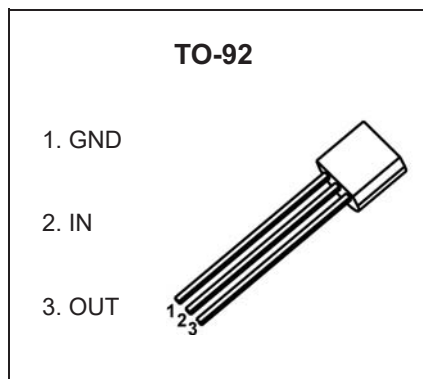


## TO-92 Plastic-Encapsulate Voltage Regulator

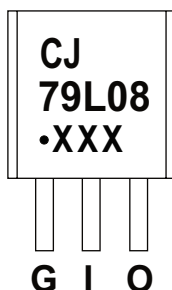
### **CJ79L08** Three-terminal negative voltage regulator

#### FEATURES

- Maximum output current  
 $I_{OM}$ : 0.1A
- Output voltage  
 $V_o$ : -8 V
- Continuous total dissipation  
 $P_D$ : 0.625 W ( $T_a = 25^\circ\text{C}$ )



#### MARKING



CJ79L08=Device code  
Solid dot=Green molding compound device,  
if none, the normal device  
XXX=Code

#### ORDERING INFORMATION

| Part Number | Package | Packing Method | Pack Quantity |
|-------------|---------|----------------|---------------|
| CJ79L08     | TO-92   | Bulk           | 1000pcs/Bag   |
| CJ79L08-TA  | TO-92   | Tape           | 2000pcs/Box   |

#### 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      | $^\circ\text{C}/\text{W}$ |
| Operating Junction Temperature Range        | $T_{OPR}$       | -40~+125 | $^\circ\text{C}$          |
| Storage Temperature Range                   | $T_{STG}$       | -65~+150 | $^\circ\text{C}$          |

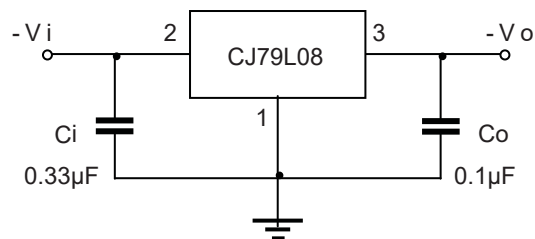
## ELECTRICAL CHARACTERISTICS

$T_a=25^{\circ}\text{C}$  unless otherwise specified ( $V_i=-14\text{V}$ ,  $I_o=40\text{mA}$ ,  $C_i=0.33\mu\text{F}$ ,  $C_o=0.1\mu\text{F}$ , unless otherwise specified)

| Parameter                | Symbol       | Test conditions                                               | Min   | Typ  | Max   | Unit              |
|--------------------------|--------------|---------------------------------------------------------------|-------|------|-------|-------------------|
| Output Voltage           | $V_o$        | $T_J=25^{\circ}\text{C}$                                      | -7.76 | -8.0 | -8.24 | V                 |
|                          |              | -10.5VKV <sub>I</sub> K-23V, $I_o=1\text{mA}\sim 40\text{mA}$ | -7.6  | -8.0 | -8.4  | V                 |
|                          |              | $I_o=1\text{mA}\sim 70\text{mA}$                              | -7.6  | -8.0 | -8.4  | V                 |
| Load Regulation          | $\gamma V_o$ | $I_o=1\text{mA}\sim 100\text{mA}$ , $T_J=25^{\circ}\text{C}$  |       | 30   | 100   | mV                |
|                          |              | $I_o=1\text{mA}\sim 40\text{mA}$ , $T_J=25^{\circ}\text{C}$   |       | 15   | 50    | mV                |
| Line Regulation          | $\gamma V_o$ | -10.5VKV <sub>I</sub> K-23V, $T_J=25^{\circ}\text{C}$         |       | 42   | 200   | mV                |
|                          |              | -11VKV <sub>I</sub> K-23V, $T_J=25^{\circ}\text{C}$           |       | 36   | 150   | mV                |
| Quiescent Current        | $I_q$        | $T_J=25^{\circ}\text{C}$                                      |       | 4    | 6     | mA                |
| Quiescent Current Change | $\gamma I_q$ | -11VKV <sub>I</sub> K-23V                                     |       |      | 1.5   | mA                |
|                          | $\gamma I_q$ | 1mA $I_o$ K40mA                                               |       |      | 0.1   | mA                |
| Output Noise Voltage     | $V_N$        | 10HzK100KHz, $T_J=25^{\circ}\text{C}$                         |       | 54   |       | $\mu\text{V}/V_o$ |
| Ripple Rejection         | RR           | -11VKV <sub>I</sub> K-21V, $f=120\text{Hz}$                   | 37    | 46   |       | dB                |
| Dropout Voltage          | $V_d$        | $T_J=25^{\circ}\text{C}$                                      |       | 1.7  |       | V                 |

