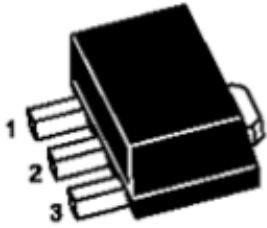


## SOT-89 Plastic-Encapsulate Voltage Regulators

LM79L05A

Three-terminal negative voltage regulator

**SOT-89  
Surface Mount  
Plastic Package**



Pin Configuration

1. Ground
2. In
3. Out

### Features

1. Maximum Output current  $I_O$ : 0.1A
2. Output voltage  $V_O$ : -5V
3. Continuous total dissipation  $P_D$ : 0.625W ( $T_a = 25^\circ\text{C}$ )

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

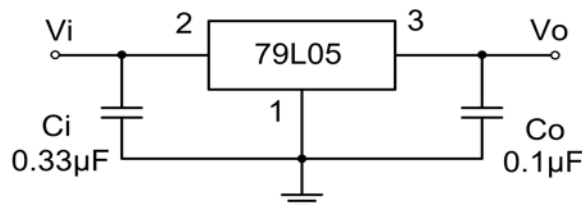
DESCRIPTION	SYMBOL	VALUE	UNIT
Input Voltage	$V_i$	-30	V
Thermal Resistance from Junction	$R_{\theta JA}$	200	$^\circ\text{C/W}$
Operating Junction Temperature	$T_{OPR}$	0 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

### Electrical Characteristics at Specified Virtual Junction Temperature

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

DESCRIPTION	SYMBOL	Test Conditions	VALUE			Unit	
			Min	Typ	Max		
Output Voltage	$V_o$	$25^\circ\text{C}$	-4.8	-5.00	-5.20	V	
		$-7\text{V} \leq V_i \leq -20\text{V}$ , $I_o = 1\text{mA}$ to $40\text{mA}$	0- $125^\circ\text{C}$	-4.75	-5.00	-5.25	V
		$I_o = 1\text{mA}$ to $70\text{mA}$	0- $125^\circ\text{C}$	-4.75	-5.00	-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	$\Delta V_o$	$-7\text{V} \leq V_i \leq -20\text{V}$	$25^\circ\text{C}$	15	150	mV	
		$-8\text{V} \leq V_i \leq -20\text{V}$	$25^\circ\text{C}$	12	100	mV	
Quiescent Current	$I_q$	$25^\circ\text{C}$			6	mA	
Quiescent Current Change	$\Delta I_q$	$-8\text{V} \leq V_i \leq -20\text{V}$	0- $125^\circ\text{C}$		1.5	mA	
		$1\text{mA} \leq I_o \leq 40\text{mA}$	0- $125^\circ\text{C}$		0.1	mA	
Output Noise Voltage	$V_N$	$f = 10\text{Hz}$ to $100\text{KHz}$	$25^\circ\text{C}$	40		$\mu\text{V}$	
Ripple Rejection	RR	$f = 120\text{Hz}$ , $-8\text{V} \leq V_i \leq -18\text{V}$	0- $125^\circ\text{C}$	41	49	dB	
Dropout Voltage	$V_d$	$25^\circ\text{C}$		1.7		V	

