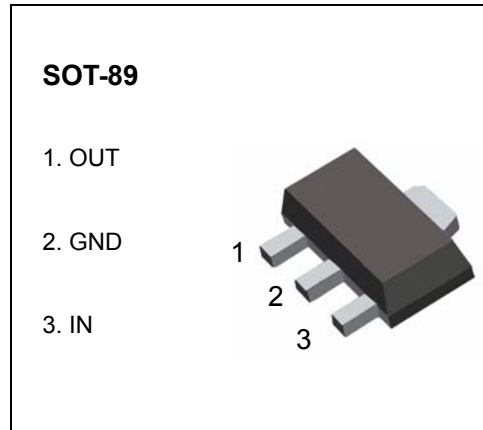


**SOT-89 Encapsulate Three Terminal Voltage Regulator**

**CJ78L08** Three-terminal positive voltage regulator

**FEATURES**

- Maximum Output current  
I<sub>OM</sub>: 0.1 A
- Output voltage  
V<sub>o</sub>: 8 V
- Continuous total dissipation  
P<sub>D</sub>: 0.5W



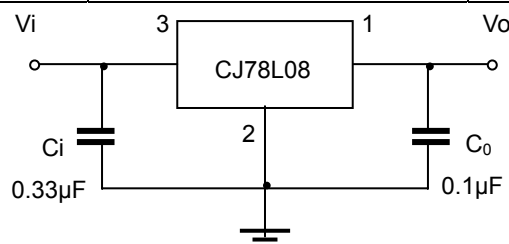
**ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)**

Parameter	Symbol	Value	Units
Input Voltage	V <sub>i</sub>	30	V
Operating Junction Temperature Range	T <sub>OPR</sub>	0~+125	°C
Storage Temperature Range	T <sub>STG</sub>	-55~+150	°C

**ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE (V<sub>i</sub>=14V, I<sub>o</sub>=40mA, C<sub>i</sub>=0.33μF, C<sub>o</sub>=0.1μF, unless otherwise specified )**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT	
Output voltage	V <sub>o</sub>	25°C	7.7	8.0	8.3	V	
		0-125°C	10.5V≤V <sub>i</sub> ≤23V, I <sub>o</sub> =1mA~40mA	7.6	8.0	8.4	V
			I <sub>o</sub> =1mA~70mA	7.6	8.0	8.4	V
Load Regulation	ΔV <sub>o</sub>	I <sub>o</sub> =1mA~100mA	25°C	18	80	mV	
		I <sub>o</sub> =1mA~40mA	25°C	10	40	mV	
Line regulation	ΔV <sub>o</sub>	10.5V≤V <sub>i</sub> ≤23V	25°C	42	175	mV	
		11V≤V <sub>i</sub> ≤23V	25°C	36	125	mV	
Quiescent Current	I <sub>q</sub>	25°C		4	6	mA	
Quiescent Current Change	ΔI <sub>q</sub>	11V≤V <sub>i</sub> ≤23V	0-125°C		1.5	mA	
	ΔI <sub>q</sub>	1mA≤I <sub>o</sub> ≤40mA	0-125°C		0.1	mA	
Output Noise Voltage	V <sub>N</sub>	10Hz≤f≤100KHz	25°C	54		uV	
Ripple Rejection	RR	13V≤V <sub>i</sub> ≤23V, f=120Hz	0-125°C	37	46	dB	
Dropout Voltage	V <sub>d</sub>	25°C		1.7		V	

