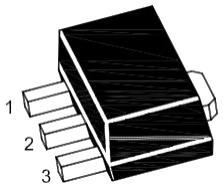
78L05

3-Terminal 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.

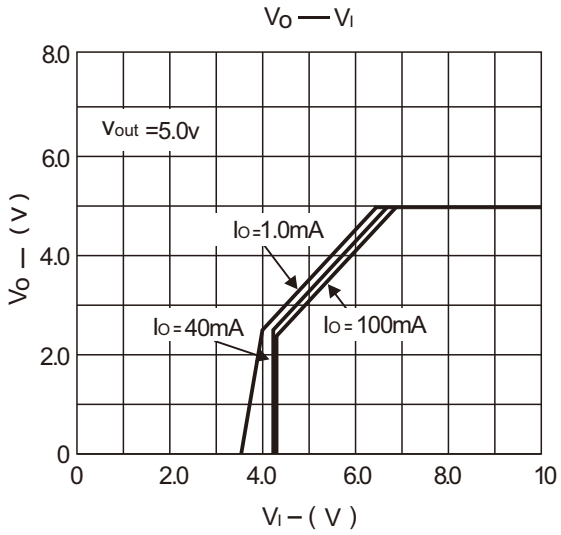
Parameter	Symbols	Value	Units
Input Voltage	V_I	30	V
Output Current	I_O	100	mA
Junction Temperature	T_J	150	˚C
Operating Temperature Range	T_{OPR}	-40～125	˚C
Power Dissipation	P_D	500	mW
Storage Temperature Range	T_{STG}	-55～150	˚C

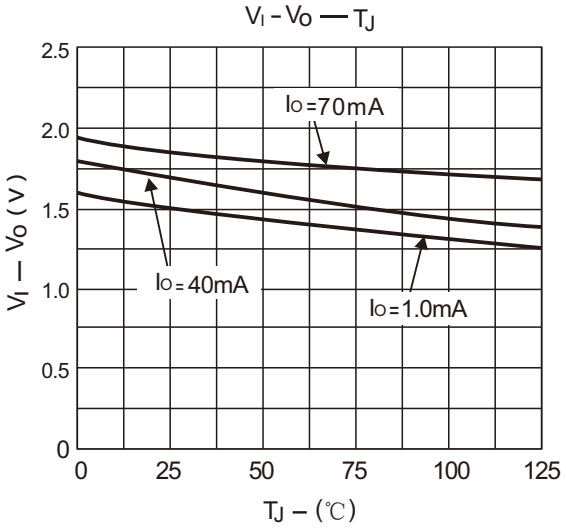
Electrical Characteristics

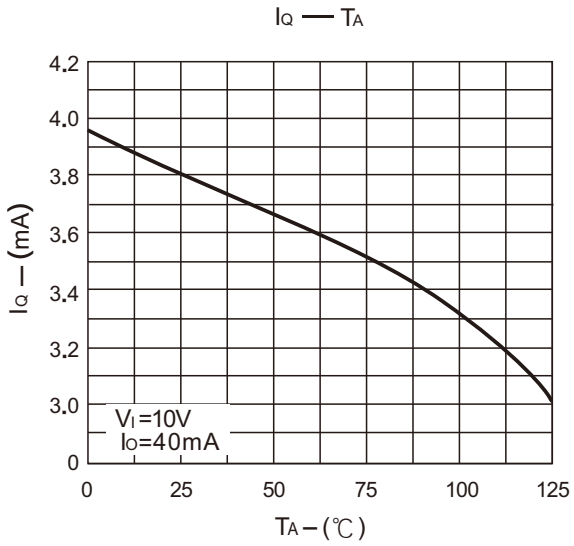
Ratings at T_A = 25˚C ambient temperature unless otherwise specified.

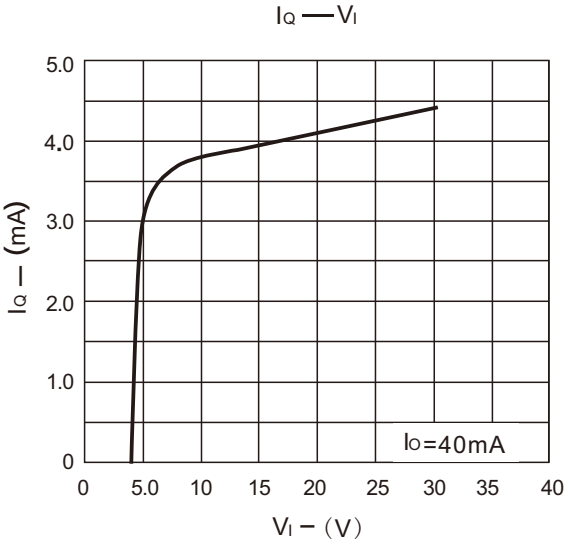
Parameter	Symbols	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_O	I_o=40mA T_J=25˚C	4.80	5.0	5.2	V
		I_O=1mA to 40mA V_I=7V to 20V	4.75	5.0	5.25	V
		I_O=1mA to 70mA V_I=10V	4.75	5.0	5.25	V
Line Regulation	$\triangle$Vo	V_I=7V to 20V TJ=25˚C		32	150	mV
		V_I=8V to 20V T_J=25˚C		26	100	mV
Load Regulation	$\triangle V_O$	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