\* Pulse test.

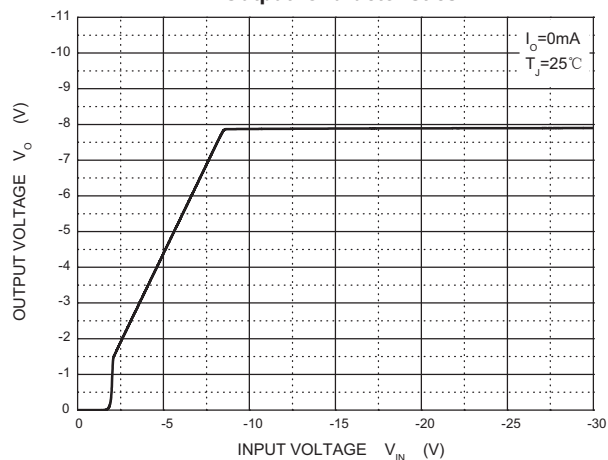
### TYPICAL APPLICATION



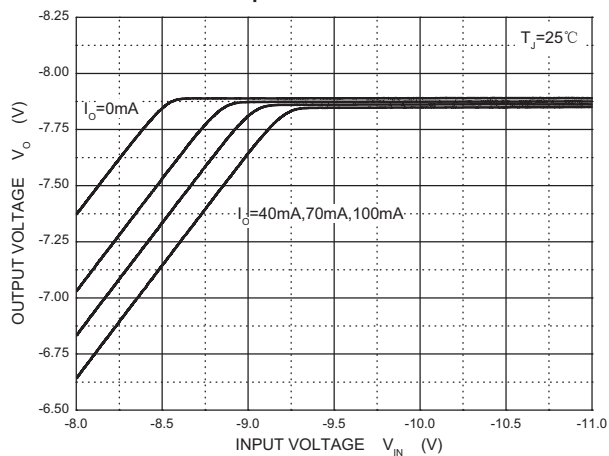
Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

