SOT-89 Encapsulate Three Terminal Voltage Regulator

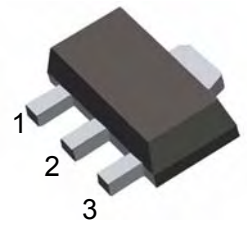
78L06 Three-terminal positive voltage regulator

SOT-89

1.OUT

2.GND

3.IN



FEATURES

Maximum Output current

I_{OM}: 0.1 A

Output voltage

V_o: 6 V

Continuous total dissipation

P_D: 0. 5W

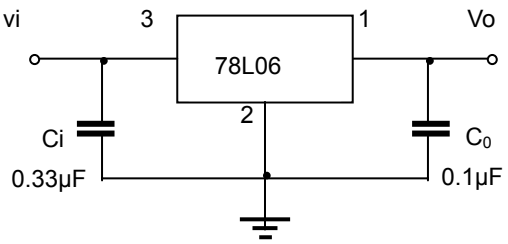
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Units
Input Voltage	Vi	30	V
Operating Junction Temperature Range	T_{OPR}	0-+125	℃
Storage Temperature Range	T_{STG}	-55-+150	℃

ELECTRICAL CHARACTERISTICS (Vi=11V,Io=40mA,Ci=0.33μF,Co=0.1μF, unless otherwise specified)

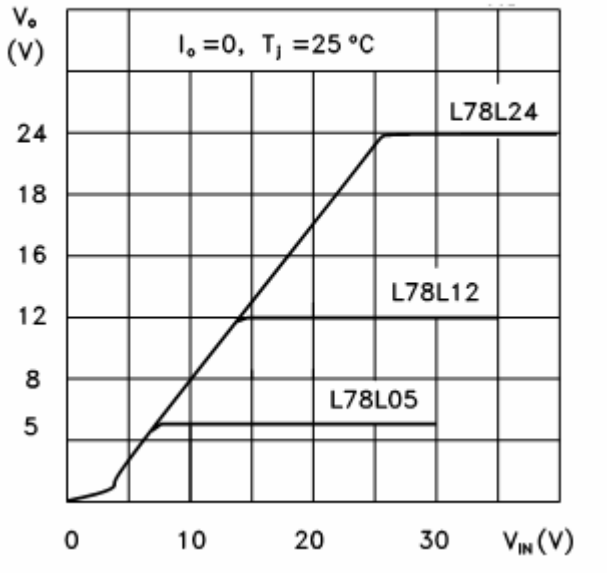
Parameter	Symbol	Test conditions		MIN	TYP	MAX	UNIT
Output voltage	Vo		25℃	5.75	6.0	6.25	V
		8V≤V_I≤20V, Io=1mA-40mA	0-125℃	5.7	6.0	6.3	V
		Io=1mA-70mA		5.7	6.0	6.3	V
Load Regulation	△Vo	Io=1mA-100mA	25℃		16	80	mV
		Io=1mA-40mA	25℃		9	40	mV
Line regulation	△Vo	8V≤V_I≤20V	25℃		35	175	mV
		9V≤V_I≤20V	25℃		29	125	mV
Quiescent Current	Iq		25℃		3.9	6.0	mA
Quiescent Current Change	△Iq	9V≤V_I≤20V	0-125℃			1.5	mA
	△Iq	1mA≤I_O≤40mA	0-125℃			0.1	mA
Output Noise Voltage	V_N	10Hz≤f≤100KHz	25℃		46		uV
Ripple Rejection	RR	9V≤V_I≤19V,f=120Hz	0-125℃	40	48		dB
Dropout Voltage	Vd		25℃		1.7		V

