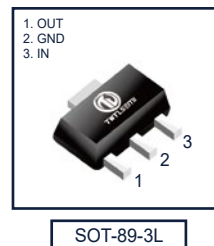


## Features

- Maximum output current  
I<sub>om</sub>: 0.1A
- Output voltage  
V<sub>o</sub>: 5V
- Continuous total dissipation  
PD: 0.6 W(T<sub>a</sub>= 25 °C )



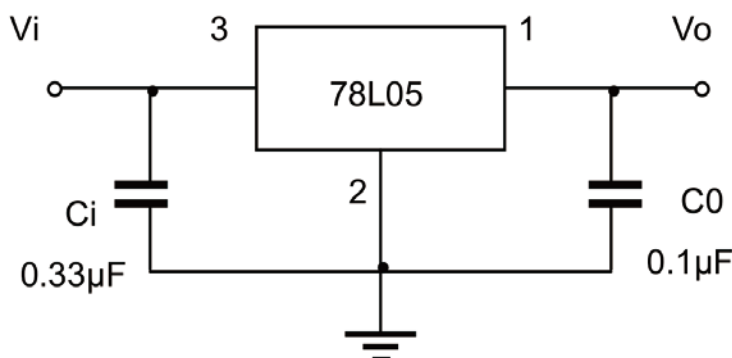
## Absolute Maximum Ratings(T<sub>A</sub>=25°C)

Symbol	Parameter	Value	Uniat
V <sub>i</sub>	Input Voltage	36	V
R <sub>θJA</sub>	Thermal Resistance from Junction to Ambient	160	°C/W
T <sub>OPR</sub>	Operating Junction Temperature Range	-40~+125	°C
T <sub>STG</sub>	Storage Temperature Range	-65~+150	°C

## Ordering information

Product ID	Pack	Naming rule	Marking	Qty(PCS)
78L05A	SOT-89-3L	<div style="border: 1px solid black; padding: 5px; display: inline-block;">78L05A</div> 产品名称 product name	C	1000

## TYPICAL APPLICATION



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

## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)

Symbol	Parameter	Test conditions		Min	Typ	Max	Unit
V <sub>o</sub>	Output voltage	T <sub>j</sub> =25°C		4.85	5.0	5.15	V
		7V≤V <sub>i</sub> ≤20V, I <sub>o</sub> =1mA~40mA	0-125°C	4.75	5.0	5.25	V
		I <sub>o</sub> =1mA~70mA		4.75	5.0	5.25	V
ΔV <sub>o</sub>	Load Regulation	I <sub>o</sub> =1mA~100mA	25°C		15	60	mV
		I <sub>o</sub> =1mA~40mA	25°C		8	30	mV
ΔV <sub>o</sub>	Line regulation	7V≤V <sub>i</sub> ≤20V	0-125°C		32	150	mV
		8V≤V <sub>i</sub> ≤20V	25°C		26	100	mV
I <sub>q</sub>	Quiescent Current		25°C		3.8	6	mA
ΔI <sub>q</sub>	Quiescent Current Change	8V≤V <sub>i</sub> ≤20V	0-125°C			1.5	mA
ΔI <sub>q</sub>		1mA≤V <sub>L</sub> ≤40mA	0-125°C			0.1	
V <sub>N</sub>	Output Noise Voltage	10Hz≤f≤100KHz	25°C		42		μV/V <sub>o</sub>
RR	Ripple Rejection	8V≤V <sub>i</sub> ≤20V, f=120Hz	0-125	41	49		dB
V <sub>d</sub>	Dropout Voltage		25°C		1.7		V

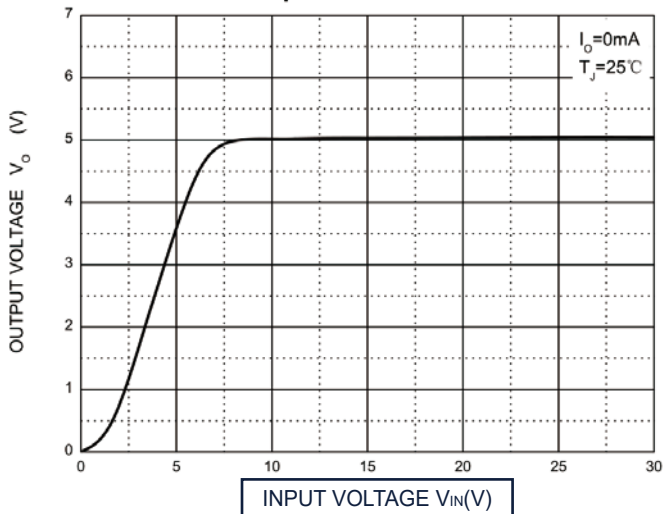
## Pin Configuration and Function

PIN NAME	TL-78L05 Series	I / O	DESCRIPTION
	SOT-89-3L		
IN	3	I	Input to the device.
GND	2	-	Regulator ground.
OUT	1	O	Output of the regulator.

