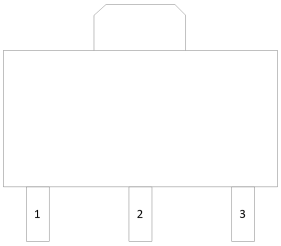
Features

- Output Voltage: 5V
- Maximum Output Current: 0.1A
- Output Transition Safe-Area Compensation

Pin Assignment



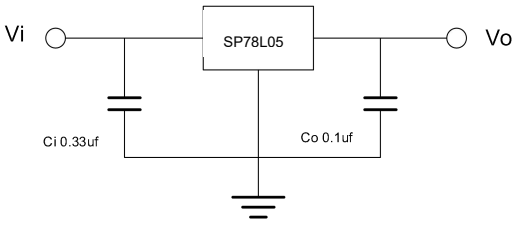
SOT-89-3L(1:OUT 2:GND 3:IN)

Marking

78L05 : Product code

** : Week Code

Typical Application



Part number rules

SP78L05①

Designator	Description
①	Package: T8: SOT-89-3

Absolute Maximum Ratings (T_a=25℃ unless otherwise noted)

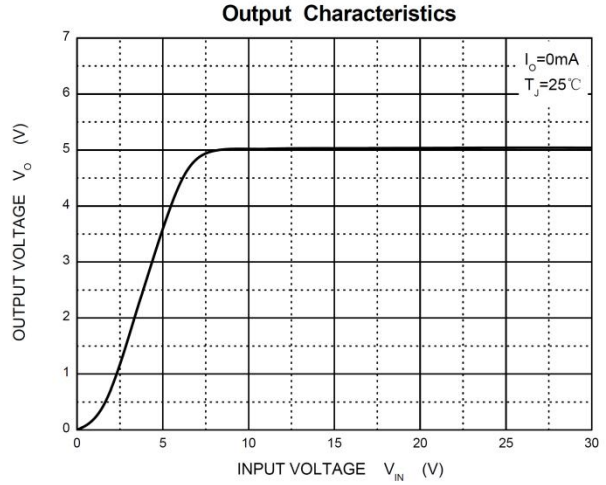
Parameter	Symbol	Value	Unit
Input voltage	V_i	30	V
Thermal Resistance from Junction to Air	$R_{\theta JA}$	166.7	℃/W
Operating Junction Temperature Range	T_{OPR}	-25~+125	℃
Storage Temperature Range	T_{STG}	-65~+150	℃

Electrical Characteristics(Ta=25℃,Vi=10V,Io=500mA,Ci=0.33uF,Co=0.1uF,unless otherwise specified**)**

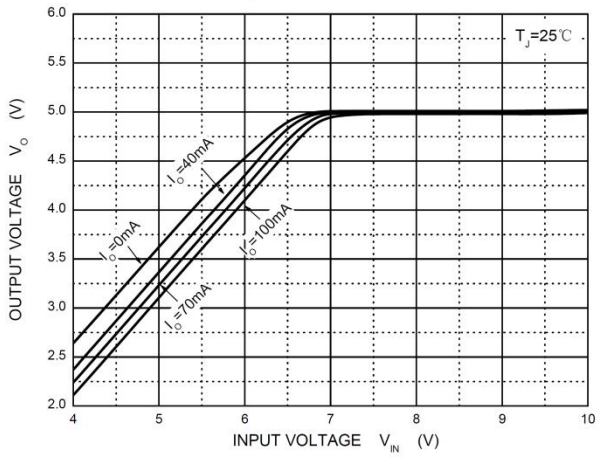
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output voltage	V_O		4.8	5	5.2	V
		7V≤V_i≤20V, Io=1mA-40mA	4.75	5	5.25	V
Load Regulation	ΔVo	Io =1mA-100mA		20	60	mV
		Io=1mA-40mA		10	30	mV
Line regulation	ΔVo	7V≤V_i≤20V		40	150	mV
		8V≤V_i≤20V		35	100	mV
Quiescent Current	I_Q				6	mA
Quiescent Current Change	ΔI_Q	8V≤V_i≤20V			0.8	mA
Dropout Voltage	Vd				1.7	V