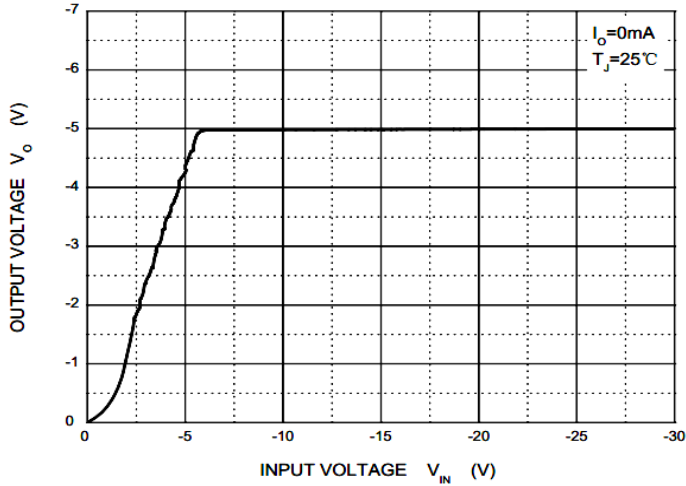
### Typical Application



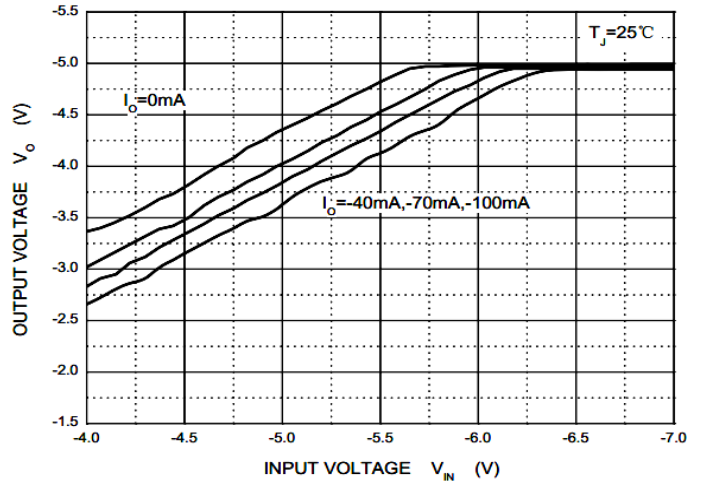
**Note:** Bypass capacitors are recommended for optimum stability and transient response and should be located as close as Possible to the regulators.

