

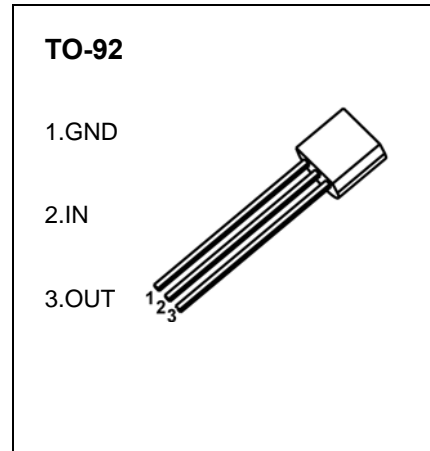


JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD
TO-92 Encapsulate Three-terminal Voltage Regulator

CJ79L09 Three-terminal negative voltage regulator

FEATURES

- Maximum output current
 $I_{OM}: 0.1A$
- Output voltage
 $V_o: -9V$
- Continuous total dissipation
 $P_D: 0.625W (T_a = 25^\circ C)$



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

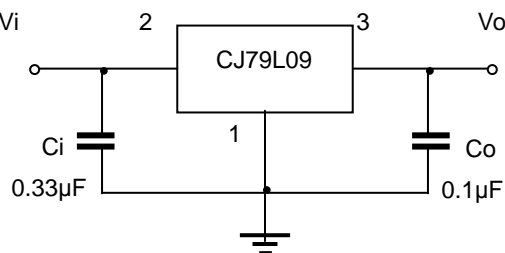
Parameter	Symbol	Value	Unit
Input Voltage	V_i	-30	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	200	$^\circ C/W$
Operating Junction Temperature Range	T_{OPR}	0~+150	$^\circ C$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ C$

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i = -16V, I_o = 40mA, C_i = 0.33\mu F, C_o = 0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Output Voltage	V_o	$25^\circ C$	-8.64	-9.0	-9.36	V	
		0-125 $^\circ C$	$-12V \leq V_i \leq -24V, I_o = 1mA-40mA$	-8.55	-9.0	-9.45	V
			$I_o = 1mA-70mA$	-8.55	-9.0	-9.45	V
Load Regulation	ΔV_o	$I_o = 1mA-100mA$	$25^\circ C$	19	90	mV	
		$I_o = 1mA-40mA$	$25^\circ C$	11	40	mV	
Line Regulation	ΔV_o	$-12V \leq V_i \leq -24V$	$25^\circ C$	45	175	mV	
		$-13V \leq V_i \leq -24V$	$25^\circ C$	40	125	mV	
Quiescent Current	I_q	$25^\circ C$		4.1	6.0	mA	
Quiescent Current Change	ΔI_q	$-13V \leq V_i \leq -24V$	0-125 $^\circ C$		1.5	mA	
	ΔI_q	$1mA \leq V_i \leq 40mA$	0-125 $^\circ C$		0.1	mA	
Output Noise Voltage	V_N	10Hz $\leq f \leq$ 100KHz	$25^\circ C$	58		$\mu V/V_o$	
Ripple Rejection	RR	$-15V \leq V_i \leq -24V, f = 120Hz$	0-125 $^\circ C$	45		dB	
Dropout Voltage	V_d	$25^\circ C$		1.7		V	

* Pulse test.

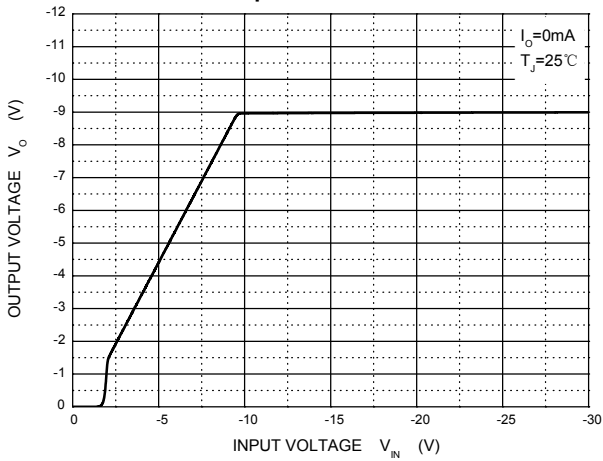
TYPICAL APPLICATION



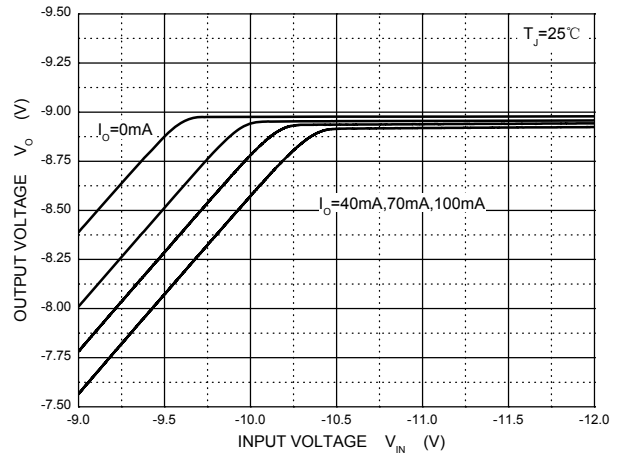
Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators

