

SOT-89 Encapsulate Three Terminal Voltage Regulator

78L06 Three-terminal positive voltage regulator

FEATURES

Maximum Output current

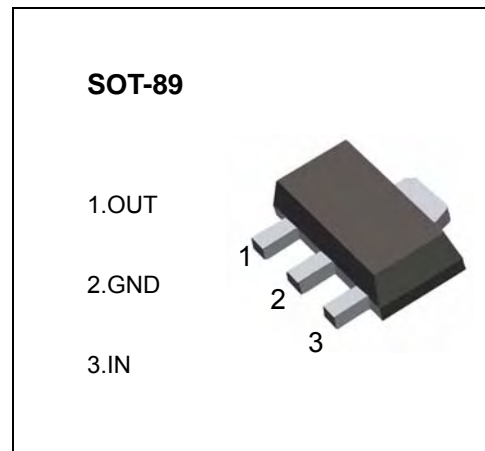
I_{OM}: 0.1 A

Output voltage

V_o: 6 V

Continuous total dissipation

P_D: 0.5W



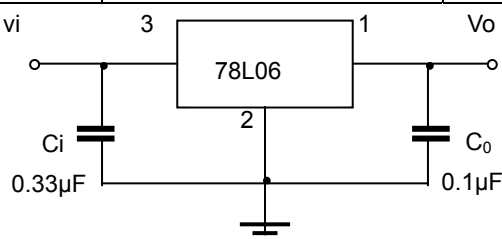
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Units
Input Voltage	V _i	30	V
Operating Junction Temperature Range	T _{OPR}	0-+125	°C
Storage Temperature Range	T _{STG}	-55-+150	°C

ELECTRICAL CHARACTERISTICS (V_i=11V, I_o=40mA, C_i=0.33μF, C_o=0.1μF, unless otherwise specified)

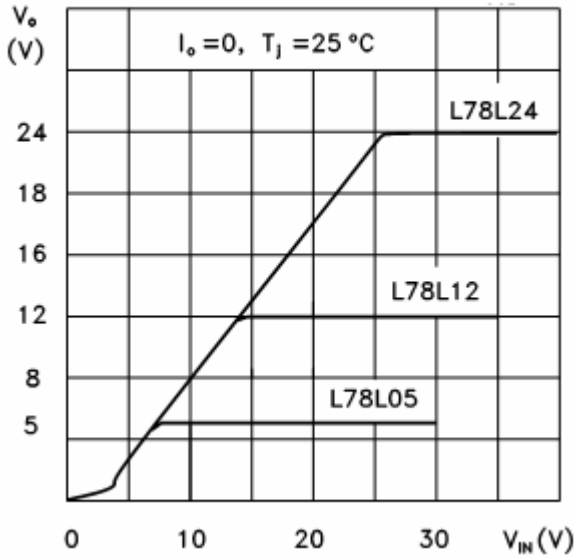
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT	
Output voltage	V _o	25°C	5.75	6.0	6.25	V	
		0-125°C	8V ≤ V _i ≤ 20V, I _o = 1mA-40mA	5.7	6.0	6.3	V
			I _o = 1mA-70mA	5.7	6.0	6.3	V
Load Regulation	ΔV _o	I _o = 1mA-100mA	25°C	16	80	mV	
		I _o = 1mA-40mA	25°C	9	40	mV	
Line regulation	ΔV _o	8V ≤ V _i ≤ 20V	25°C	35	175	mV	
		9V ≤ V _i ≤ 20V	25°C	29	125	mV	
Quiescent Current	I _q	25°C	3.9	6.0	mA		
Quiescent Current Change	ΔI _q	9V ≤ V _i ≤ 20V	0-125°C		1.5	mA	
		1mA ≤ I _o ≤ 40mA	0-125°C		0.1	mA	
Output Noise Voltage	V _N	10Hz ≤ f ≤ 100KHz	25°C	46		uV	
Ripple Rejection	RR	9V ≤ V _i ≤ 19V, f = 120Hz	0-125°C	40	48	dB	
Dropout Voltage	V _d	25°C		1.7		V	

