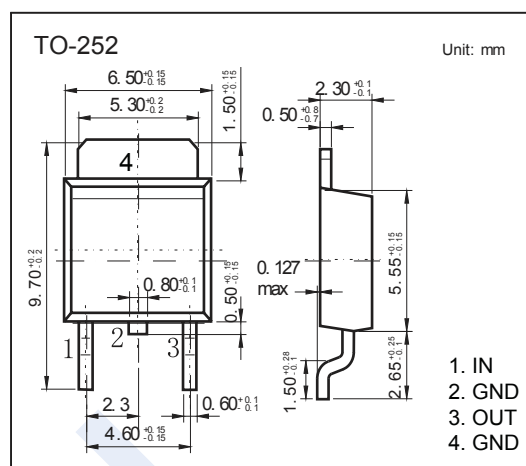


## Three Terminal Positive Voltage Regulator

## KA280M08

## ■ Features

- Maximum Output Current:  
 $I_{OM} = 500\text{mA}$
- Output Voltage:  
 $V_O = 8\text{V}$
- Continuous Total Dissipation:  
 $PD: 1.25\text{W}$  ( $T_a = 25^\circ\text{C}$ )



## ■ Absolute Maximum Ratings (Operating temperature range applies unless otherwise noted)

| Parameter                               | Symbol     | Rating     | Unit                      |
|-----------------------------------------|------------|------------|---------------------------|
| Input Voltage                           | $V_i$      | 35         | V                         |
| Maximum Output Current                  | $I_o$      | 0.5        | A                         |
| Thermal Resistance, Junction-to-Ambient | $R_{thJA}$ | 80         | $^\circ\text{C}/\text{W}$ |
| Operating Junction Temperature Range    | $T_{OPR}$  | -25 to 125 | $^\circ\text{C}$          |
| Storage Temperature Range               | $T_{STG}$  | -65 to 150 |                           |

## ■ Electrical Characteristics at Specified Virtual Junction Temperature

( $V_i = 14\text{V}$ ,  $I_o = 350\text{mA}$ ,  $C_i = 0.33\mu\text{F}$ ,  $C_o = 0.1\mu\text{F}$ , unless otherwise noted)

| Parameter                   | Symbol       | Test Conditions                                                                       | Min                        | Typ | Max | Unit              |
|-----------------------------|--------------|---------------------------------------------------------------------------------------|----------------------------|-----|-----|-------------------|
| Output Voltage              | $V_o$        | $25^\circ\text{C}$                                                                    | 7.7                        | 8   | 8.3 | V                 |
|                             |              | $10.5\text{V} \leq V_i \leq 23\text{V}$ , $5\text{mA} \leq I_o \leq 350\text{mA}$     | -25 ~ 125 $^\circ\text{C}$ | 7.6 | 8   | 8.4               |
| Load Regulation             | $\Delta V_o$ | $5\text{mA} \leq I_o \leq 500\text{mA}$                                               | $25^\circ\text{C}$         |     | 160 | mV                |
|                             |              | $5\text{mA} \leq I_o \leq 200\text{mA}$                                               | $25^\circ\text{C}$         |     | 80  |                   |
| Line Regulation             | $\Delta V_o$ | $10.5\text{V} \leq V_i \leq 25\text{V}$ , $I_o = 200\text{mA}$                        | $25^\circ\text{C}$         |     | 100 | mV                |
|                             |              | $11\text{V} \leq V_i \leq 25\text{V}$ , $I_o = 200\text{mA}$                          | $25^\circ\text{C}$         |     | 50  |                   |
| Quiescent Current           | $I_q$        | $25^\circ\text{C}$                                                                    |                            |     | 6   | mA                |
| Quiescent Current Change    | $\Delta I_q$ | $10.5\text{V} \leq V_i \leq 25\text{V}$ , $I_o = 200\text{mA}$                        | -25 ~ 125 $^\circ\text{C}$ |     | 0.8 |                   |
|                             |              | $5\text{mA} \leq I_o \leq 350\text{mA}$                                               | -25 ~ 125 $^\circ\text{C}$ |     | 0.5 |                   |
| Output Noise Voltage        | $V_N$        | $10\text{Hz} \leq f \leq 100\text{kHz}$                                               | $25^\circ\text{C}$         | 52  |     | $\mu\text{V}/V_o$ |
| Ripple Rejection            | $RR$         | $11.5\text{V} \leq V_i \leq 21.5\text{V}$ , $f = 120\text{Hz}$ , $I_o = 300\text{mA}$ | -25 ~ 125 $^\circ\text{C}$ | 56  |     | dB                |
| Dropout Voltage             | $V_d$        | $I_o = 350\text{mA}$                                                                  | $25^\circ\text{C}$         | 2   |     | V                 |
| Short Circuit Current Limit | $I_{sc}$     | $V_i = 14\text{V}$                                                                    | $25^\circ\text{C}$         | 250 |     | mA                |
| Peak Current                | $I_{pk}$     | $25^\circ\text{C}$                                                                    |                            | 0.5 |     | A                 |

\* Pulse test.

## ■ Marking

|         |      |
|---------|------|
| Marking | KM08 |
|---------|------|

## Three Terminal Positive Voltage Regulator

### KA280M08

#### ■ Typical Characteristics