Typical Characteristics

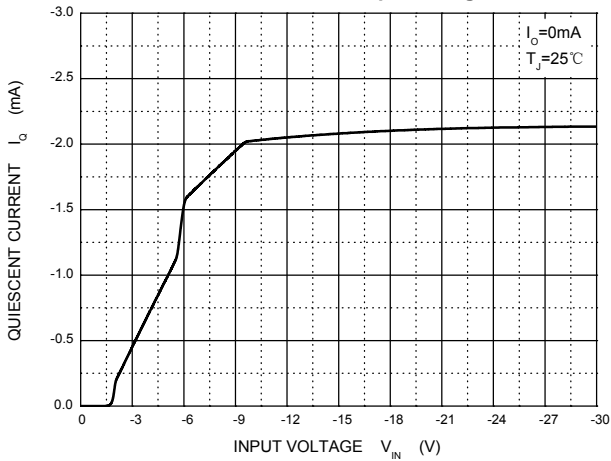
Output Characteristics



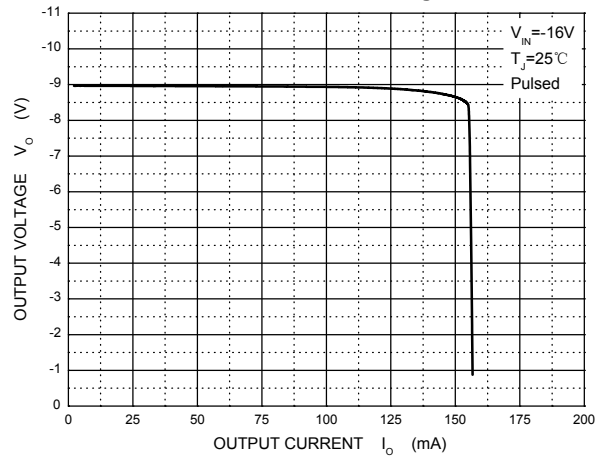
Dropout Characteristics



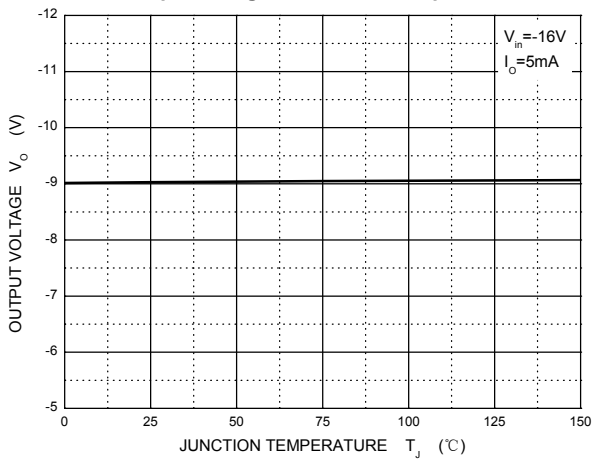
Quiescent Current vs Input Voltage



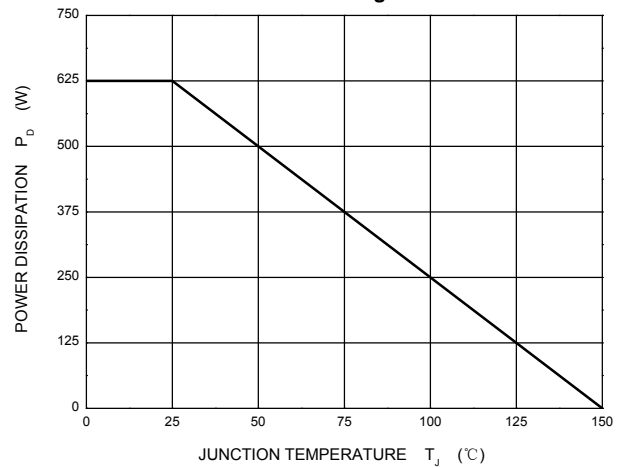
Current Cut-off Grid Voltage



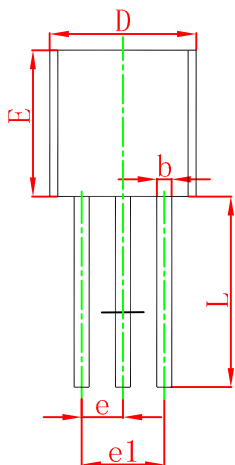
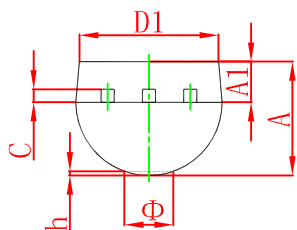
Output Voltage vs Junction Temperature



