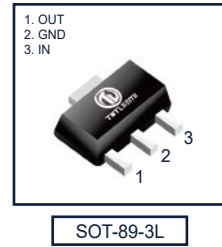


Features

- Maximum output current
 I_{OM} : 0.1A
- Output voltage
 V_O : 5V
- Continuous total dissipation
 P_D : 0.6 W($T_A = 25^\circ\text{C}$)



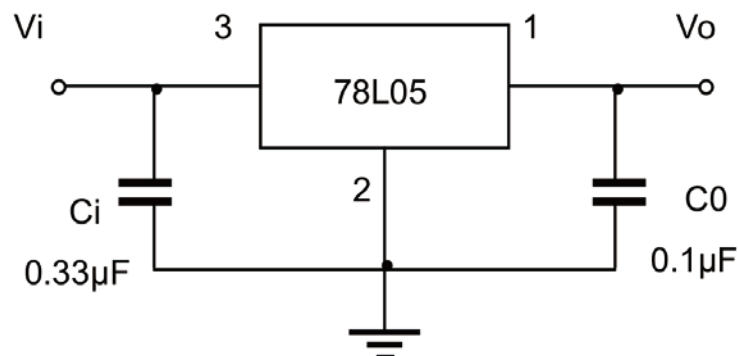
Absolute Maximum Ratings($T_A = 25^\circ\text{C}$)

Symbol	Parameter	Value	Unit
V_i	Input Voltage	36	V
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	160	$^\circ\text{C}/\text{W}$
T_{OPR}	Operating Junction Temperature Range	$-40 \sim +125$	$^\circ\text{C}$
T_{STG}	Storage Temperature Range	$-65 \sim +150$	$^\circ\text{C}$

Ordering information

Product ID	Pack	Naming rule	Marking	Qty(PCS)
78L05XB	SOT-89-3L	78L05XB 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_A=25°C unless otherwise specified)

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

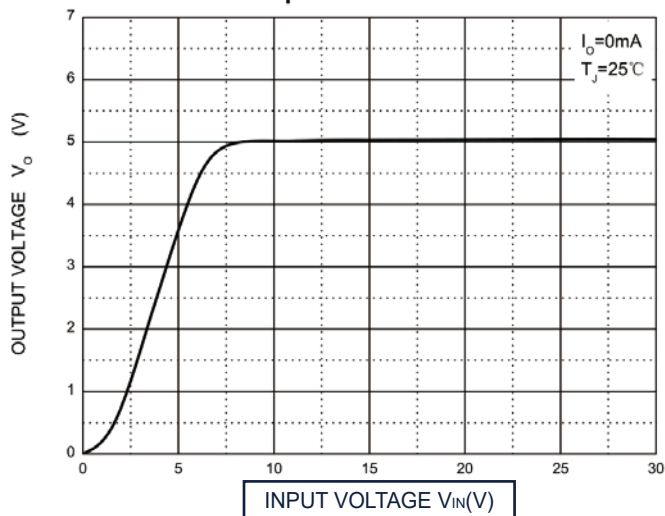
Pin Configuration and Function

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.

