



## TO-252-3L Plastic-Encapsulate Voltage Regulator

**CJ7808** Three-terminal positive voltage regulator

### FEATURES

Maximum Output current  $I_{OM}$ : 1.5 A

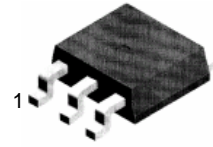
Output voltage  $V_o$ : 8 V

Continuous total dissipation

$P_D$ : 1.25 W

### TO-252-3L

1. IN
2. GND
3. OUT



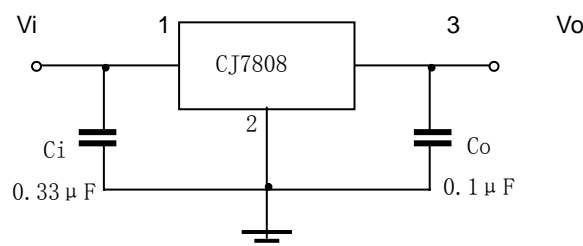
### ABSOLUTE MAXIMUM RATINGS(Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	35	V
Operating Junction Temperature Range	$T_{OPR}$	0-150	°C
Storage Temperature Range	$T_{STG}$	-65-150	°C

### ELECTRICAL CHARACTERISTICS( $V_i=14V, I_o=500mA, 0^\circ C < T_J < 125^\circ C, C_i=0.33 \mu F, C_o=0.1 \mu F$ , unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	$V_o$	$T_J=25^\circ C$	7.7	8	8.3	V
		$10.5V \leq V_i \leq 23V, I_o=5mA-1A, P \leq 15W$	7.6	8	8.4	V
Load Regulation	$\Delta V_o$	$T_J=25^\circ C, I_o=5mA-1.5A$		12	160	mV
		$T_J=25^\circ C, I_o=250mA-750mA$		4	80	mV
Line regulation	$\Delta V_o$	$10.5V \leq V_i \leq 25V, T_J=25^\circ C$		6	160	mV
		$11V \leq V_i \leq 17V, T_J=25^\circ C$		2	80	mV
Quiescent Current	$I_q$	$T_J=25^\circ C$		4.3	8	mA
Quiescent Current Change	$\Delta I_q$	$10.5V \leq V_i \leq 25V$			1	mA
	$\Delta I_q$	$5mA \leq I_o \leq 1A$			0.5	mA
Output Noise Voltage	$V_n$	$10Hz \leq f \leq 100KHz$		52		$\mu V$
Ripple Rejection	RR	$11.5V \leq V_i \leq 21.5V, f=120Hz, T_J=25^\circ C$	55	72		dB
Dropout Voltage	$V_d$	$T_J=25^\circ C, I_o=1A$		2		V
Short Circuit Current	$I_{sc}$	$V_i=35V, T_J=25^\circ C$		450		mA
Peak Current	$I_{pk}$	$T_J=25^\circ C$		2.2		A