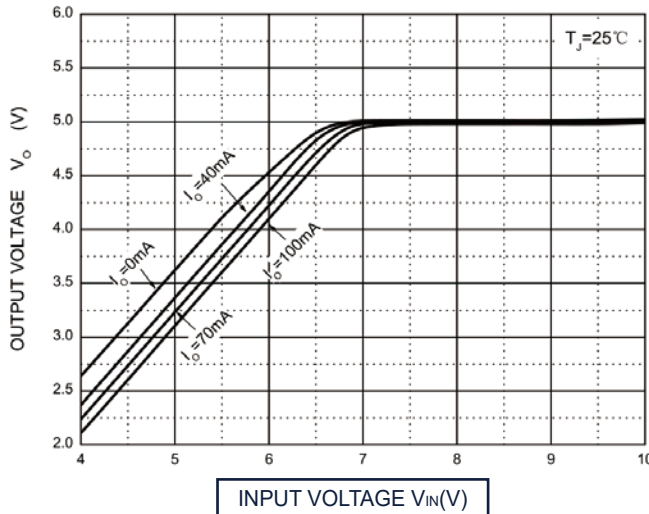


## Typical Characteristics

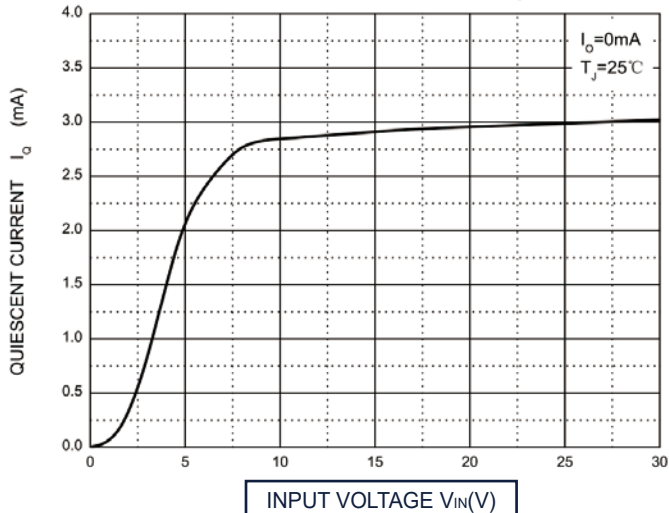
### Output Characteristics



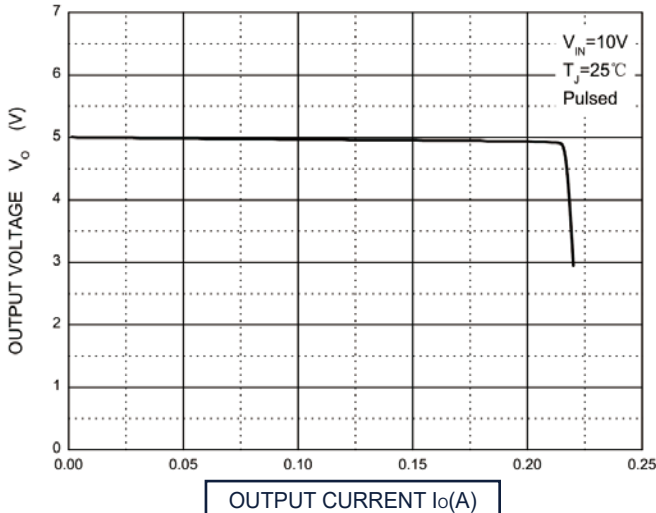
### Dropout Characteristics



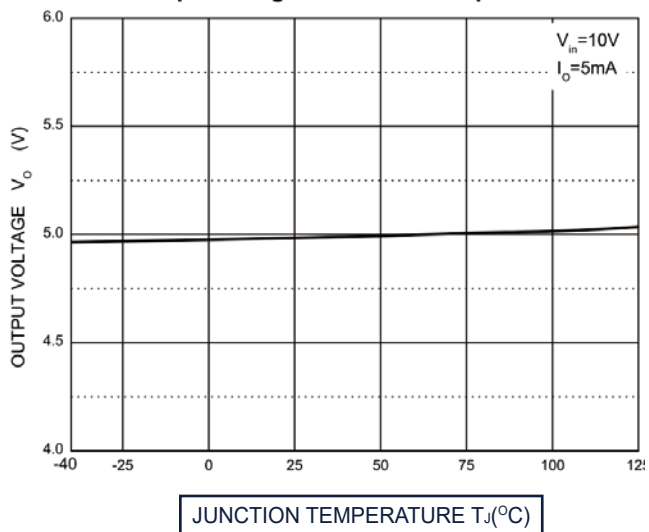
### Quiescent Current vs Input Voltage



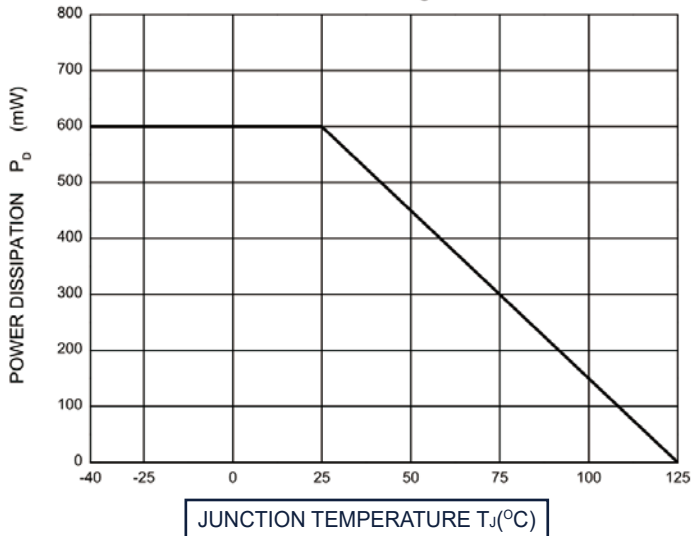
