

## Three-terminal positive voltage regulator

### FEATURES

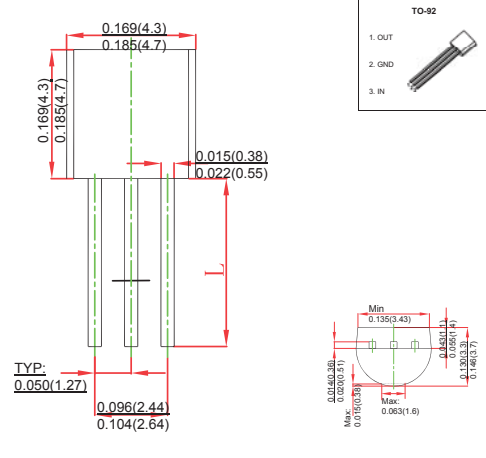
- Maximum output current IOM: 0.1A
- Output voltage VO: -5V
- Continuous total dissipation

$$P_D: 0.625 \text{ W ( } T_a = 25 \text{ } ^\circ\text{C )}$$

### MECHANICAL DATA

- Case: TO-92 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any

### TO-92



### ABSOLUTE MAXIMUM RATINGS

(Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	-30	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	200	$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_{OPR}$	0~+150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65~+150	$^\circ\text{C}$

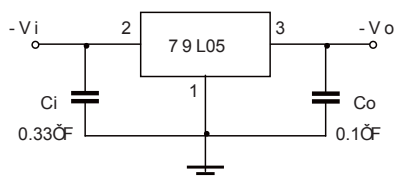
### ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE

( $V_i = -10\text{V}$ ,  $I_o = 40\text{mA}$ ,  $C_i = 0.33 \text{ } \mu\text{F}$ ,  $C_o = 0.1 \text{ } \mu\text{F}$ , unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	$V_o$	25 $^\circ\text{C}$	-4.8	-5.0	-5.2	V
		-7V $\leq V_i \leq$ -20V, $I_o = 1\text{mA} \sim 40\text{mA}$	-4.75	-5.0	-5.25	V
		0-125 $^\circ\text{C}$ , $I_o = 1\text{mA} \sim 70\text{mA}$	-4.75	-5.0	-5.25	V
Load Regulation	$\Delta V_o$	$I_o = 1\text{mA} \sim 100\text{mA}$ , 25 $^\circ\text{C}$		20	60	mV
		$I_o = 1\text{mA} \sim 40\text{mA}$ , 25 $^\circ\text{C}$		10	30	mV
Line Regulation	$\Delta V_o$	-7V $\leq V_i \leq$ -20V, 25 $^\circ\text{C}$		15	150	mV
		-8V $\leq V_i \leq$ -20V, 25 $^\circ\text{C}$		12	100	mV
Quiescent Current	$I_q$	25 $^\circ\text{C}$			6	mA
Quiescent Current Change	$\Delta I_q$	-8V $\leq V_i \leq$ -20V, 0-125 $^\circ\text{C}$			1.5	mA
	$\Delta I_q$	1mA $\leq V_i \leq$ 40mA, 0-125 $^\circ\text{C}$			0.1	mA
Output Noise Voltage	$V_N$	10Hz $\leq f \leq$ 100KHz, 25 $^\circ\text{C}$		40		$\mu\text{V}/V_o$
Ripple Rejection	RR	-8V $\leq V_i \leq$ -18V, $f = 120\text{Hz}$ , 0-125 $^\circ\text{C}$	41	49		dB
Dropout Voltage	$V_d$	25 $^\circ\text{C}$		1.7		V

\* Pulse test.

