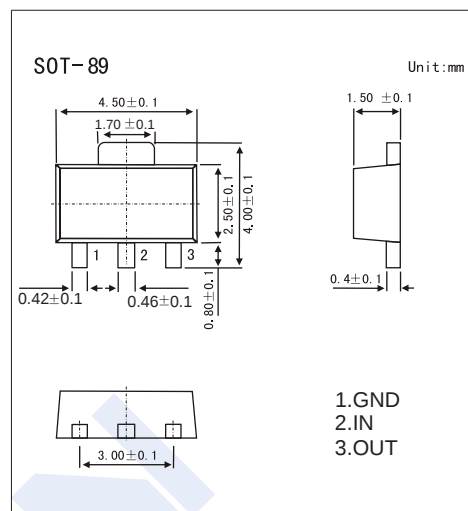


Three-Terminal Negative Voltage Regulator

KA190O06

■ Features

- Maximum output current I_{om} : 0.1A.
- Output voltage V_o : -6V.
- Continuous total dissipation P_d : 0.5 W
- Marking Code: KN06

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Input Voltage	V_i	-30	V
Operating junction temperature range	T_{opr}	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

■ Electrical Characteristics ($V_i = -11\text{V}$, $I_o = 40\text{mA}$, $0^\circ\text{C} < T_j < 125^\circ\text{C}$, $C_i = 0.33\ \mu\text{F}$, $C_o = 0.1\ \mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	V_o	$T_j = 25^\circ\text{C}$	-5.75	-6.0	-6.25	V
		$-8\text{V} \leq V_i \leq -20\text{V}$, $I_o = 1\text{mA} - 40\text{mA}$	-5.7	-6.0	-6.3	V
		$I_o = 1\text{mA} - 70\text{mA}$	-5.7	-6.0	-6.3	V
Load regulation	ΔV_o	$T_j = 25^\circ\text{C}$, $I_o = 1\text{mA} - 100\text{mA}$		21	80	mV
		$T_j = 25^\circ\text{C}$, $I_o = 1\text{mA} - 40\text{mA}$		11	40	mV
Line regulation	ΔV_o	$-8\text{V} \leq V_i \leq -20\text{V}$, $T_j = 25^\circ\text{C}$		20	175	mV
		$-9\text{V} \leq V_i \leq -20\text{V}$, $T_j = 25^\circ\text{C}$		15	125	mV
Quiescent current	I_q	25°C		3.9	6.0	mA
Quiescent current change	ΔI_q	$0^\circ\text{C} < T_j < 125^\circ\text{C}$, $-9\text{V} \leq V_i \leq -20\text{V}$			1.5	mA
	ΔI_q	$0^\circ\text{C} < T_j < 125^\circ\text{C}$, $1\text{mA} \leq I_o \leq 40\text{mA}$			0.1	mA
Output noise voltage	V_n	$10\text{Hz} \leq f \leq 100\text{kHz}$, $T_j = 25^\circ\text{C}$		44		μV
Ripple rejection	RR	$-9\text{V} \leq V_i \leq -19\text{V}$, $f = 120\text{Hz}$	40	48		dB
Dropout voltage	V_d	$T_j = 25^\circ\text{C}$		1.7		V

■ Typical Application

