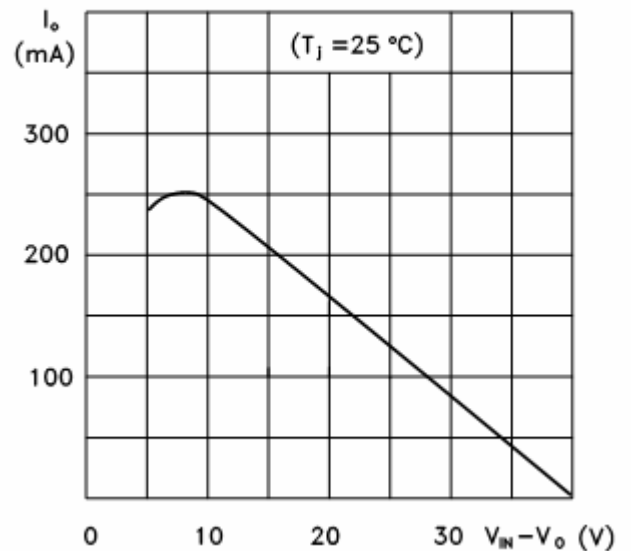
L78L05/12/24 Load Characteristics



L78L05/12/24 Thermal Shutdown



L78L00 Series Short Circuit Output Current



L78L05 Quiescent Current vs Input Voltage