## Typical Characteristics

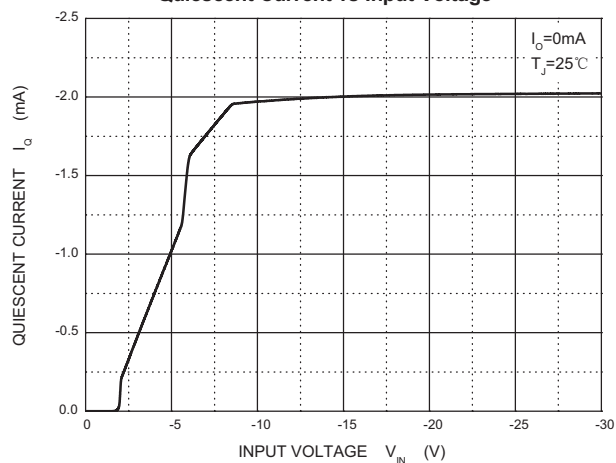
Output Characteristics



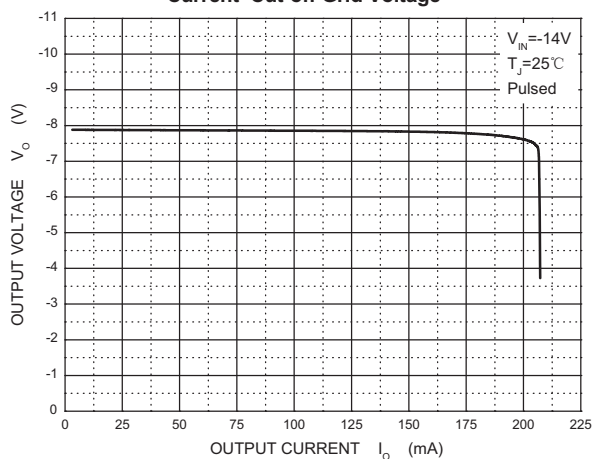
Dropout Characteristics



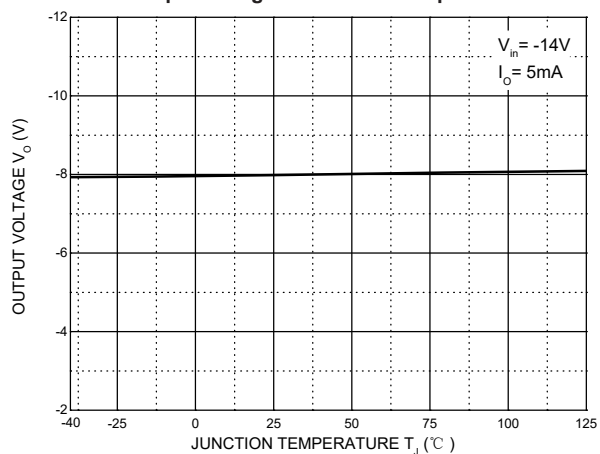
Quiescent Current vs Input Voltage



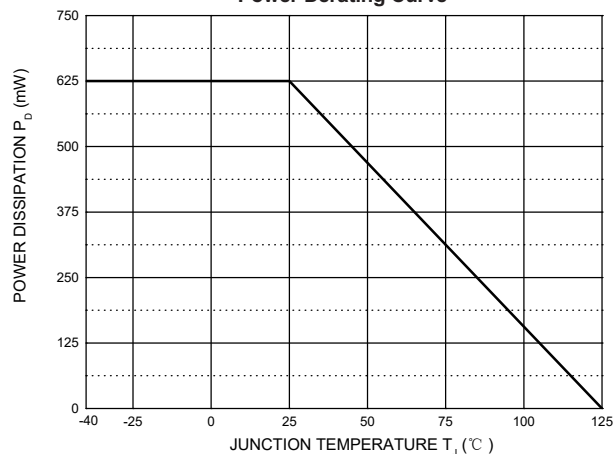
Current Cut-off Grid Voltage



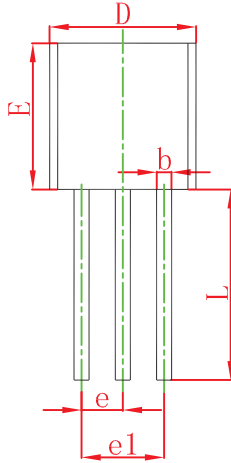
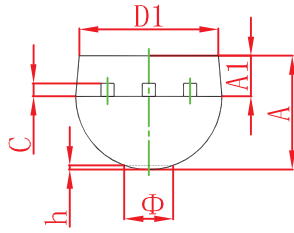
Output Voltage vs Junction Temperature



Power Derating Curve

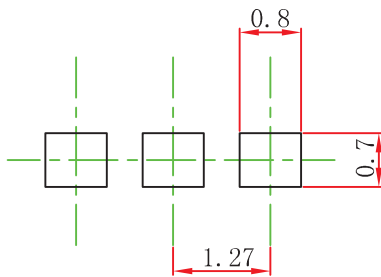


## TO-92 Package Outline Dimensions



| 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 |
| K      |                           | 1.600  |                      | 0.063 |
| h      | 0.000                     | 0.380  | 0.000                | 0.015 |

