



## TO-252-2L/TO-251 Plastic-Encapsulate Voltage Regulator

### CJ7812 Three-terminal positive voltage regulator

#### FEATURES

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

Output voltage  $V_o$ : 12 V

Continuous total dissipation

$P_D$ : 1.25 W

TO-251  
TO-252-2L

1. IN  
2. GND  
3. OUT



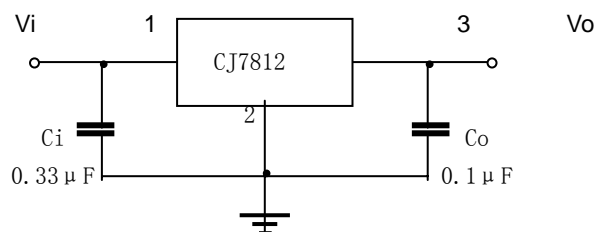
#### ABSOLUTE MAXIMUM RATINGS(Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	40	V
Operating Junction Temperature Range	$T_{OPR}$	0-150	°C
Storage Temperature Range	$T_{STG}$	-65-150	°C

#### ELECTRICAL CHARACTERISTICS( $V_i=19V, I_o=500mA, 0^\circ C < T_J < 125^\circ C, C_i=0.33 \mu F, C_o=0.1 \mu F$ , unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	$V_o$	$T_J=25^\circ C$	11.5	12.0	12.5	V
		$I_o=5.0mA-1.0A, P<15W$ $14.5V \leq V_i \leq 27V$	11.4	12	12.6	V
Load Regulation	$\Delta V_o$	$T_J=25^\circ C, 14.5V \leq V_i \leq 30V$		10	240	mV
		$T_J=25^\circ C, 16V \leq V_i \leq 22V$		3	120	mV
Line regulation	$\Delta V_o$	$T_J=25^\circ C, I_o=5.0mA - 1.5A$		11	240	mV
		$T_J=25^\circ C, I_o=250mA - 750mA$		5.0	120	mV
Quiescent Current	$I_q$	$T_J=25^\circ C$		5.1	8	mA
Quiescent Current Change	$\Delta I_q$	$5.0mA \leq I_o \leq 1.0A$			0.5	mA
		$14.5V \leq V_i \leq 30V$			1.0	mA
Output Noise Voltage	$V_n$	$f=10Hz$ to $100kHz, T_J=25^\circ C$		76		$\mu V$
Ripple Rejection	RR	$f=120Hz, 15V \leq V_i \leq 25V$	55	71		dB
Dropout Voltage	$V_d$	$I_o=1.0A, T_J=25^\circ C$		2		V
Output resistance	$R_o$	$f=1KHz$		18		$m\Omega$
Short Circuit Current	$I_{sc}$	$V_i=35V, T_J=25^\circ C$		350		mA
Peak Current	$I_{pk}$	$T_J=25^\circ C$		2.2		A