## Typical Characteristics

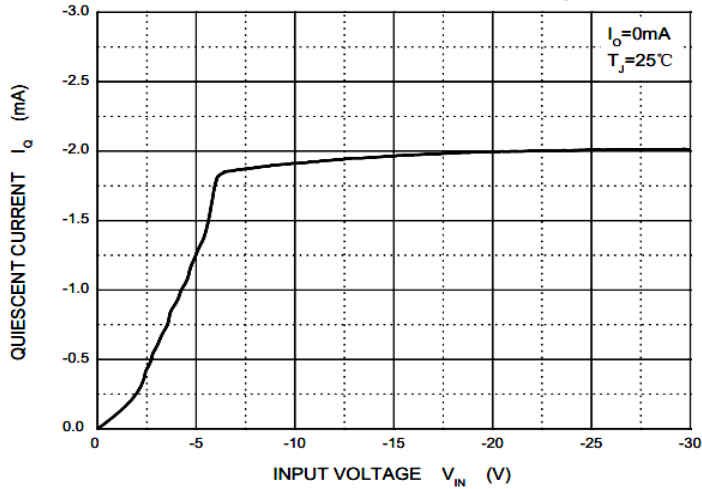
**Output Characteristics**



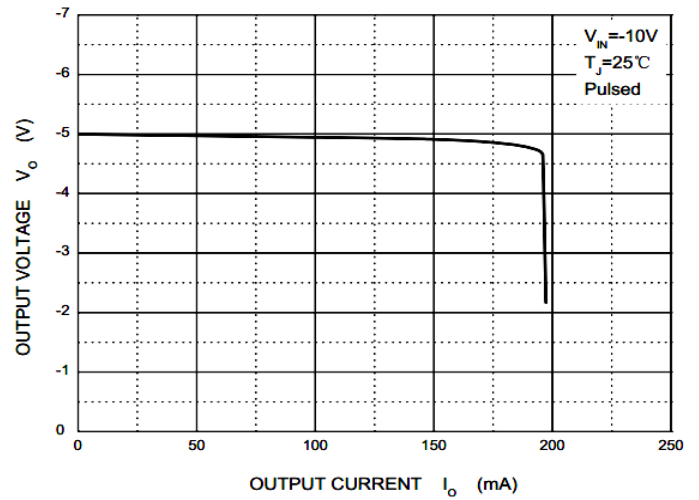
**Dropout Characteristics**



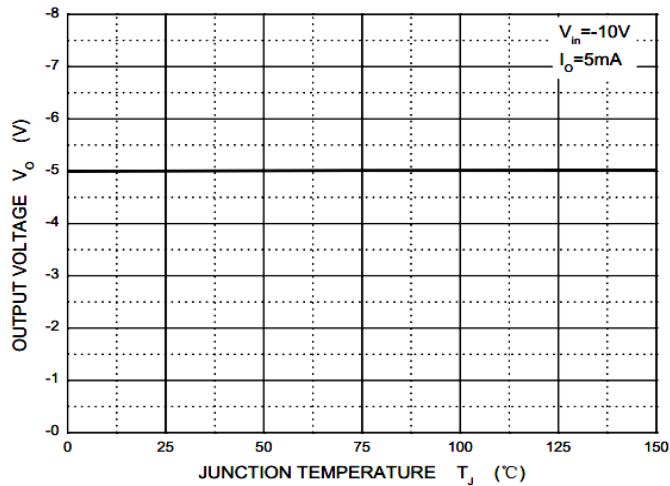
**Quiescent Current vs Input Voltage**



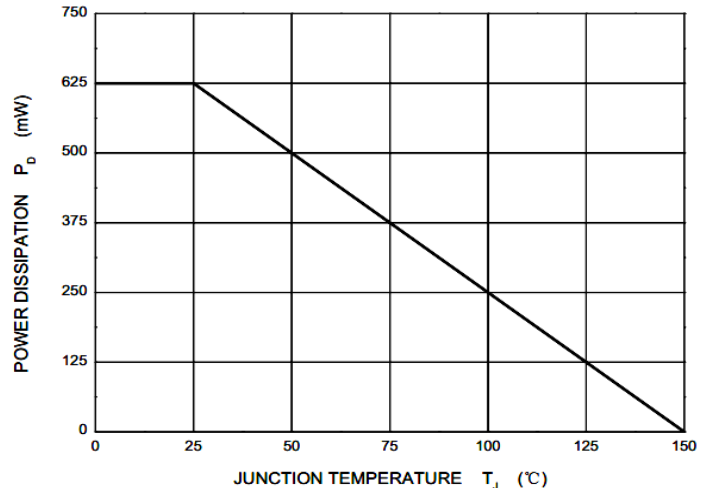
**Current Cut-off Grid Voltage**



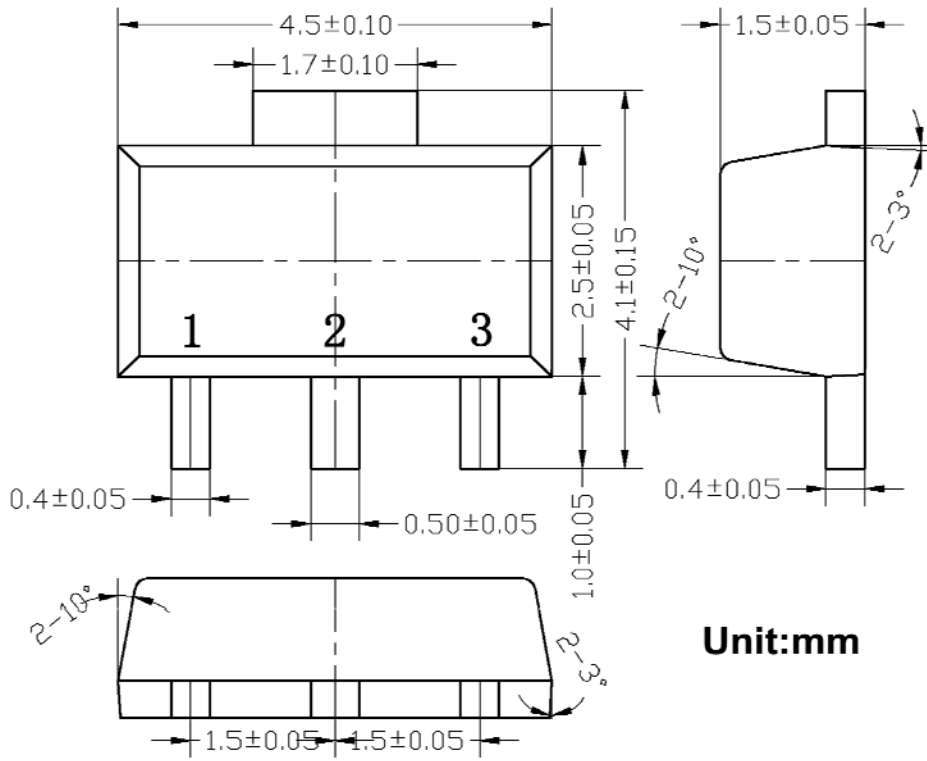
**Output Voltage vs Junction Temperature**



**Power Derating Curve**



**Package Details**



**Unit:mm**

- 1 Ground**
- 2 IN**
- 3 OUT**



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2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

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