TYPICAL APPLICATION

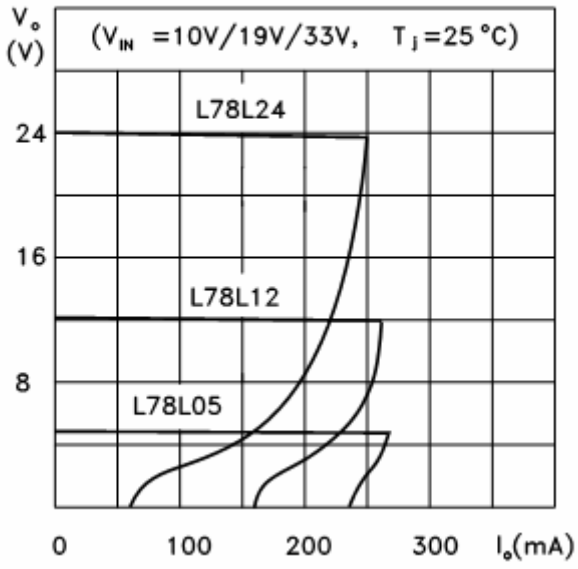


Note : Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

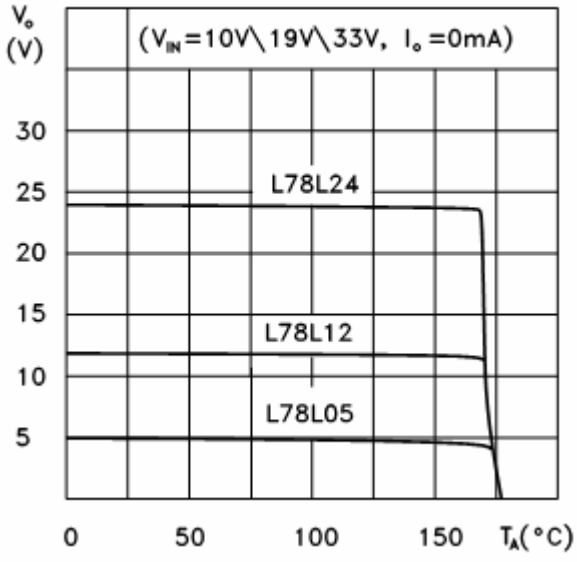
L78L05/12/24 Output Characteristics



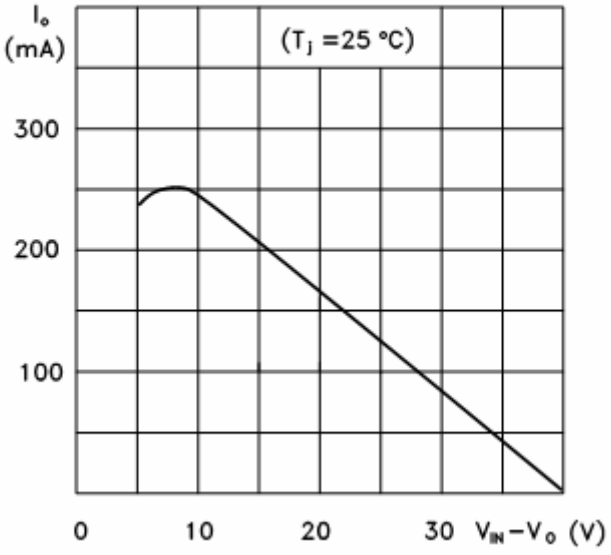
L78L05/12/24 Load Characteristics



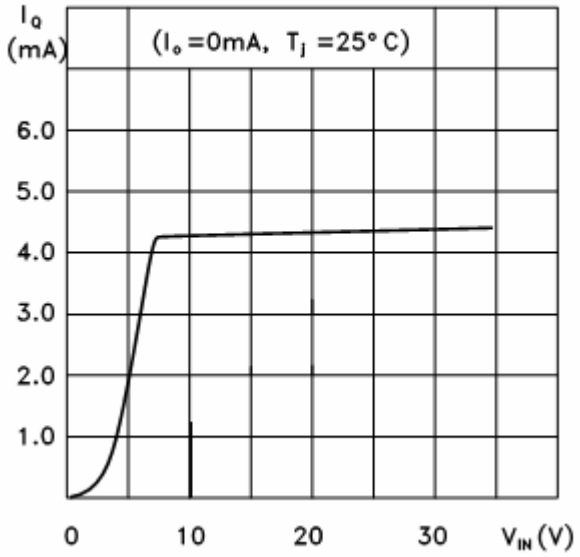
L78L05/12/24 Thermal Shutdown



L78L00 Series Short Circuit Output Current



L78L05 Quiescent Current vs Input Voltage



Power dissipation vs. ambient temperature