### TYPICAL APPLICATION



# Typical Characteristics

# CJ7808

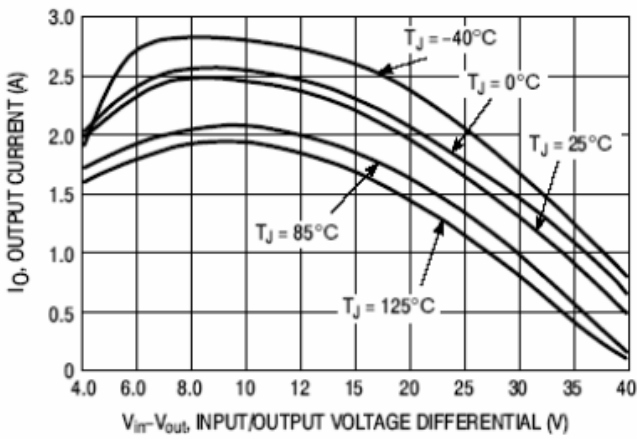


Figure 1 Peak Output Current as a Function of Input/Output Differential Voltage

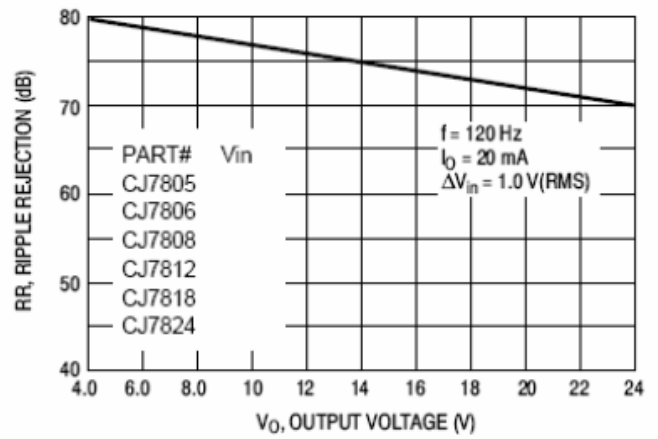


Figure 2 Ripple Rejection as a Function of Output Voltages

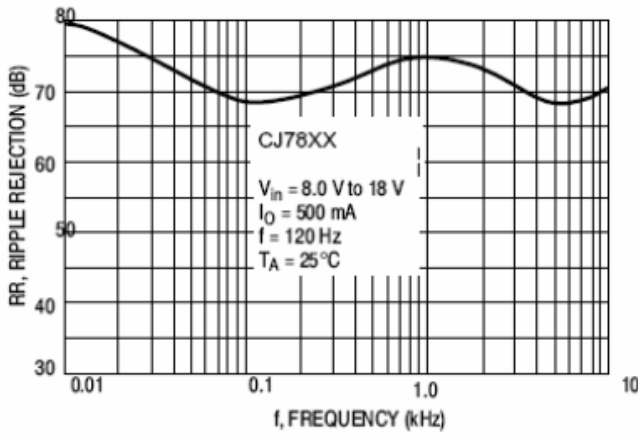


Figure 3 Ripple Rejection as a Function of Frequency

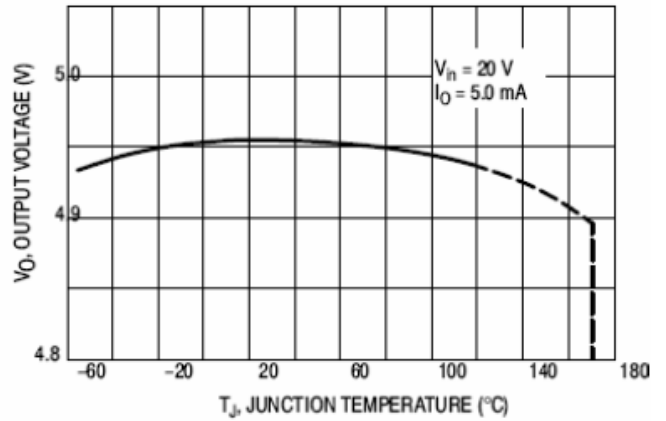


Figure 4 Output Voltage as a Function of Junction Temperature

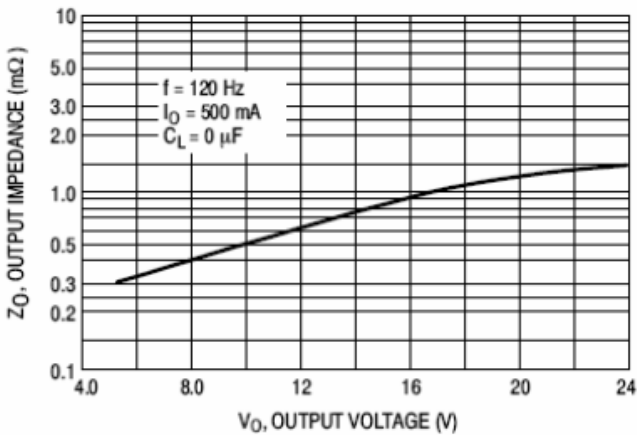


Figure 5 Output Impedance as a Function of Output Voltage

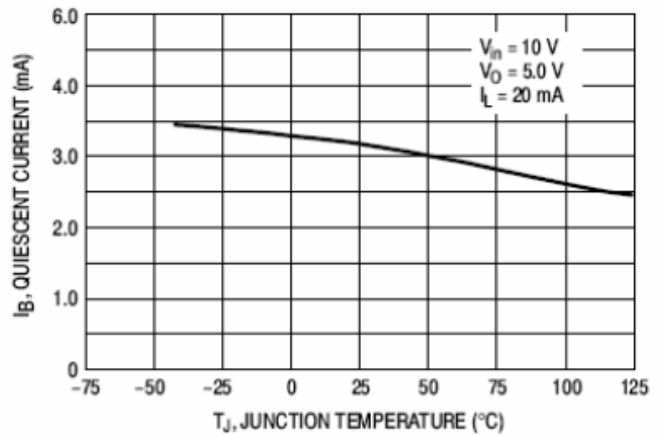


Figure 6 Quiescent Current as a Function of Temperature