Typical Characteristics

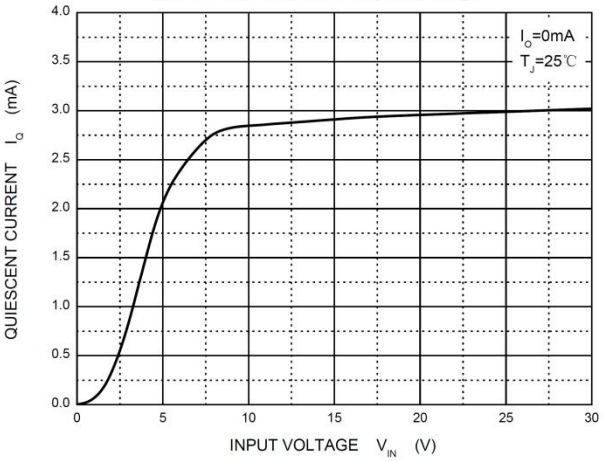
Output Characteristics



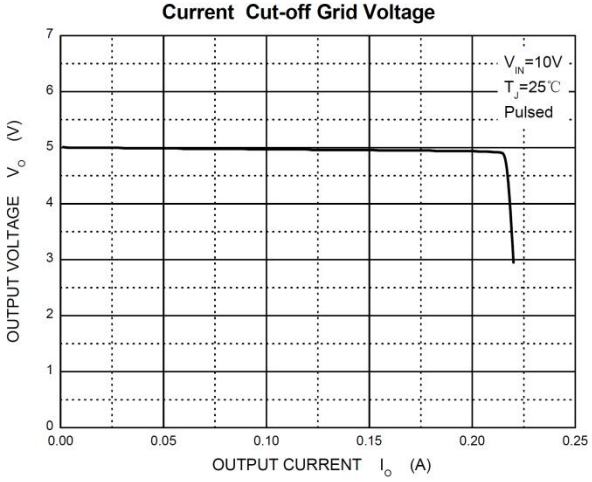
Dropout Characteristics



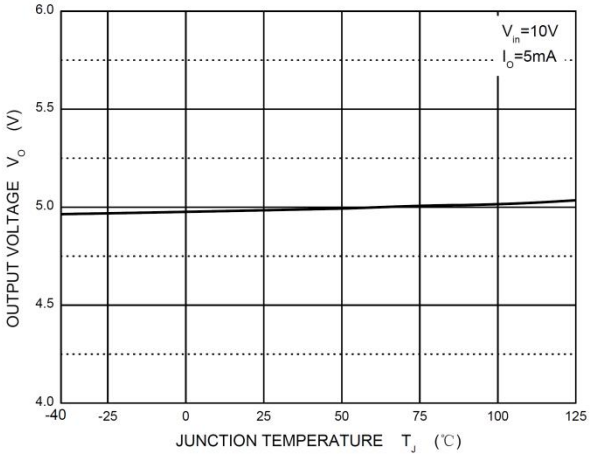
Quiescent Current vs Input Voltage