### Current Cut-off Grid Voltage



### Output Voltage vs Junction Temperature

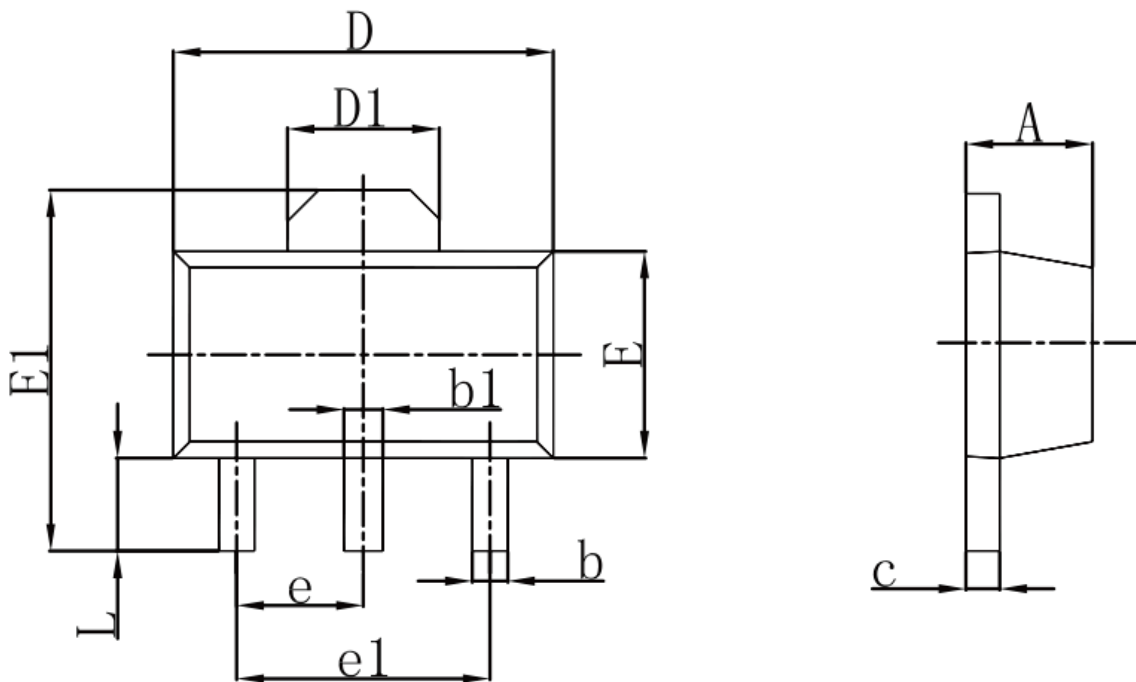


### Power Derating Curve





## SOT-89-3L Package Outline Dimensions



Symbol	Dimensions in Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047