Elektronische Bauelemente

SJ78L09

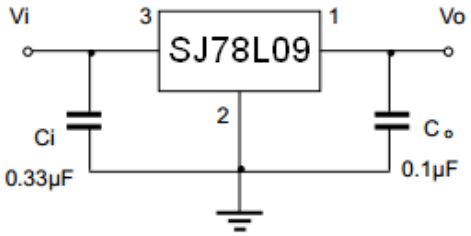
3-Terminal
Positive Voltage Regulator

RoHS Compliant Product
A suffix of "-C" specifies halogen and lead-free

FEATURES

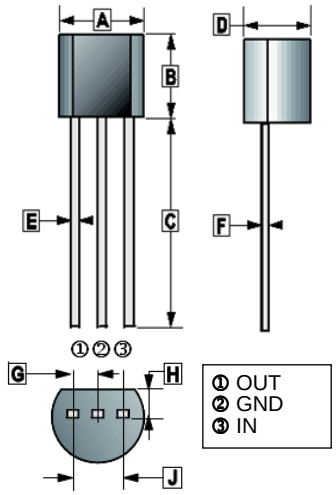
- Maximum output current I_O: 0.1A
- Output voltage V_O: 9V
- Continuous total dissipation P_D: 0.625W (T_A=25℃)

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	℃

ELECTRICAL CHARACTERISTICS

(At specified virtual junction temperature, V_I=16V, I_O=40mA, C_I=0.33μF, C_O=0.1μF unless otherwise specified)

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

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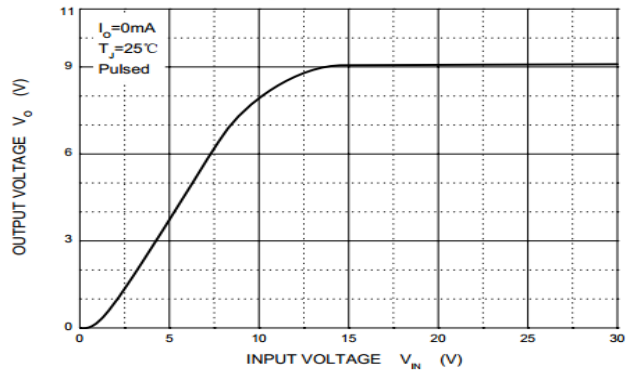
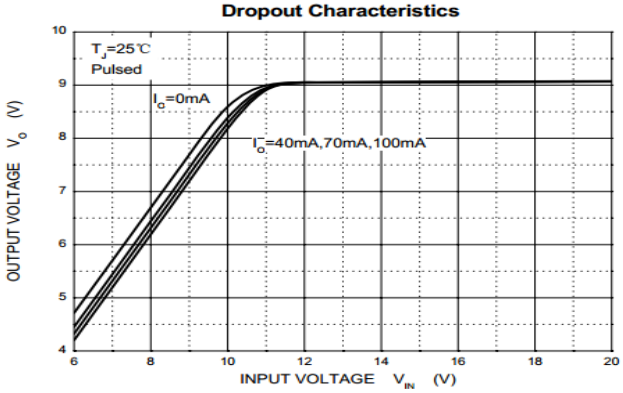
TYPICAL CHARACTERISTICS

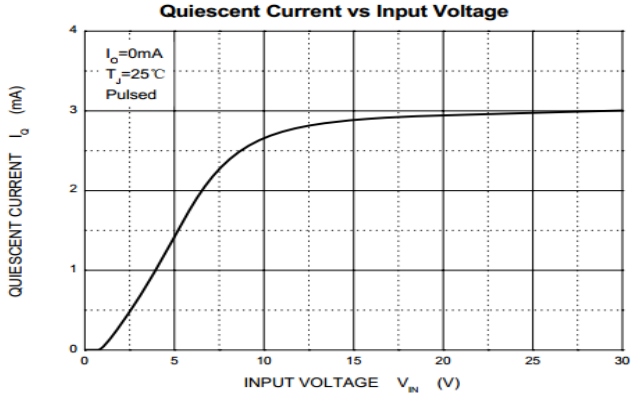
Output Characteristics



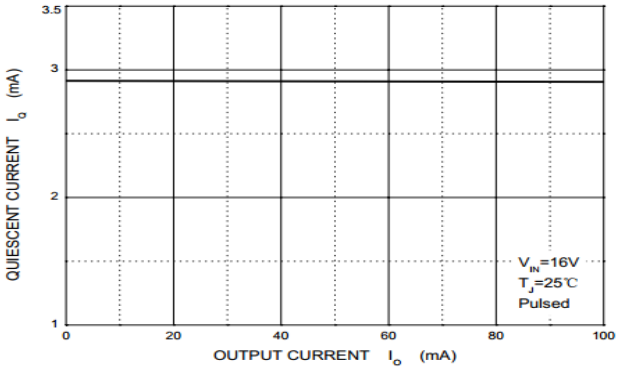
Dropout Characteristics



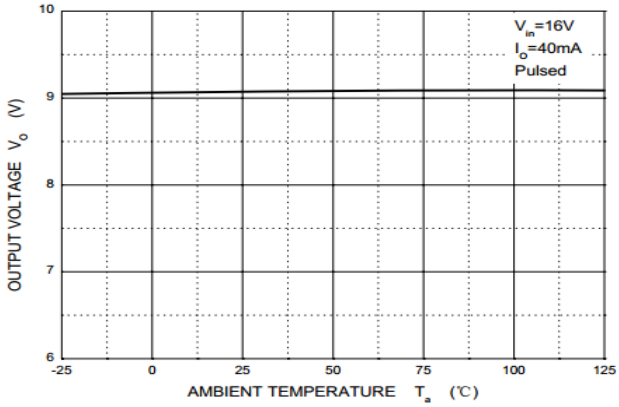
Quiescent Current vs Input Voltage



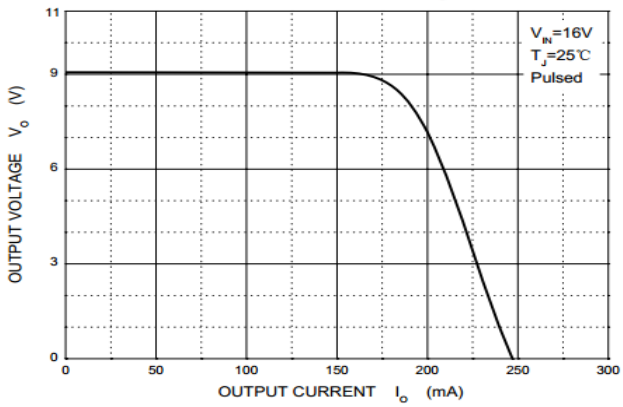
Quiescent Current vs Output Current



Output Voltage vs Ambient Temperature



Current Cut-off Grid Voltage



Power Derating Curve