

100mA, Quasi Low-Dropout Voltage Regulator

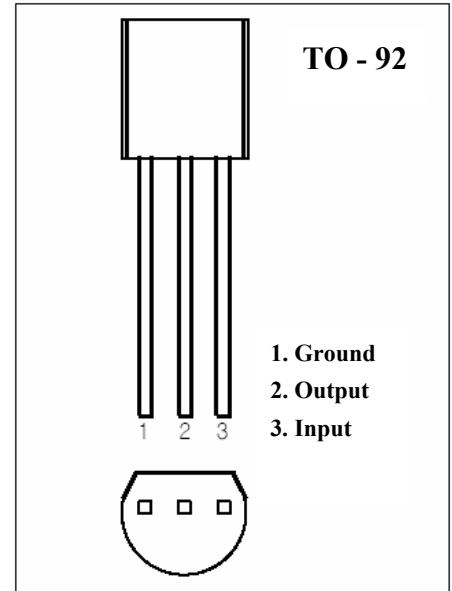
KK3480

Features:

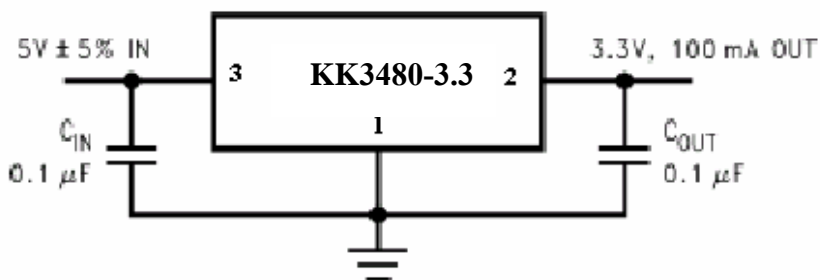
- 3.3, 5V versions available
- 30V maximum input for operation
- 1.2V guaranteed maximum dropout over full load and temperature ranges
- 100 mA guaranteed minimum load current

Application:

- Tiny alternative to 78LXX series and similar devices
- Low-Dropout Voltage Regulator
- Post regulator for switching DC/DC converter
- Bias supply for analog circuits



Typical Application Circuit



Absolute Maximum Ratings

Input Voltage	35V
Junction Temperature	+150°C

Electrical Characteristics KK3480-3.3, KK3480-5.0

Typicals and limits appearing in normal type apply for $T_A = T_J = 25^\circ\text{C}$. Limits appearing in boldface type apply over the entire junction temperature range for operation, -10 to $+70^\circ\text{C}$. (Notes 1, 2)

Nominal Output Voltage (VNOM)			3.3V			5.0V			Units
Parameter	Symbol	Conditions	Min	Typ	Max	Min	Typ	Max	
Output Voltage	V_{out}	$V_{in}=V_{nom}+1.5V$; $1mA \leq I_{out} \leq 100mA$	3.17 3.14	3.3	3.43 3.46	4.8 4.75	5.0	5.2 5.25	V
Line Regulation	ΔV_{out}	$V_{nom}+1.5V \leq V_{in} \leq 30V$; $I_{out} = 1mA$			25			25	mV
Load Regulation	ΔV_{out}	$V_{in}=V_{nom}+1.5V$; $1mA \leq I_{out} \leq 100mA$			40			50	mV
Ground Pin Current	I_{GND}	$V_{in}=30V$ No Load		3	4		3	4	mA
Ground Pin Current Change	ΔI_{GND}	$V_{nom}+1.5V \leq V_{in} \leq 20V$, $I_{out} = 40mA$; $V_{in}=V_{nom}+5V$, $1mA \leq I_{out} \leq 40mA$			1.4			1.4	mA
					0.5			0.5	mA
Dropout Voltage	V_{in} - V_{out}	$I_{out} = 10mA$; $I_{out} = 100mA$			0.9			0.9	V
					1.0			1.0	
					1.1			1.1	
					1.2			1.2	

Note 1: A typical is the center of characterization data taken with $T_A = T_J = 25^\circ\text{C}$. Typical values are not guaranteed.

Note 2: All limits are guaranteed. All electrical characteristics having room-temperature limits are tested during production with $T_A = T_J = 25^\circ\text{C}$. All hot and cold limits

are guaranteed by correlating the electrical characteristics to process and temperature variations and applying statistical process control.

• TO-92

