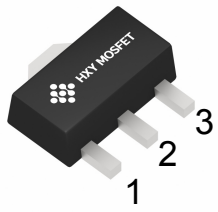
FEATURES

- Maximum output current
  I_{OM}: 0.15 A
- Output voltage
  V_O: 5V
- Continuous total dissipation
  P_D: 0.5W (T_a= 25 ℃)

SOT-89

1. OUT
2. GND
3. IN



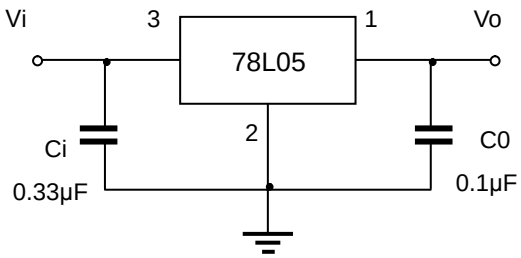
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Operating Junction Temperature Range	T_{OPR}	-0 ~+125	℃
Storage Temperature Range	T_{STG}	-40~+150	℃

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE (Vi=10V,Io=40mA,Ci=0.33uF,,Co=0.1uF, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_O	T_j=25℃ 7V≤V_i≤20V,I_O=1mA-40mA V_1=10V,I_O=1mA-70mA	4.8 4.75 4.75	5.0	5.2 5.25 5.25	V
Load regulation	Reg_{load}	T_j=25℃, I_O=1mA-100mA T_j=25℃, I_O=1mA-40mA		11 5	60 30	mV
Line regulation	Reg_{line}	7V≤V_i≤20V, T_j=25℃ 8V≤V_i≤20V, T_j=25℃		55 45	150 100	mV
Input Bias Current	I_{IB}	T_j=25℃ T_j=125℃		3.8	6.0 5.5	mA
Input Bias Current Change	$\triangle I_{IB}$	8V≤V_i≤20V 1mA≤I_O≤40mA			1.5 0.1	mA
Output noise voltage	V_N	10Hz ≤f≤100KHz		40		μV
Ripple rejection	RR	I_O=40mA,8V≤V_i≤18V,f=120Hz ,T_j=25℃	41	49		dB
Dropout voltage	V_I-V_O	T_j=25℃		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 @ Ta=25℃ unless otherwise specified

