

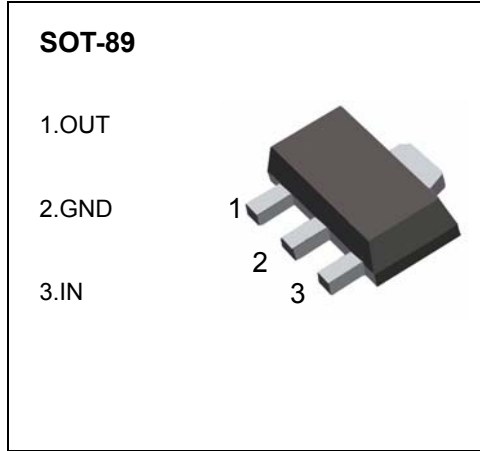


SOT-89 Encapsulate Three Terminal Voltage Regulator

78L12 Three-terminal positive voltage regulator

FEATURES

- Maximum Output current
I_{OM}: 0.1 A
- Output voltage
V_o: 12 V
- Continuous total dissipation
P_D: 0.50 W



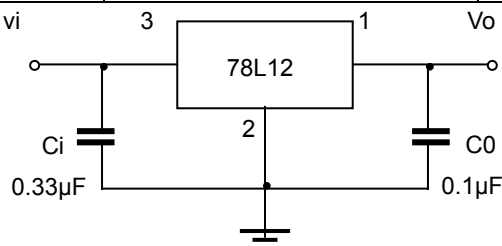
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

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 AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE (V_I=19V, I_o=40mA, C_i=0.33μF, C_o=0.1μF, 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

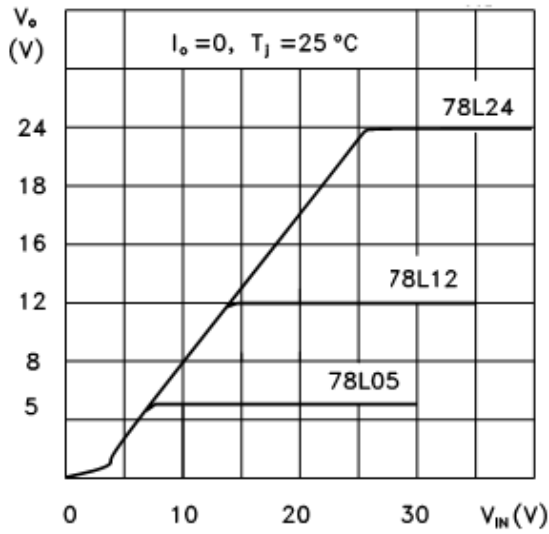


Note : Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

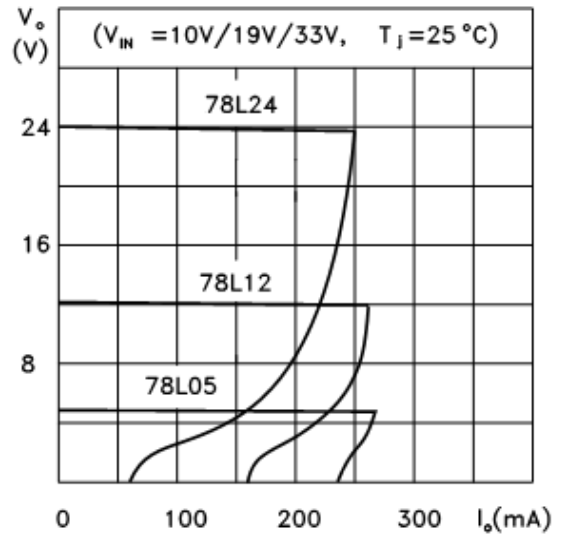
Typical Characteristics

78LXX

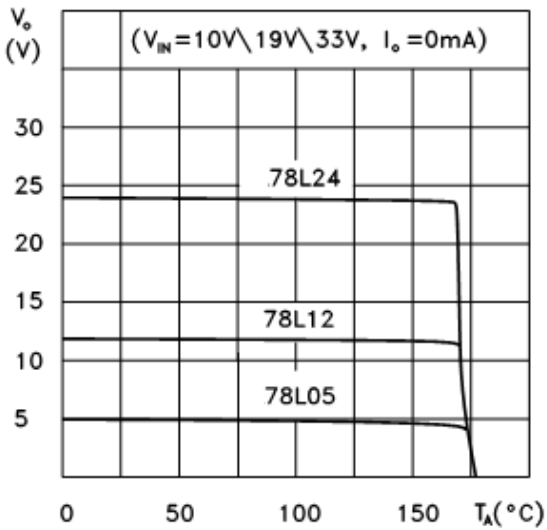
78L05/12/24 Output Characteristics



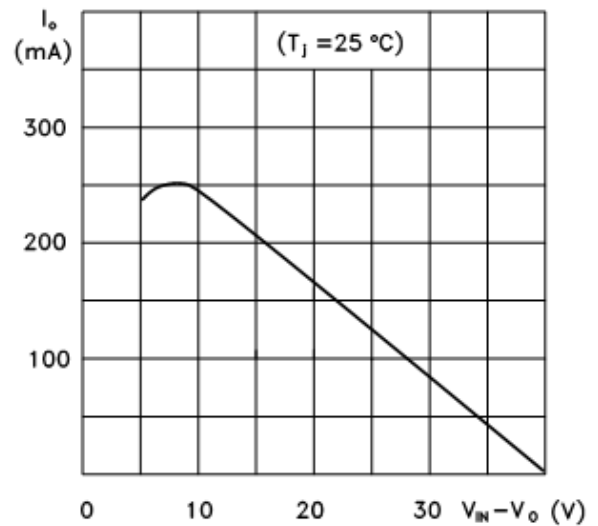
78L05/12/24 Load Characteristics



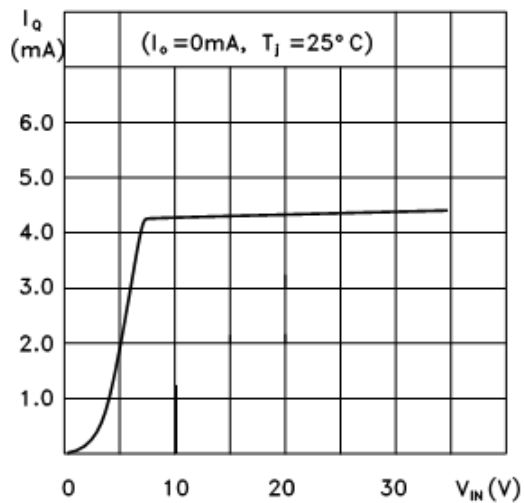
78L05/12/24 Thermal Shutdown



78L00 Series Short Circuit Output Current



78L05 Quiescent Current vs Input Voltage



PD-TA