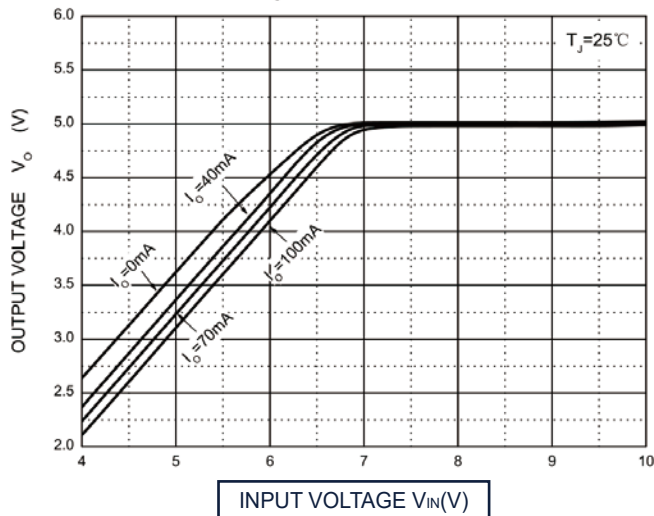


Typical Characteristics

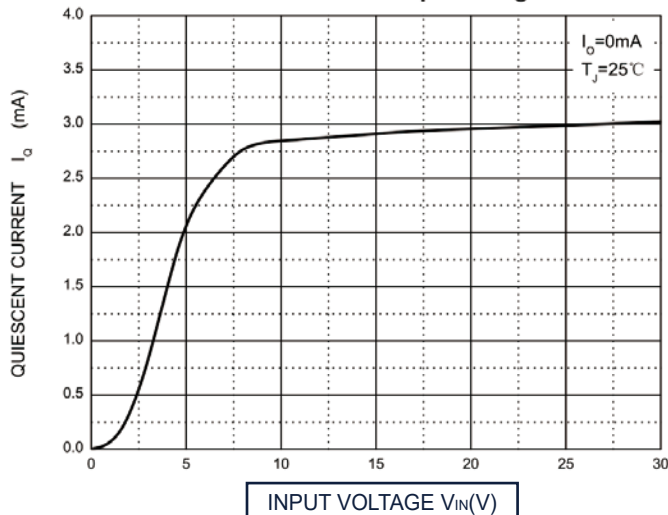
Output Characteristics



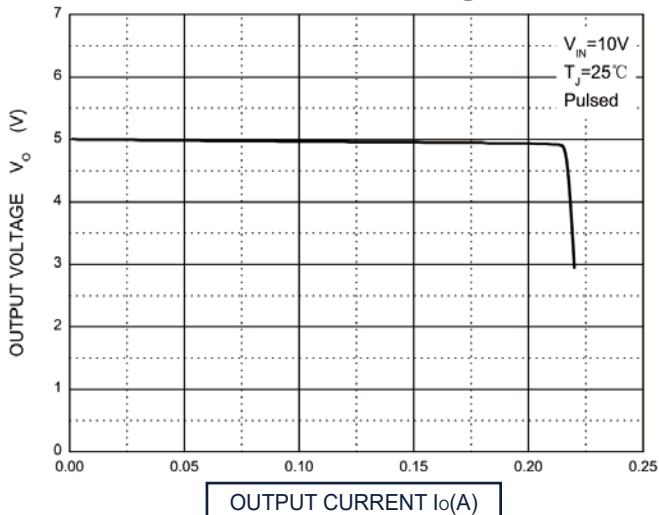
Dropout Characteristics



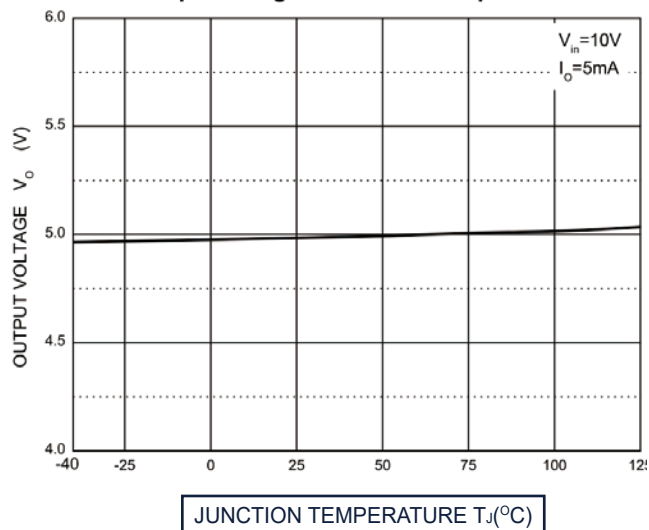
