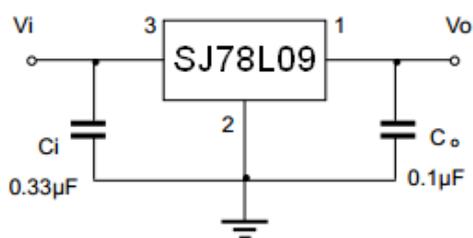


**RoHS Compliant Product**  
A suffix of “-C” specifies halogen and lead-free

## FEATURES

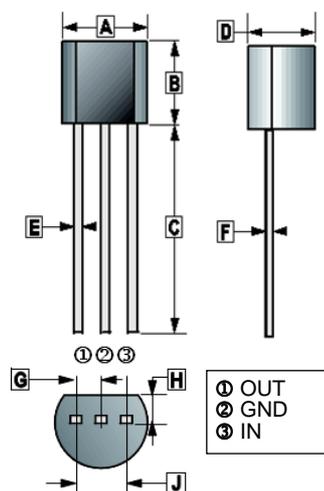
- Maximum output current  $I_O$ : 0.1A
- Output voltage  $V_O$ : 9V
- Continuous total dissipation  $P_D$ : 0.625W ( $T_A=25^\circ\text{C}$ )

## TYPICAL APPLICATION



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

## TO-92



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.40	4.70	F	0.30	0.51
B	4.30	4.70	G	1.27 TYP.	
C	12.70	-	H	1.10	1.40
D	3.30	3.81	J	2.42	2.66
E	0.36	0.56	K	0.36	0.76

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

Parameter	Symbol	Value	Unit
Input Voltage	$V_I$	30	V
Operating Junction and Storage Temperature Range	$T_{OPR}, T_{STG}$	0~150, -55~150	$^\circ\text{C}$

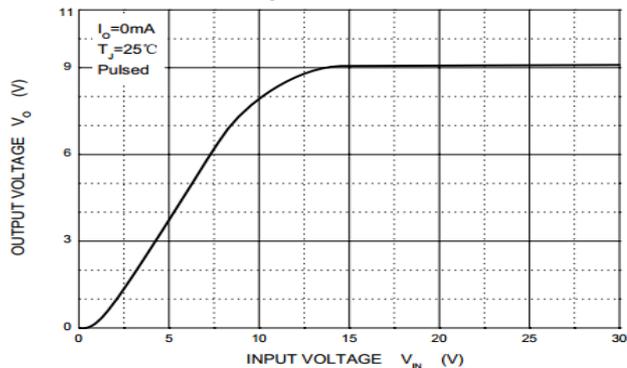
## ELECTRICAL CHARACTERISTICS

(At specified virtual junction temperature,  $V_I=16\text{V}$ ,  $I_O=40\text{mA}$ ,  $C_I=0.33\mu\text{F}$ ,  $C_O=0.1\mu\text{F}$  unless otherwise specified)

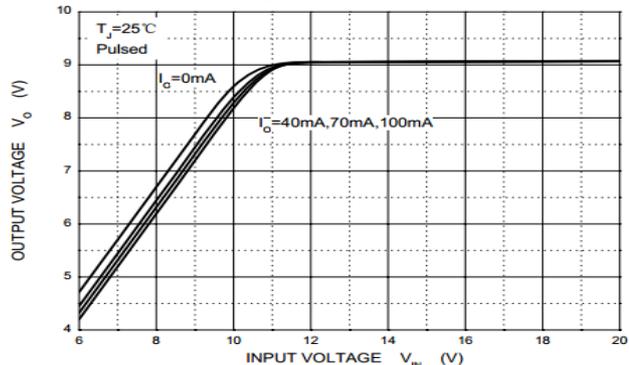
Parameter	Symbol	Min.	Typ.	Max.	Unit.	Test Condition
Output Voltage	$V_O$	8.64	9	9.36	V	$T_J=25^\circ\text{C}$
		8.55	9	9.45	V	$12\text{V} \leq V_I \leq 24\text{V}$ , $I_O=1\text{mA} \sim 40\text{mA}$ , $T_J=0 \sim 125^\circ\text{C}$
		8.55	9	9.45	V	$I_O=1\text{mA} \sim 70\text{mA}$ , $T_J=0 \sim 125^\circ\text{C}$
Load Regulation	$\Delta V_O$	-	19	90	mV	$I_O=1\text{mA} \sim 100\text{mA}$ , $T_J=25^\circ\text{C}$
		-	11	40	mV	$I_O=1\text{mA} \sim 40\text{mA}$ , $T_J=25^\circ\text{C}$
Line Regulation	$\Delta V_O$	-	45	175	mV	$12\text{V} \leq V_I \leq 24\text{V}$ , $T_J=25^\circ\text{C}$
		-	40	125	mV	$13\text{V} \leq V_I \leq 24\text{V}$ , $T_J=25^\circ\text{C}$
Quiescent Current	$I_Q$	-	4.1	6	mA	$T_J=25^\circ\text{C}$
Quiescent Current Change	$\Delta I_Q$	-	-	1.5	mA	$13\text{V} \leq V_I \leq 24\text{V}$ , $T_J=0 \sim 125^\circ\text{C}$
	$\Delta I_Q$	-	-	0.1	mA	$1\text{mA} \leq V_I \leq 40\text{mA}$ , $T_J=0 \sim 125^\circ\text{C}$
Output Noise Voltage	$V_N$	-	58	-	$\mu\text{V}$	$10\text{Hz} \leq f \leq 100\text{KHz}$ , $T_J=25^\circ\text{C}$
Ripple Rejection	RR	-	45	-	dB	$15\text{V} \leq V_I \leq 25\text{V}$ , $f=120\text{Hz}$ , $T_J=0 \sim 125^\circ\text{C}$
Drop Out Voltage	$V_D$	-	1.7	-	C	$T_J=25^\circ\text{C}$

