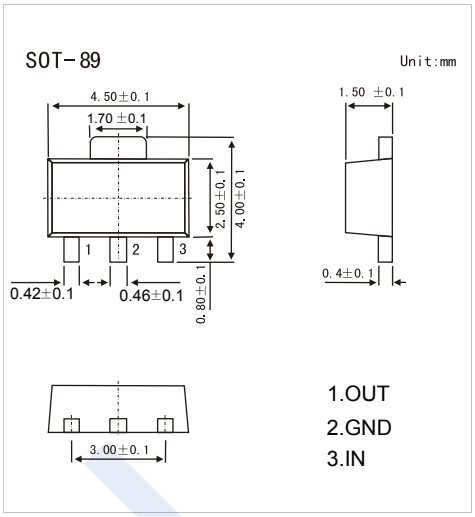
Three-Terminal Positive Voltage Regulator

LM78L18



Features

- Maximum Output current I_O: 0.1A
- Output Voltage V_O: 18V
- Continuous Total Dissipation P_D: 0.5W (T_a = 25℃)

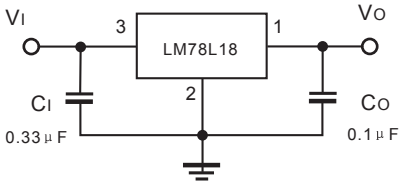
Absolute Maximum Ratings (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Rating	Unit
Input Voltage	V_I	35	V
Operating Junction Temperature Range	T_{OPR}	-55 ~ +125	℃
Storage Temperature Range	T_{STG}	-55 ~ +150	℃

Electrical Characteristics (V_I=26V, I_O=40mA,C_I=0.33μF,C_O=0.1μF, unless otherwise specified)

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Output Voltage	V_O	T_J = 25℃	17.3	18	18.7	V
		T_J = 0~125℃, 20.5V≤V_I≤33V, I_O=1mA~40mA	17.1	18	18.9	V
		T_J = 0~125℃, V_I = 26V, I_O=1mA~70mA	17.1	18	18.9	V
Load Regulation	$\triangle V_O$	T_J = 25℃, V_I = 26V, I_O=1mA~100mA		27	180	mV
		T_J = 25℃, V_I = 26V, I_O=1mA~40mA		19	90	mV
Line Regulation	$\triangle V_O$	T_J = 25℃, 20.5V≤V_I≤33V, I_O = 40mA		70	360	mV
		T_J = 25℃, 22V≤V_I≤33V, I_O = 40mA		64	300	mV
Quiescent Current	I_Q	T_J = 25℃		4.7	6.5	mA
Quiescent current Change	$\triangle I_Q$	T_J = 0~125℃, 22V≤V_I≤33V, I_O = 40mA			1.5	mA
		T_J = 0~125℃, V_I = 26V, 1mA≤I_O≤40mA			0.1	
Output Noise Voltage	V_N	T_J = 25℃, 10Hz≤f≤100KHz		89		μV
Ripple Rejection	RR	T_J = 0~125℃, 21.5V≤V_I≤31.5V, f = 120Hz	32	36		dB
Dropout Voltage	V_D	T_J = 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.

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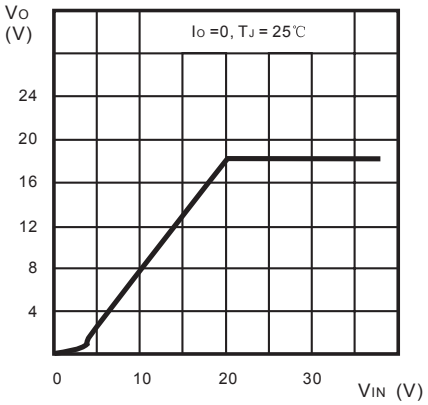
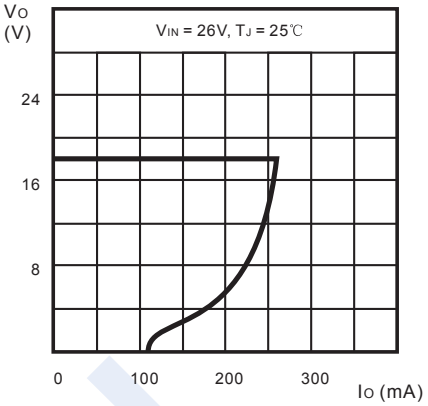
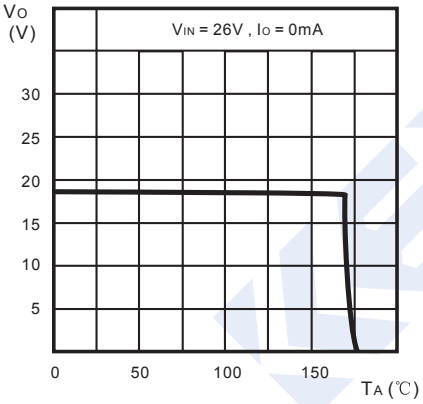
■ Typical Characteristics



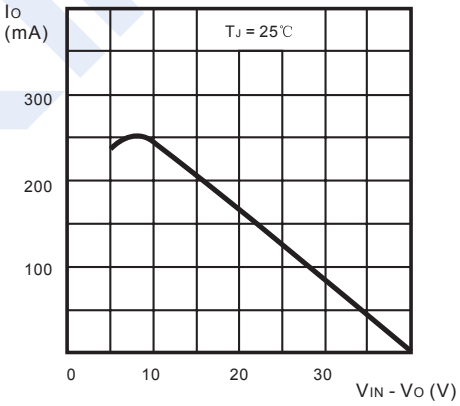
Output Characteristics



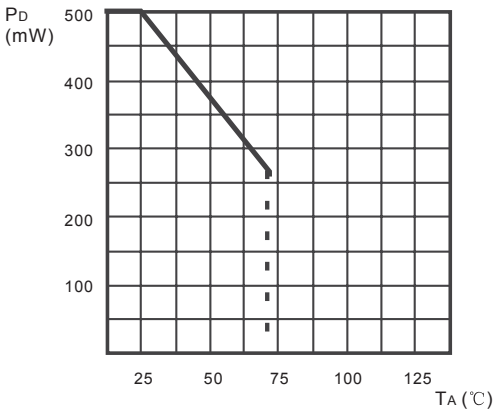
Load Characteristics



Thermal Shutdown



Short Circuit Output Current



Power Dissipation vs. Ambient Temperature