Quiescent Current vs Input Voltage



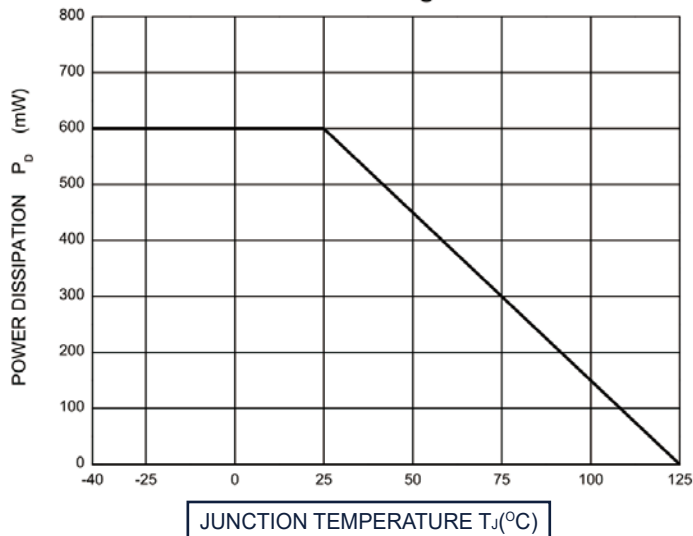
Current Cut-off Grid Voltage



Output Voltage vs Junction Temperature

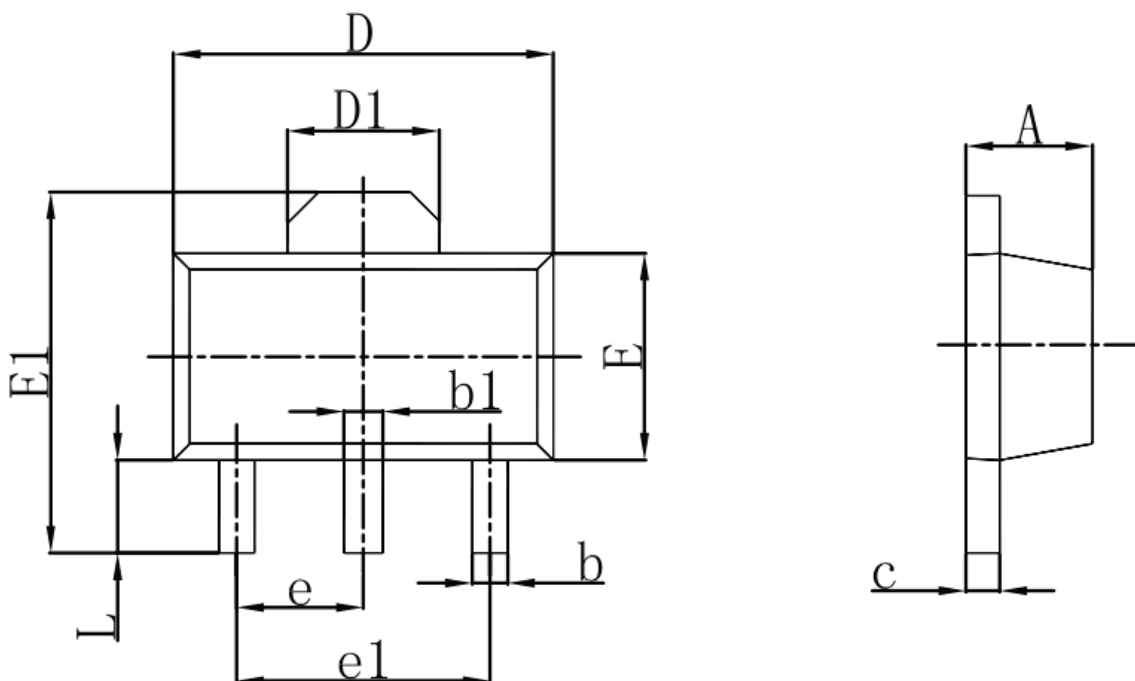


Power Derating Curve





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