

LM78L06 Three-terminal positive voltage regulator

FEATURES

Maximum Output current

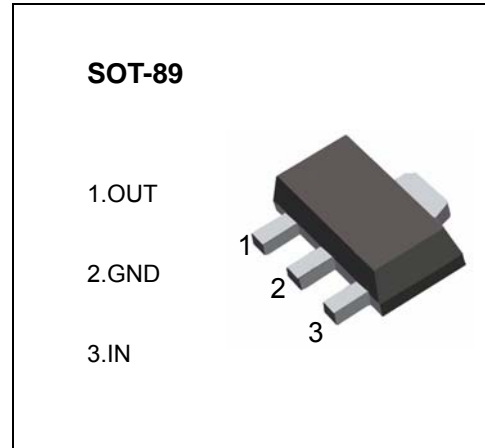
I_{OM} : 0.1 A

Output voltage

V_O : 6 V

Continuous total dissipation

P_D : 0.5W



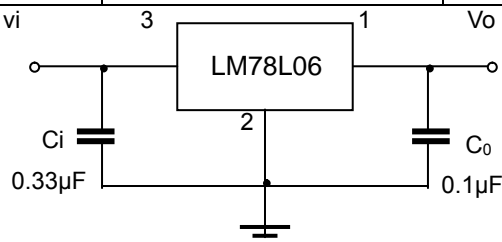
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

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 AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i=11V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT	
Output voltage	V_o	$25^\circ C$	5.75	6.0	6.25	V	
		0-125°C	$8V \leq V_i \leq 20V, I_o=1mA-40mA$	5.7	6.0	6.3	V
			$I_o=1mA-70mA$	5.7	6.0	6.3	V
Load Regulation	ΔV_o	$I_o=1mA-100mA$	$25^\circ C$	16	80	mV	
		$I_o=1mA-40mA$	$25^\circ C$	9	40	mV	
Line regulation	ΔV_o	$8V \leq V_i \leq 20V$	$25^\circ C$	35	175	mV	
		$9V \leq V_i \leq 20V$	$25^\circ C$	29	125	mV	
Quiescent Current	I_q		$25^\circ C$	3.9	6.0	mA	
Quiescent Current Change	ΔI_q	$9V \leq V_i \leq 20V$	0-125°C		1.5	mA	
	ΔI_q	$1mA \leq I_o \leq 40mA$	0-125°C		0.1	mA	
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz$	$25^\circ C$	46		uV	
Ripple Rejection	RR	$9V \leq V_i \leq 19V, f=120Hz$	0-125°C	40	48	dB	
Dropout Voltage	V_d		$25^\circ C$	1.7		V	

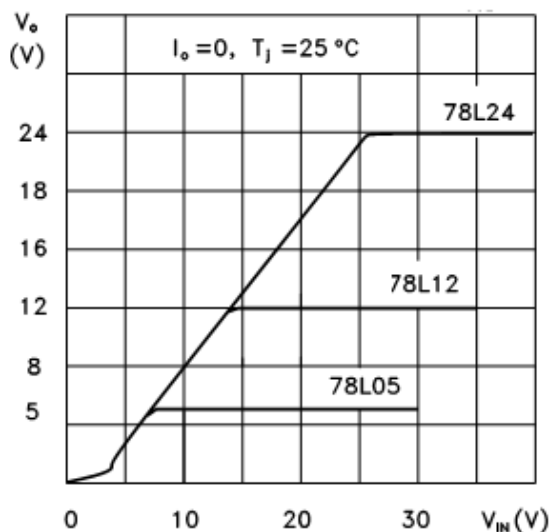
TYPICAL APPLICATION



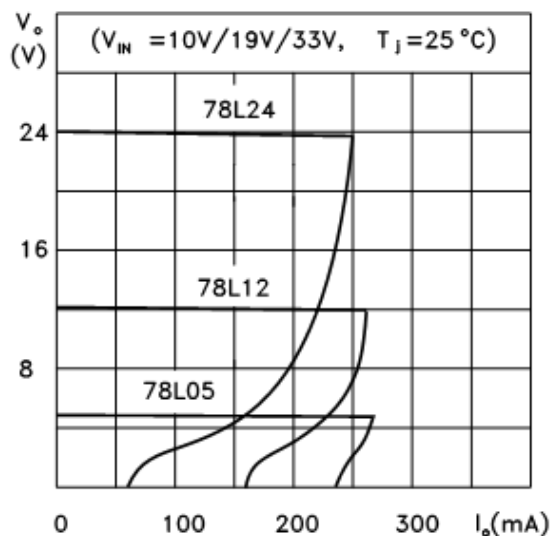
Note : Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

