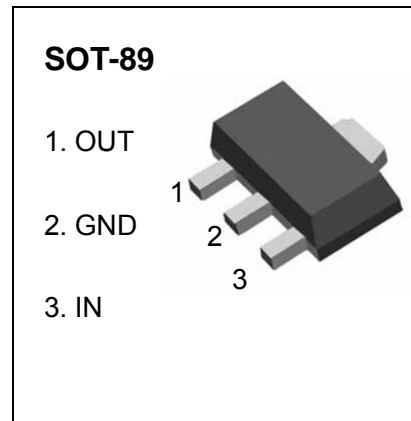


# SOT-89 Encapsulate Three Terminal Voltage Regulator

## CJ78L05 Three-terminal positive voltage regulator

### FEATURES

Maximum Output current  
 $I_{OM}: 0.1 \text{ A}$   
 Output voltage  
 $V_o: 5 \text{ V}$



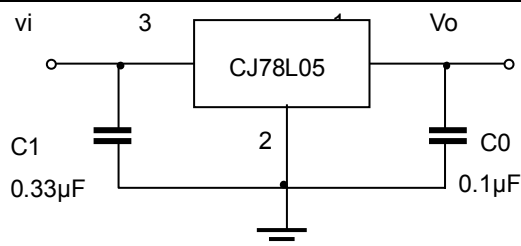
### ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Units
Input Voltage	$V_I$	30	V
Operating Junction Temperature Range	$T_{OPR}$	0~+125	°C
Storage Temperature Range	$T_{STG}$	-55~+150	°C

### ELECTRICAL CHARACTERISTICS ( $V_I=10V, I_o=40mA, 0^\circ C < T_j < 125^\circ C, C_1=0.33\mu F, C_o=0.1\mu F$ , unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	$V_o$	$T_j=25^\circ C$	4.8	5.0	5.2	V
		$7V \leq V_I \leq 20V, I_o=1mA \sim 40mA$	4.75	5.0	5.25	V
		$7V \leq V_I \leq V_{MAX}, I_o=1mA \sim 70mA$	4.75	5.0	5.25	V (note)
Load Regulation	$\Delta V_o$	$T_j=25^\circ C, I_o=1mA \sim 100mA$		11	60	mV
		$T_j=25^\circ C, I_o=1mA \sim 40mA$		5.0	30	mV
Line regulation	$\Delta V_o$	$7V \leq V_I \leq 20V, T_j=25^\circ C$		32	150	mV
		$8V \leq V_I \leq 20V, T_j=25^\circ C$		26	100	mV
Quiescent Current	$I_q$	$25^\circ C$		3.8	6	mA
Quiescent Current Change	$\Delta I_q$	$8V \leq V_I \leq 20V$			1.5	mA
	$\Delta I_q$	$1mA \leq I_o \leq 40mA$			0.1	mA
Output Noise Voltage	$V_N$	$10Hz \leq f \leq 100KHz$		42		uV
Ripple Rejection	RR	$8V \leq V_I \leq 18V, f=120Hz, T_j=25^\circ C$	41	80		dB
Dropout Voltage	$V_d$	$T_j=25^\circ C$		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.