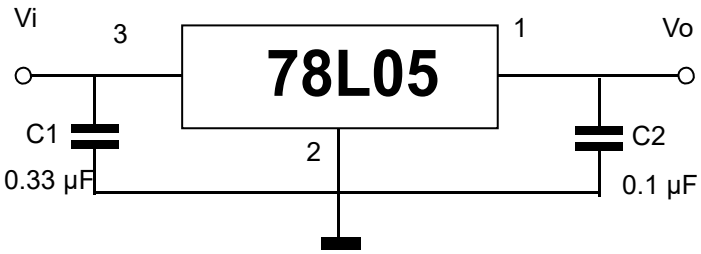
Ratings and Characteristic Curves





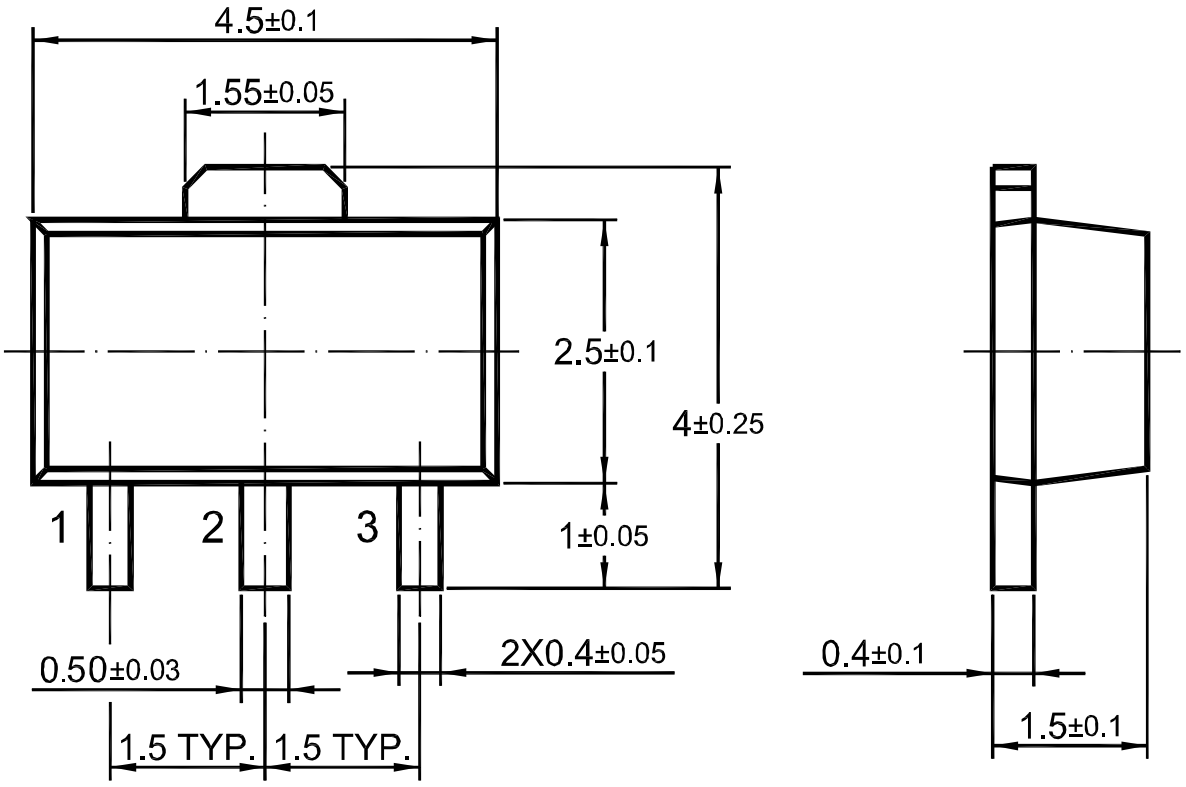






Package Outline

Dimensions in mm



Ordering Information

Device	Package	Shipping
78L05	SOT-89	1,000/ Tape & Reel (7 inches)