78L05
LINEAR INTEGRATED CIRCUIT

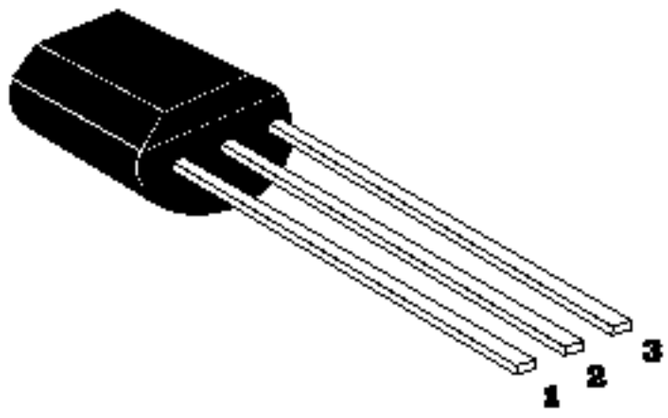
3-TERMINAL 0.1A POSITIVE VOLTAGE REGULATOR

2

FEATURES

*Output current up to 100mA
*Fixed output voltage of 5V available
*Thermal overload shutdown protection
*Short circuit current limiting

Package: TO-92



PIN: / STYLE	1	2	3
NO.1	O	G	I

ABSOLUTE MAXIMUM RATINGS

(Operating temperature range applies unless otherwise specified)

Characteristic	Symbol	Rating	Unit
Input voltage	V_I	30	V
Output Current	I_O	100	mA
Power Dissipation	P_D	500	mW
Operating Junction Temperature Range	T_{OPR}	0~150	℃
Storage Temperature Range	T_{STG}	-55~150	℃

ELECTRICAL CHARACTERISTICS at Tamb=25°C

(V_I=10V,I_O=40mA,0℃<T_j<125℃,C_I=0.33uF,C_O=0.1uF,unless otherwise specified)(Note 1)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Output Voltage	V_O	4.8	5	5.2	V	T_j=25℃
Output Voltage	V_O	4.75		5.25	V	7V≦V_I≦20V,I_O=1mA-40mA
Output Voltage(Note 2)	V_O	4.75		5.25	V	V_I=10V,I_O=1mA-70mA
Load Regulation	⊿V_O		11	60	mV	T_j=25℃,I_O=1mA-100mA
Load Regulation	⊿V_O		5	30	mV	T_j=25℃,I_O=1mA-40mA
Line Regulation	⊿V_O		55	150	mV	7V≦V_I≦20V,Io=40mA,T_j=25℃
Line Regulation	⊿V_O		45	100	mV	8V≦V_I≦20V,Io=40mA,T_j=25℃
Quiescent Current	Iq		4	6	mA	V_{IN}=10V,I_O=0mA,T_j=25℃
Quiescent Current Change	⊿ Iq			1.5	mA	8V≦V_I≦20V
Quiescent Current Change	⊿ Iq			0.1	mA	1mA≦I_O≦40mA
Output Noise Voltage	V_N		40		uV	10Hz≦f≦100kHz Ta=25℃
Ripple Rejection	RR	41	80		dB	8V≦V_I≦18 V,f=120Hz,T_j=25℃
Dropout Voltage	V_D		1.7		V	T_j=25℃

Note1: The maximum steady state usable output current is dependent on input voltage, heat sinking, lead length of the package and copper patten of PCB. The data above represent pulse test conditions with junction temperatures specified at the initiation of test.

Note2: Power dissipation<0.5W