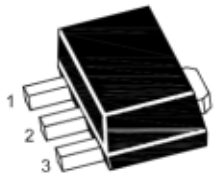
SL78L05

Three-terminal positive voltage regulator

Features

- Input voltage:up to 30V
- Output:5V
- Output current up to 100 mA, internal thermal overload protection and short-circuit limiting.

SOT-89



1. OUT 2. GND 3. IN

Maximum Ratings

Ratings at T_A = 25°C ambient temperature unless otherwise specified.

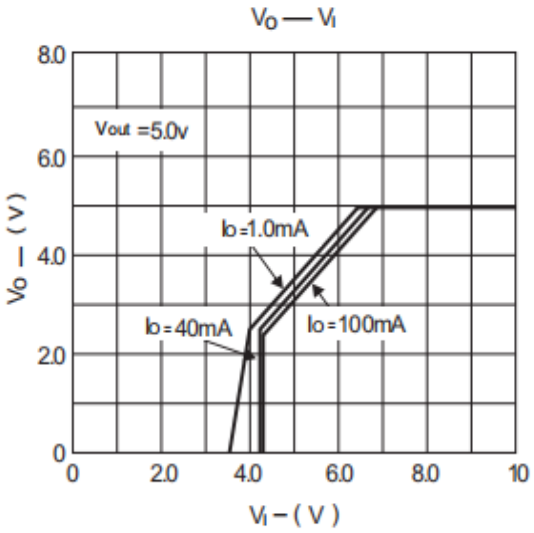
Parameter	Symbols	Value	Units
Input Voltage	V_I	30	V
Output Current	I_O	100	mA
Junction Temperature	T_J	150	°C
Operating Temperature Range	T_{OPR}	-40～125	°C
Power Dissipation	P_D	500	mW
Storage Temperature Range	T_{STG}	-55～150	°C

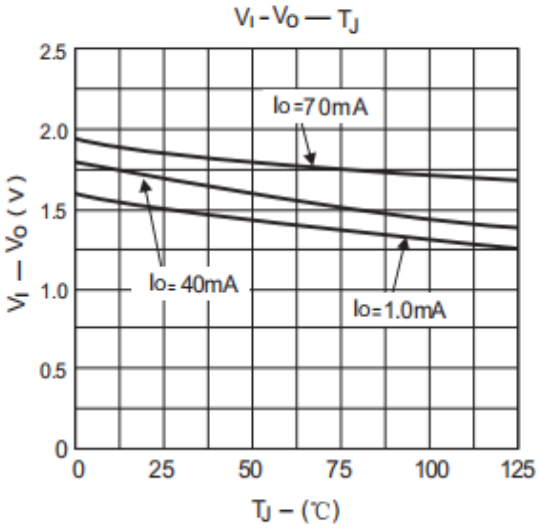
Electrical Characteristics

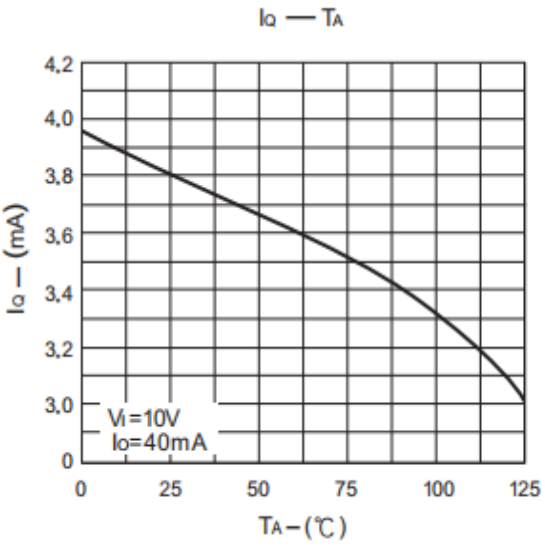
Ratings at T_A = 25°C ambient temperature unless otherwise specified.

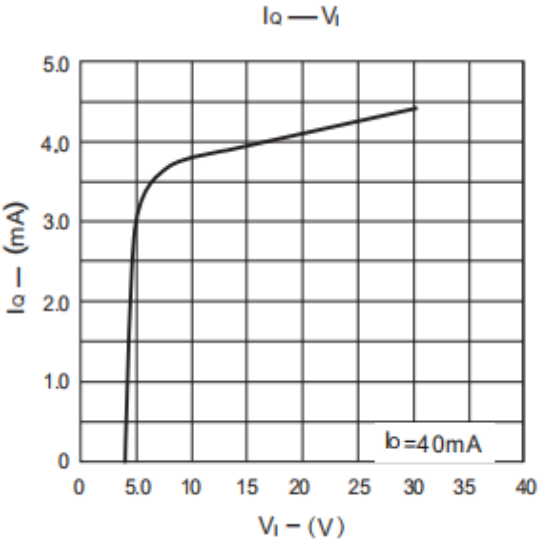
Parameter	Symbols	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_O	I_o=40mA T_J=25°C	4.80	5.0	5.2	V
		I_O=1mA to 40mA V_I=7V to 20V	4.75	5.0	5.25	V
		I_O=1mA to 70mA V_I=10V	4.75	5.0	5.25	V
Line Regulation	$\triangle V_O$	V_I=7V to 20V TJ=25°C		32	150	mV
		V_I=8V to 20V T_J=25°C		26	100	mV
Load Regulation	$\triangle V_O$	I_O=1mA to 100mA T_J=25°C		15	60	mV
		I_O=1mA to 40 mA T_J=25°C		8	30	mV
Ripple Rejection	RR	V_I=8V to 18V f=120Hz T_J=25°C	41	49		dB
Output Noise Voltage	eN	f=10Hz~100KHz T_J=25°C		42		μV
Dropout Voltage	V_D	T_J=25°C		1.7		V
Quiescent Current	I_Q	T_J=25°C		3.8	6	mA
		T_J=125°C			5.5	mA
Quiescent Current Change	$\triangle I_Q$	V_I=8V to 20V			1.5	mA
		I_O=1mA to 40mA			0.1	mA

Ratings and Characteristic Curves









Package Outline
SOT-89
Dimensions in mm