**TYPICAL CHARACTERISTICS**

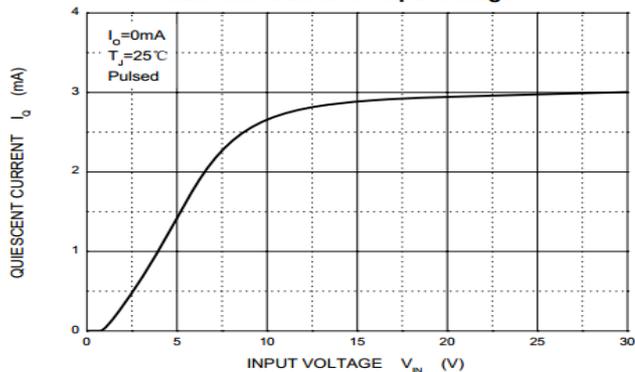
**Output Characteristics**



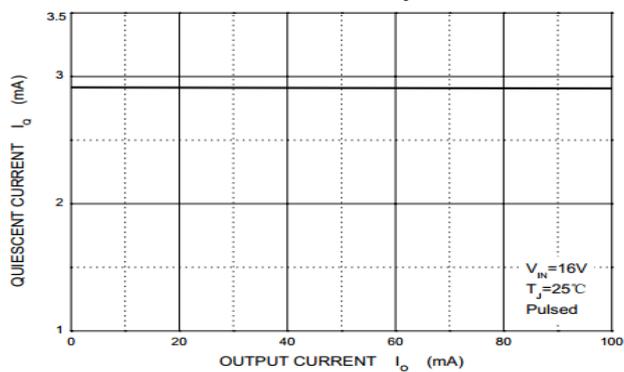
**Dropout Characteristics**



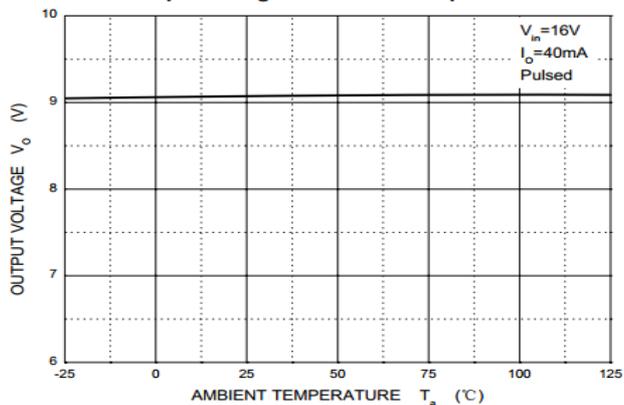
**Quiescent Current vs Input Voltage**



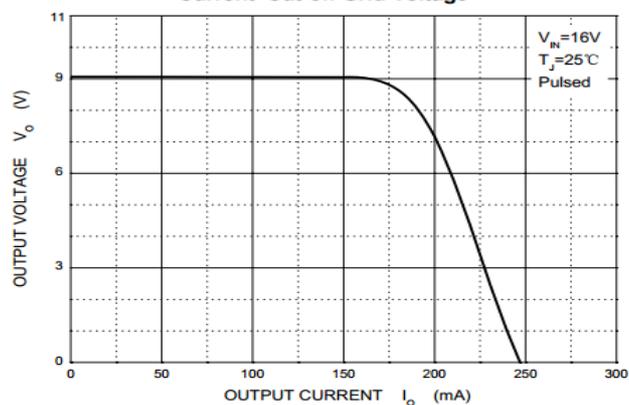
**Quiescent Current vs Output Current**



**Output Voltage vs Ambient Temperature**



**Current Cut-off Grid Voltage**



**Power Derating Curve**

