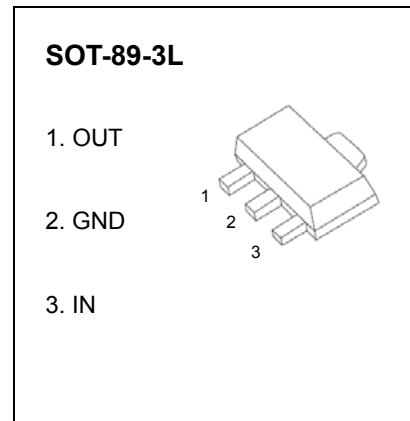


SOT-89-3L Encapsulate Three Terminal Voltage Regulators

CJ78L05M Three-terminal positive voltage regulator

FEATURES

- Maximum Output Current I_O : 0.1 A
- Output Voltage V_O : 5 V
- Continuous Total Dissipation
 P_D : 0.80 W ($T_a = 25\text{ }^\circ\text{C}$) (Equipped certain heat sink)



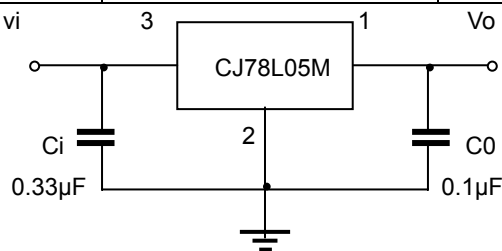
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_I	30	V
Operating Junction Temperature Range	T_{OPR}	-55~+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i=10V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Output voltage	V_o	25°C	4.8	5.0	5.2	V	
		0-125 $^\circ\text{C}$	$7V \leq V_i \leq 20V, I_o = 1mA \sim 40mA$	4.75	5.0	5.25	V
			$I_o = 1mA \sim 70mA$	4.75	5.0	5.25	V
Load Regulation	ΔV_o	$I_o = 1mA \sim 100mA$	25°C		15	60	mV
		$I_o = 1mA \sim 40mA$	25°C		8	30	mV
Line regulation	ΔV_o	$7V \leq V_i \leq 20V$			32	150	mV
		$8V \leq V_i \leq 20V$	25°C		26	100	mV
Quiescent Current	I_q	25°C		3.8	6	mA	
Quiescent Current Change	ΔI_q	$8V \leq V_i \leq 20V$	0-125 $^\circ\text{C}$			1.5	mA
		$1mA \leq I_o \leq 40mA$	0-125 $^\circ\text{C}$			0.1	mA
Output Noise Voltage	V_N	10Hz $\leq f \leq$ 100KHz	25°C		42	μV	
Ripple Rejection	RR	$8V \leq V_i \leq 20V, f = 120\text{Hz}$	0-125 $^\circ\text{C}$	41	49	dB	
Dropout Voltage	V_d		25°C		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.