## TO-92 Suggested Pad Layout

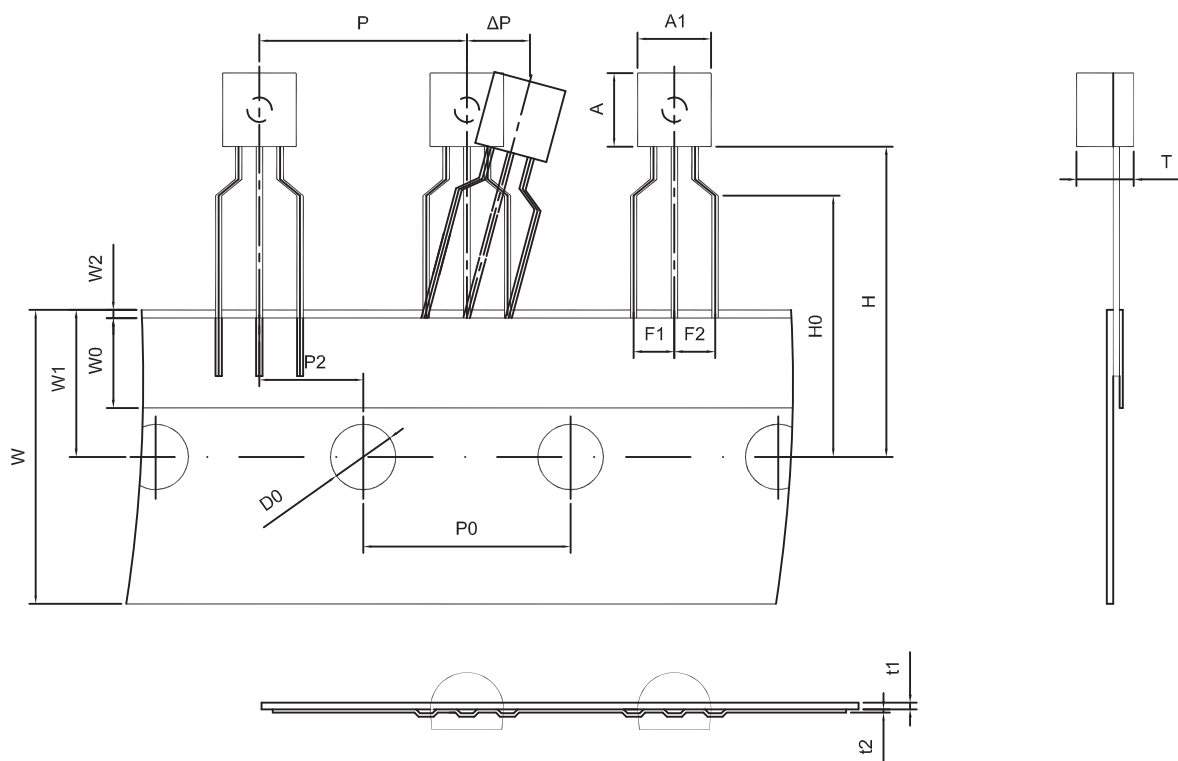


Note:

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

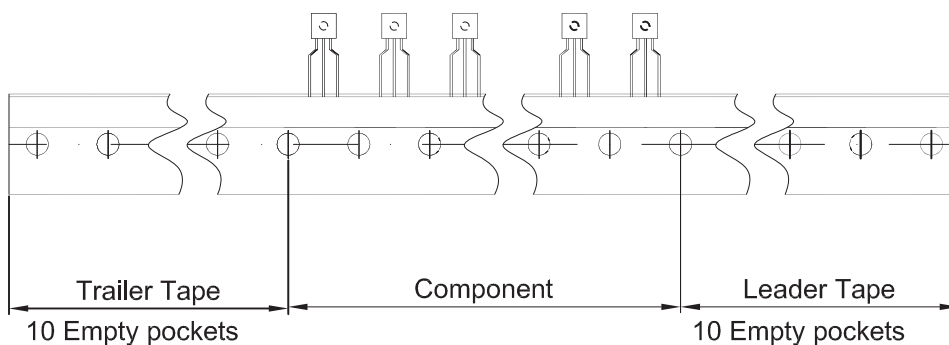
## TO-92 PACKAGE TAPEING DIMENSION

### TO-92 PACKAGE TAPEING DIMENSION



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     |

# DISCLAIMER

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