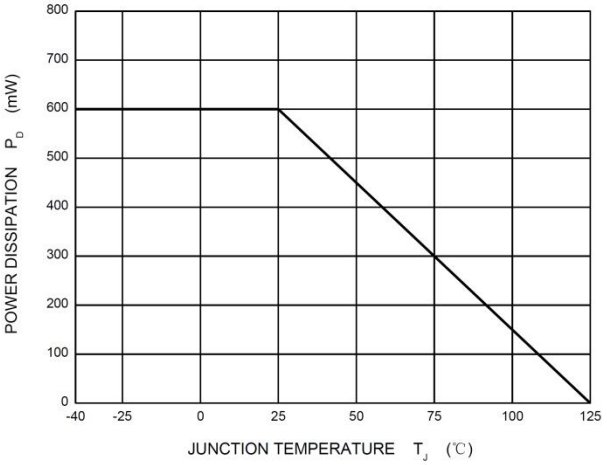
Current Cut-off Grid Voltage



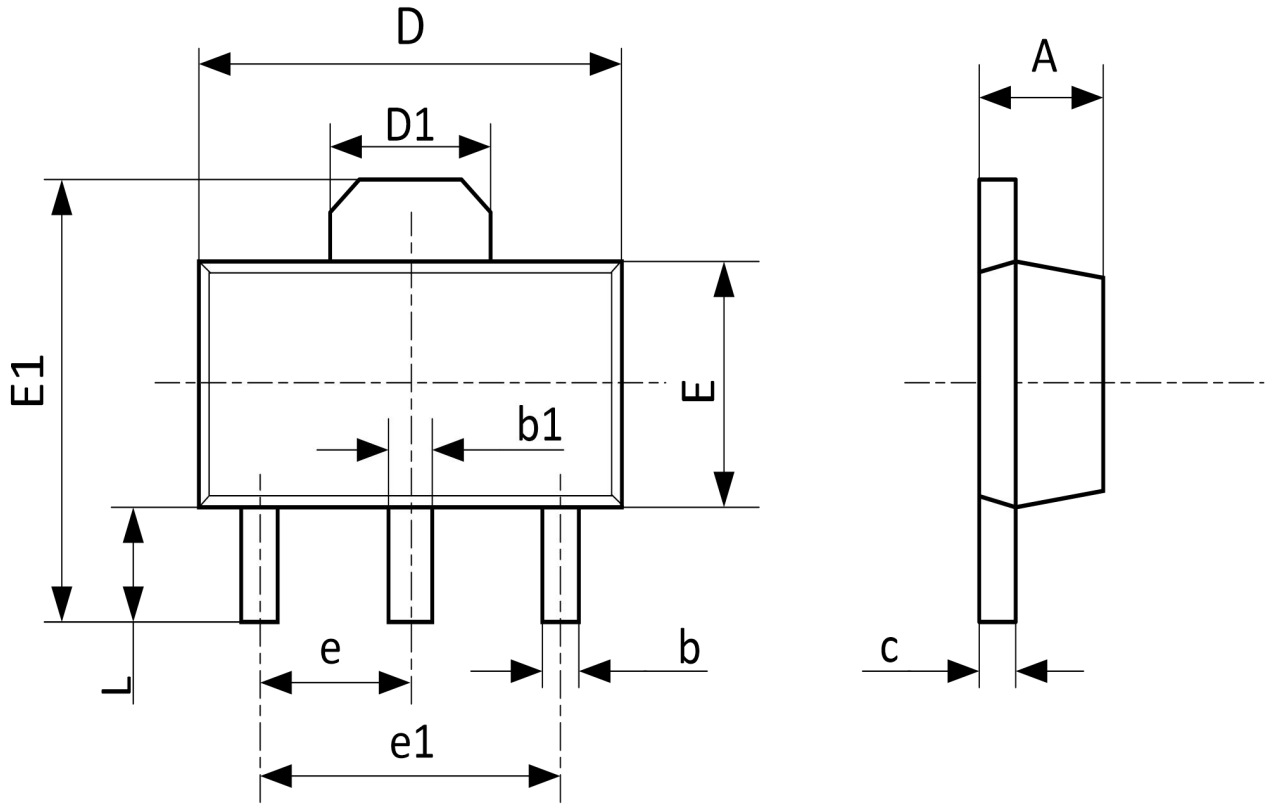
Output Voltage vs Junction Temperature



Power Derating Curve



SOT-89-3L Package Outline



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