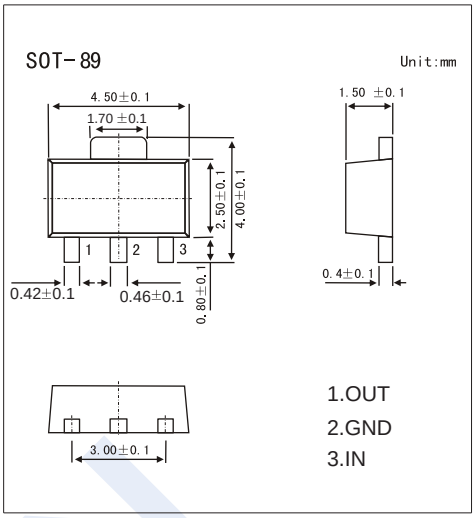
Three-Terminal Positive Voltage Regulator

KA180O06



■ Features

- Maximum Output current I_O: 0.1A
- Output Voltage V_O: 6V
- Continuous Total Dissipation P_D: 0.5W (T_a = 25℃)
- Marking Code: KL06

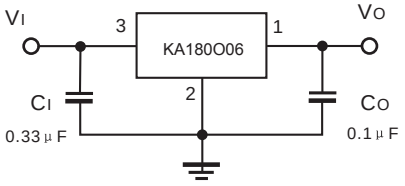
■ Absolute Maximum Ratings (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Rating	Unit
Input Voltage	V_I	30	V
Operating Junction Temperature Range	T_{OPR}	-55 ~ +125	℃
Storage Temperature Range	T_{STG}	-55 ~ +150	℃

■ Electrical Characteristics (V_I=12V, 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	T_J = 25℃	5.75	6.0	6.25	V
		T_J = 0~125℃, 8V≤V_I≤20V, I_O=1mA~40mA	5.7	6.0	6.3	V
		T_J = 0~125℃, I_O=1mA~70mA	5.7	6.0	6.3	V
Load Regulation	△V_O	T_J = 25℃, I_O=1mA~100mA		16	80	mV
		T_J = 25℃, I_O=1mA~40mA		9	40	mV
Line Regulation	△V_O	T_J = 25℃, 8V≤V_I≤20V		35	175	mV
		T_J = 25℃, 9V≤V_I≤20V		29	125	mV
Quiescent Current	I_Q	T_J = 25℃		3.9	6.0	mA
Quiescent current Change	△I_Q	T_J = 0~125℃, 9V≤V_I≤20V			1.5	mA
		T_J = 0~125℃, 1mA≤I_O≤40mA			0.1	
Output Noise Voltage	V_N	T_J = 25℃, 10Hz≤f≤100KHz		16		μV
Ripple Rejection	RR	T_J = 0~125℃, 9V≤V_I≤19V, f = 120Hz	40	48		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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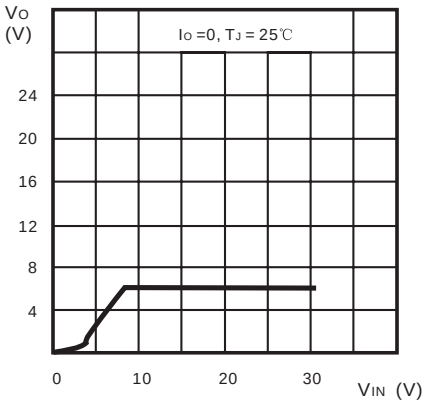
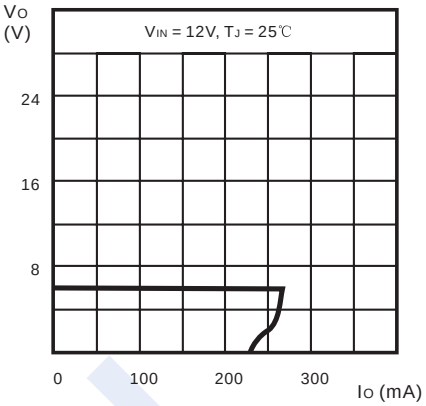
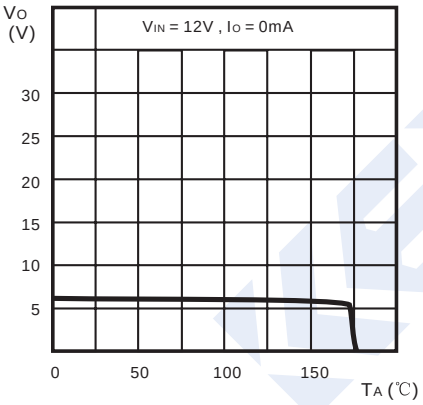
■ Typical Characteristics



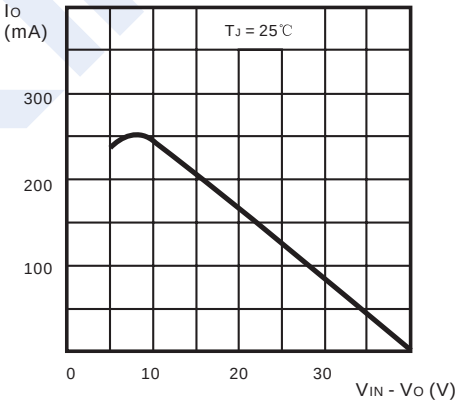
Output Characteristics



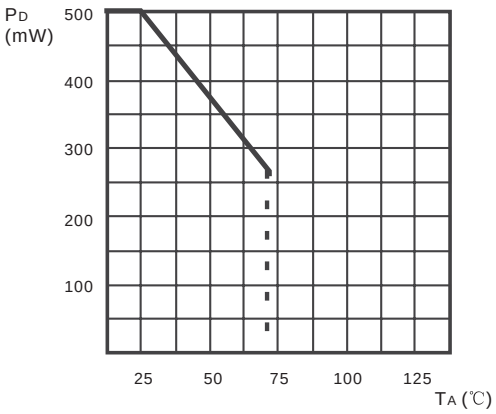
Load Characteristics



Thermal Shutdown



Short Circuit Output Current



Power Dissipation vs. Ambient Temperature