**TYPICAL APPLICATION**

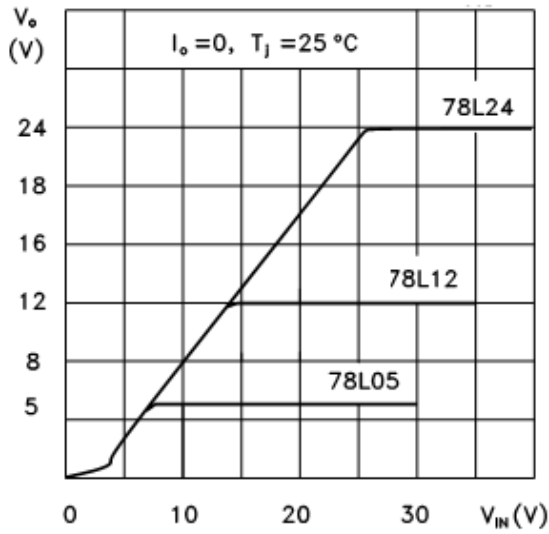


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

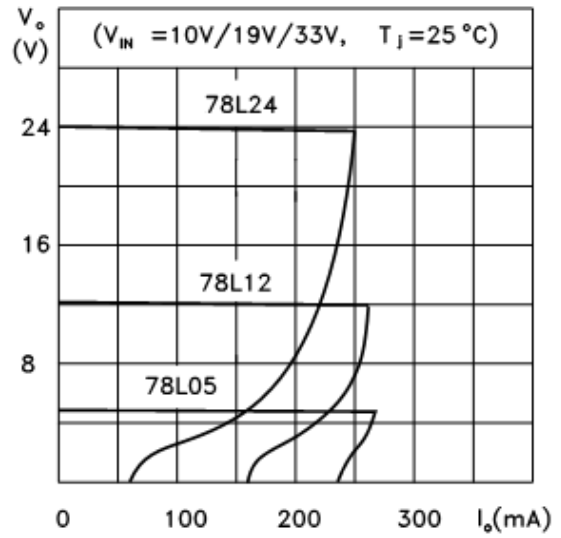
# Typical Characteristics

CJ78LXX

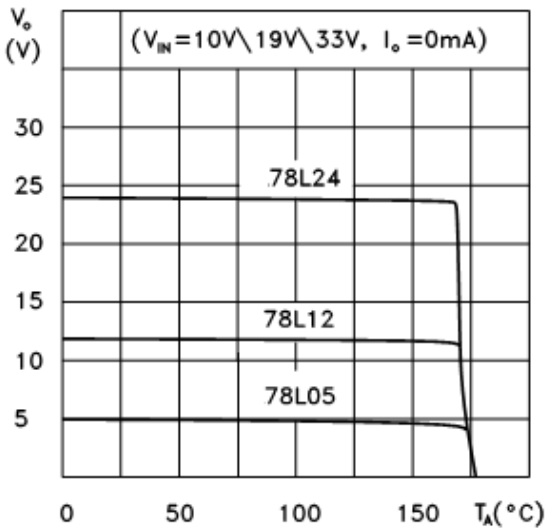
78L05/12/24 Output Characteristics



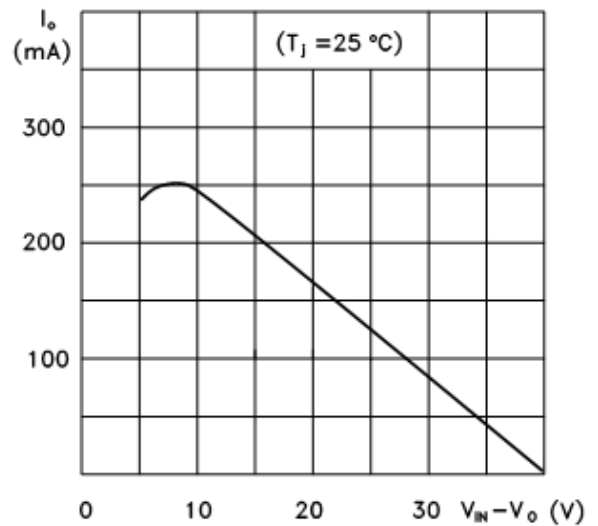
78L05/12/24 Load Characteristics



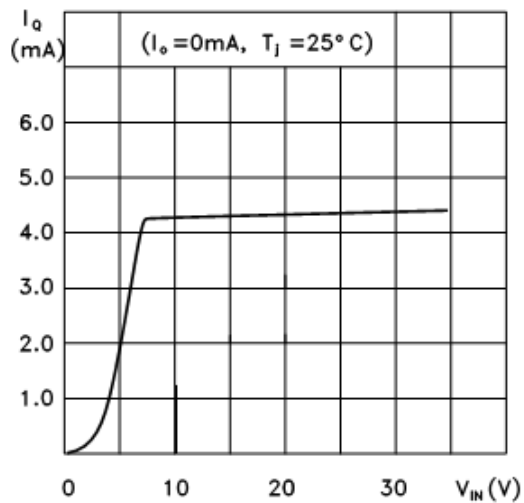
78L05/12/24 Thermal Shutdown



78L00 Series Short Circuit Output Current



78L05 Quiescent Current vs Input Voltage



PD-TA