Power Derating Curve

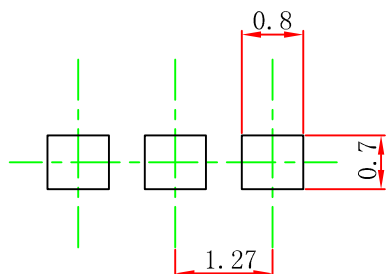


TO-92 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.400	4.700	0.173	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015

TO-92 Suggested Pad Layout



Note:

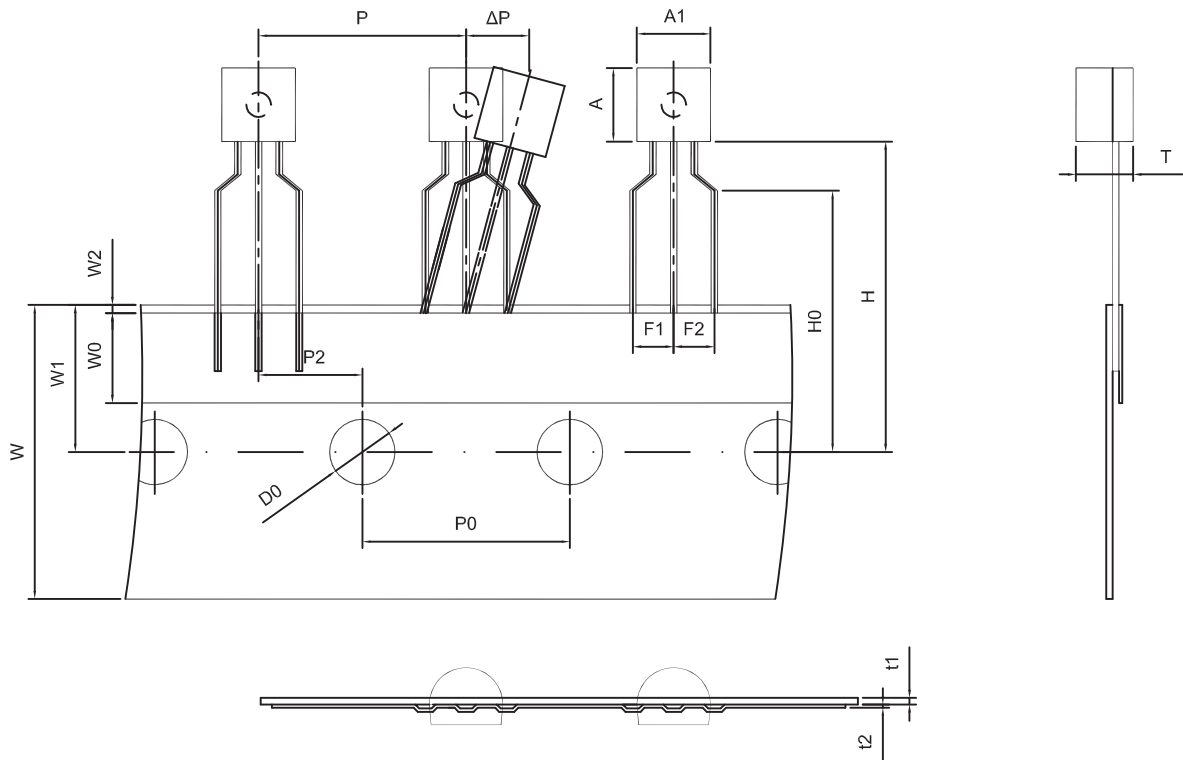
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

JCET reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JCET does not assume any liability arising out of the application or use of any product described herein.

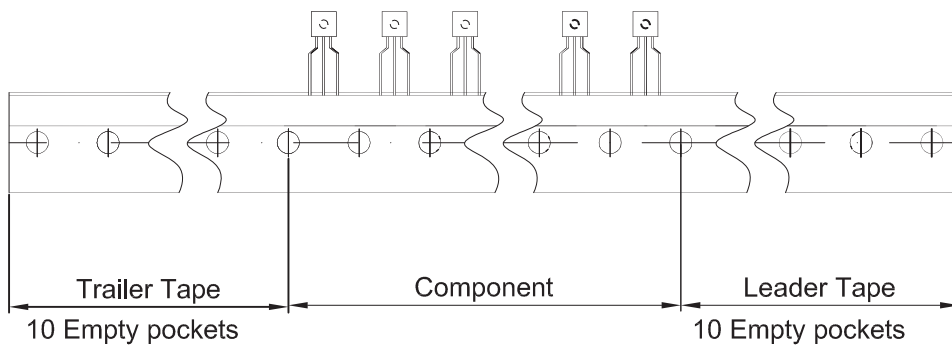
TO-92 PACKAGE TAPEING DIMENSION

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Dimiensions are in millimeter

A1	A	T	P	P0	P2	F1	F2	W
4.5	4.5	3.5	12.7	12.7	6.35	2.5	2.5	18.0
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0	9.0	1.0 MAX.	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	2000 pcs	333×162×43	20,000 pcs	350×340×250