Figure 1. Dropout Characteristics

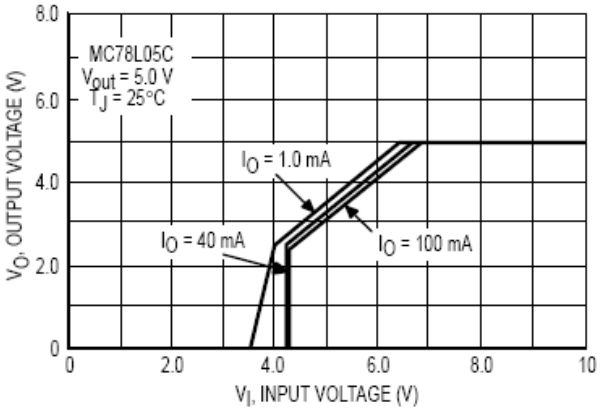


Figure 2. Dropout Voltage versus Junction Temperature

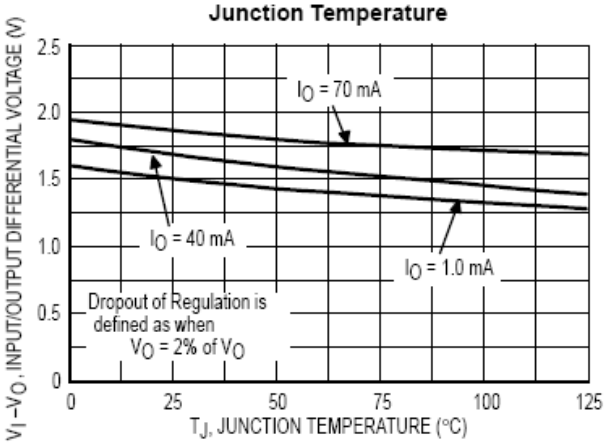


Figure 3. Input Bias Current versus Ambient Temperature

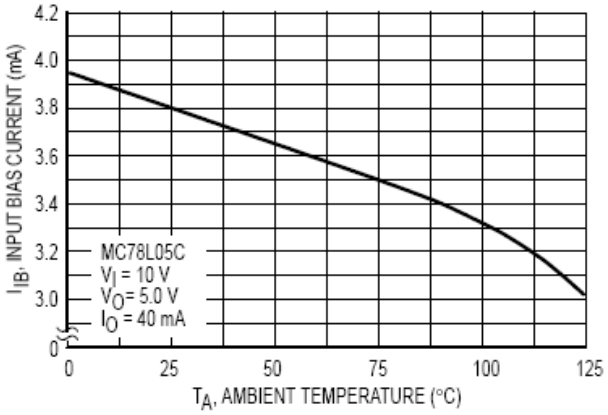


Figure 4. Input Bias Current versus Input Voltage

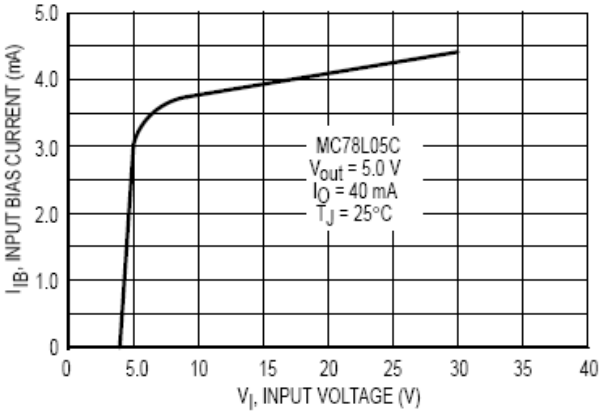


Figure 5. Maximum Average Power Dissipation versus Ambient Temperature – TO–92 Type Package

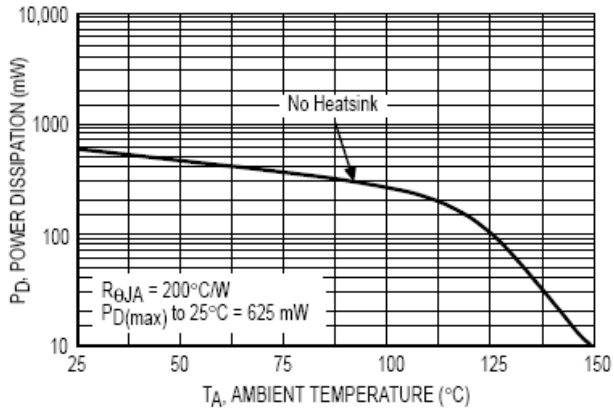
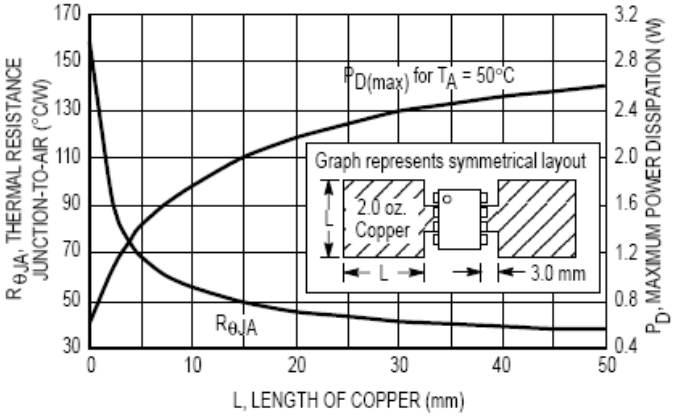
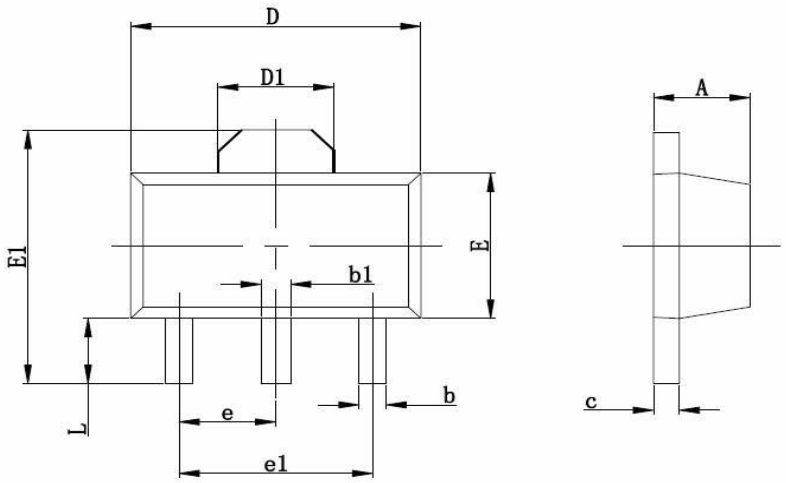


Figure 6. SOP–8 Thermal Resistance and Maximum Power Dissipation versus P.C.B. Copper Length



SOT-89 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.350	0.520	0.013	0.197
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	2.350	2.550	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP		0.060TYP	
e1	3.000 TYP		0.118TYP	
L	0.900	1.100	0.035	0.047

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