#### TYPICAL APPLICATION



# Typical Characteristics

# CJ7812

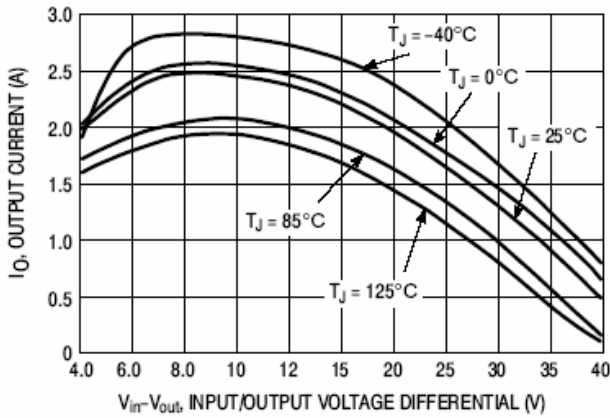


Figure 1. Peak Output Current as a Function of Input/Output Differential Voltage

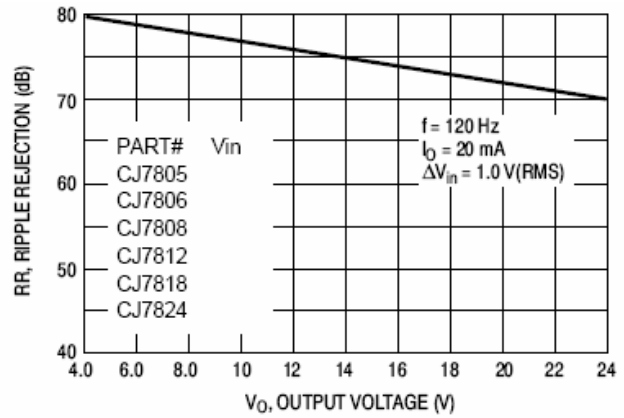


Figure 1. Ripple Rejection as a Function of Output Voltages

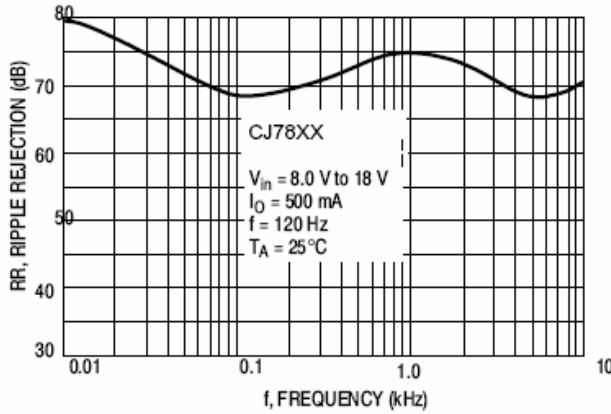


Figure 4. Ripple Rejection as a Function of Frequency

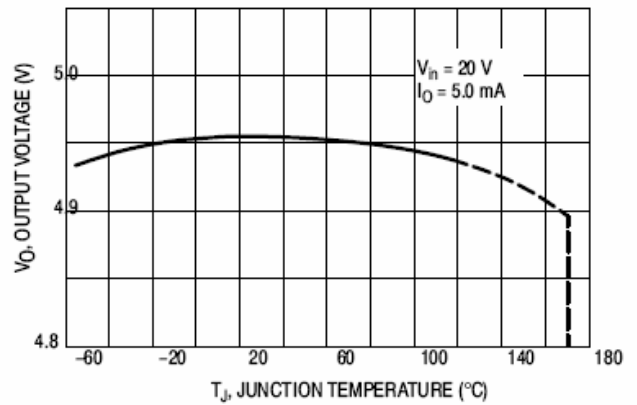


Figure 5. Output Voltage as a Function of Junction Temperature

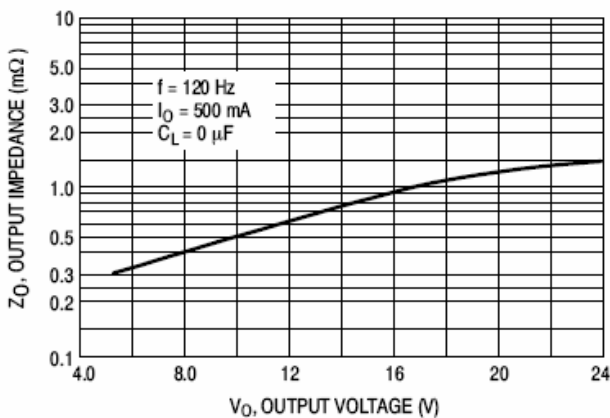


Figure 6. Output Impedance as a Function of Output Voltage

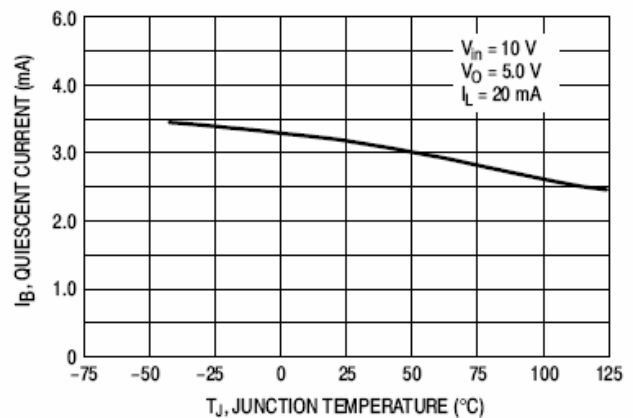


Figure 7. Quiescent Current as a Function of Temperature