Typical Characteristics

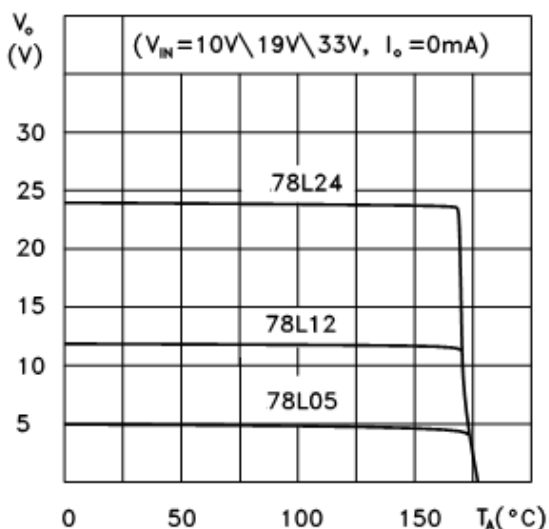
78L05/12/24 Output Characteristics



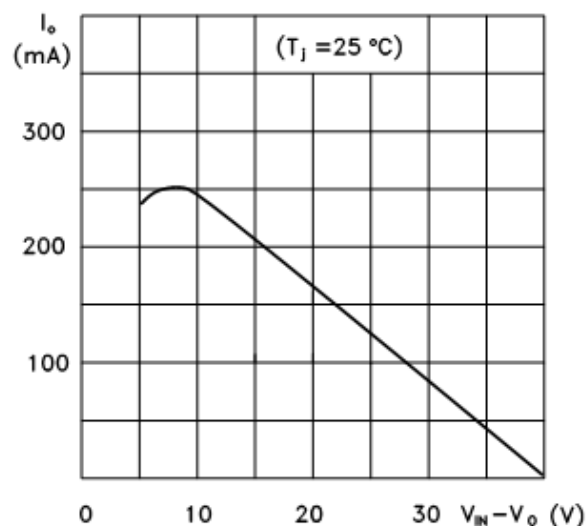
78L05/12/24 Load Characteristics



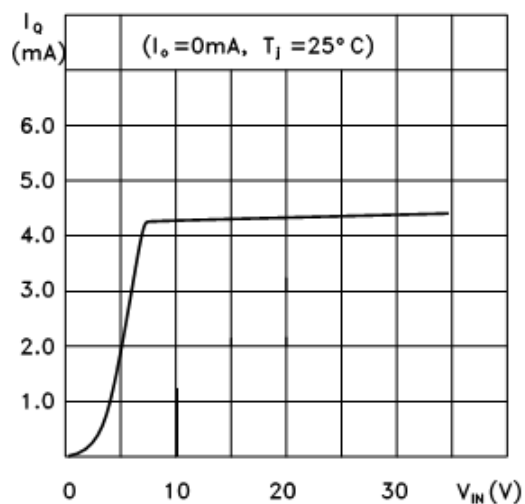
78L05/12/24 Thermal Shutdown



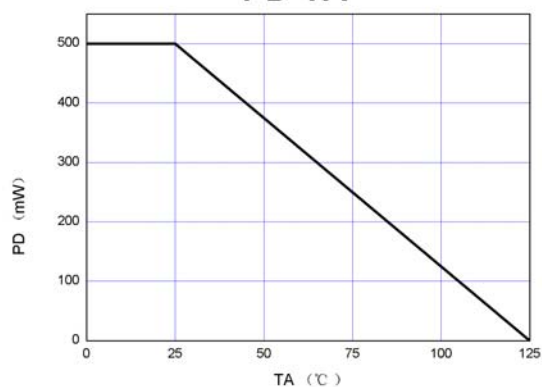
78L00 Series Short Circuit Output Current



78L05 Quiescent Current vs Input Voltage



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