

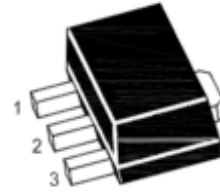
78L05

3-Terminal Voltage Regulator

SOT-89

Features

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



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	ΔV _O	V _I =7V to 20V T _J =25°C		32	150	mV
		V _I =8V to 20V T _J =25°C		26	100	mV
Load Regulation	ΔV _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 T _J =25°C f=120Hz	41	49		dB
Output Noise Voltage	e _N	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	ΔI _Q	V _I =8V to 20V			1.5	mA
		I _O =1mA to 40mA			0.1	mA

Typical Characteristics