### TYPICAL APPLICATION

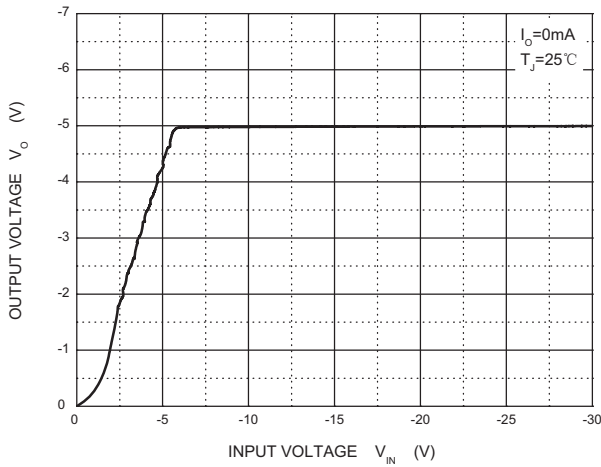


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

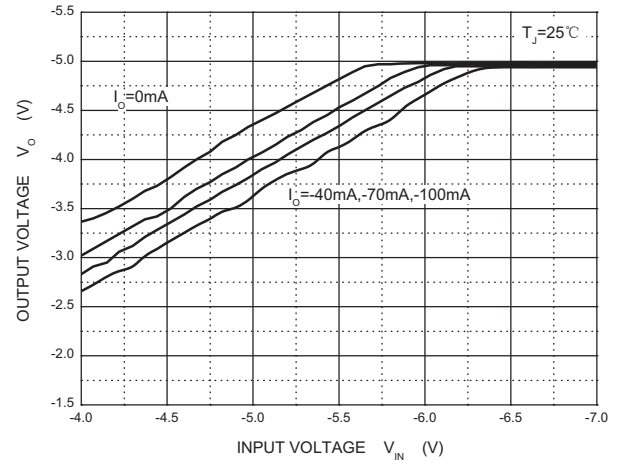
# RATINGS AND CHARACTERISTIC CURVES

## TYPICAL APPLICATION

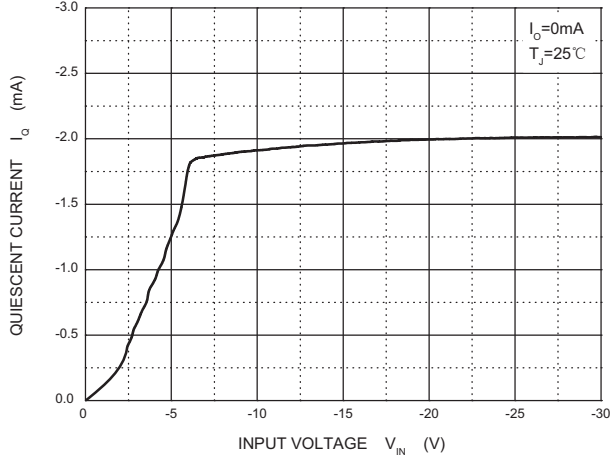
**Output Characteristics**



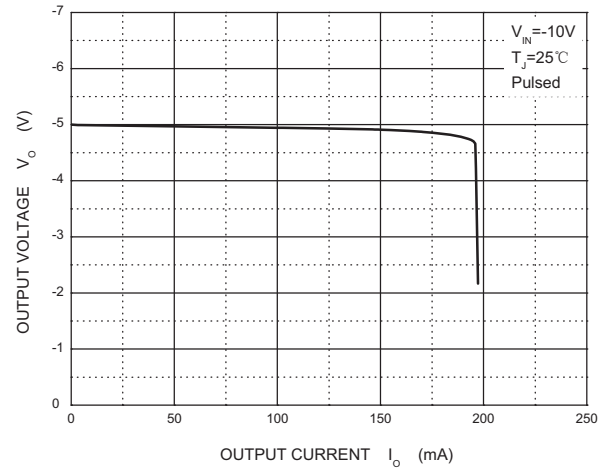
**Dropout Characteristics**



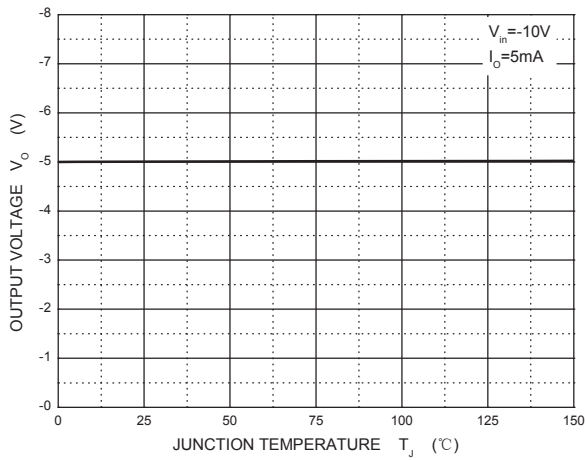
**Quiescent Current vs Input Voltage**



**Current Cut-off Grid Voltage**



**Output Voltage vs Junction Temperature**



**Power Derating Curve**