TYPICAL APPLICATION

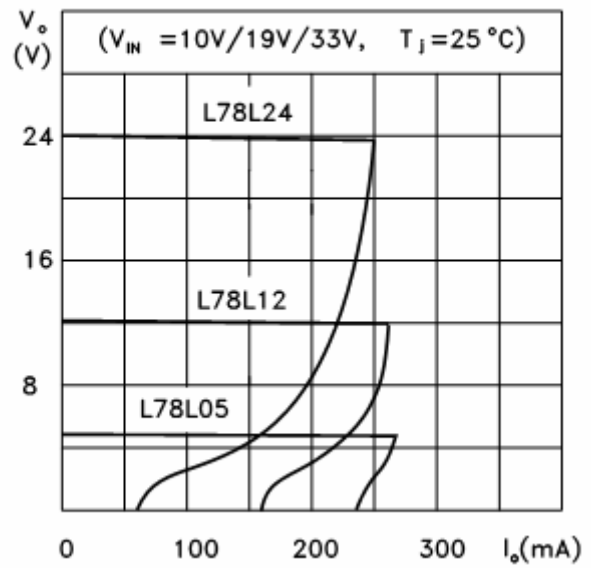


Note : Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

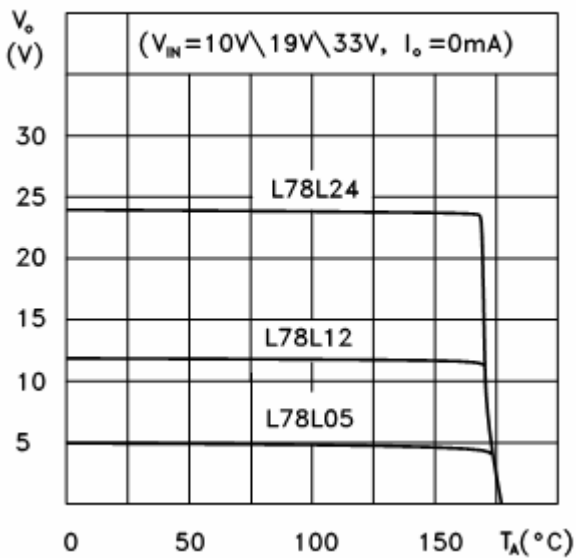
L78L05/12/24 Output Characteristics



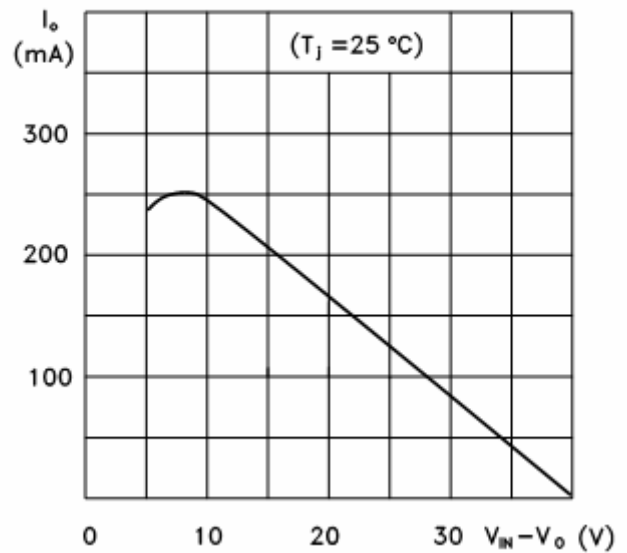
L78L05/12/24 Load Characteristics



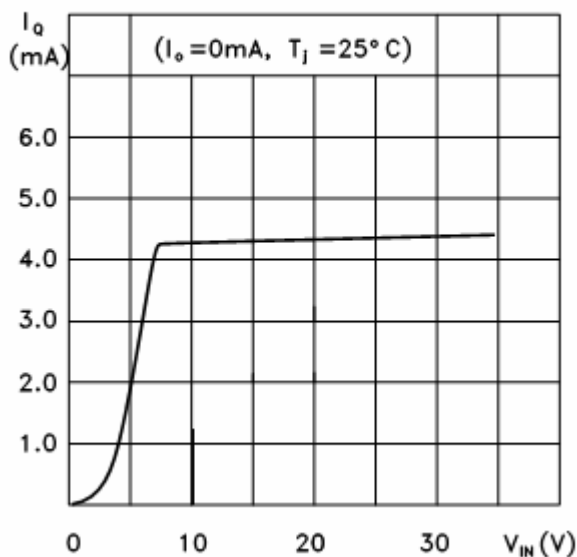
L78L05/12/24 Thermal Shutdown



L78L00 Series Short Circuit Output Current



L78L05 Quiescent Current vs Input Voltage



Power dissipation vs. ambient temperature

