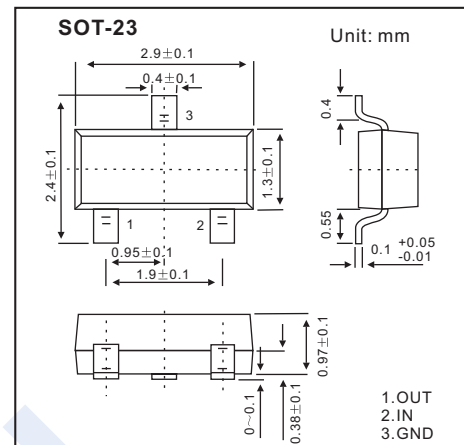


## Three-Terminal Positive Voltage Regulator

## KA080Q08

## ■ Features

- Maximum Output current  $I_o$ : 0.1A
- Output Voltage  $V_o$ : 8V
- Continuous Total Dissipation  $P_D$ : 0.35W ( $T_a = 25^\circ\text{C}$ )
- Marking Code: Q88



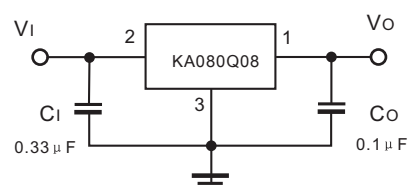
## ■ Absolute Maximum Ratings (Operating temperature range applies unless otherwise specified)

| Parameter                            | Symbol    | Rating     | Unit             |
|--------------------------------------|-----------|------------|------------------|
| Input Voltage                        | $V_i$     | 30         | V                |
| Operating Junction Temperature Range | $T_{OPR}$ | -55 ~ +125 | $^\circ\text{C}$ |
| Storage Temperature Range            | $T_{STG}$ | -55 ~ +150 | $^\circ\text{C}$ |

■ Electrical Characteristics ( $V_i=14\text{V}$ ,  $I_o=40\text{mA}$ ,  $C_i=0.33\ \mu\text{F}$ ,  $C_o=0.1\ \mu\text{F}$ , unless otherwise specified)

| Parameter                | Symbol       | Testconditions  | Min | Typ | Max | Unit          |
|--------------------------|--------------|---|-----|-----|-----|---------------|
| Output Voltage           | $V_o$        | $T_J = 25^\circ\text{C}$  | 7.7 | 8.0 | 8.3 | V             |
|                          |              | $T_J = 0\sim 125^\circ\text{C}$ , $10.5\text{V} \leq V_i \leq 23\text{V}$ , $I_o=1\text{mA} \sim 40\text{mA}$ | 7.6 | 8.0 | 8.4 | V             |
|                          |              | $T_J = 0\sim 125^\circ\text{C}$ , $I_o=1\text{mA} \sim 70\text{mA}$   | 7.6 | 8.0 | 8.4 | V             |
| Load Regulation          | $\Delta V_o$ | $T_J = 25^\circ\text{C}$ , $I_o=1\text{mA} \sim 100\text{mA}$   |     | 18  | 80  | mV            |
|                          |              | $T_J = 25^\circ\text{C}$ , $I_o=1\text{mA} \sim 40\text{mA}$  |     | 10  | 40  | mV            |
| Line Regulation          | $\Delta V_o$ | $T_J = 25^\circ\text{C}$ , $10.5\text{V} \leq V_i \leq 23\text{V}$  |     | 42  | 175 | mV            |
|                          |              | $T_J = 25^\circ\text{C}$ , $11\text{V} \leq V_i \leq 23\text{V}$  |     | 36  | 125 | mV            |
| Quiescent Current        | $I_q$        | $T_J = 25^\circ\text{C}$  |     | 4   | 6   | mA            |
| Quiescent current Change | $\Delta I_q$ | $T_J = 0\sim 125^\circ\text{C}$ , $11\text{V} \leq V_i \leq 23\text{V}$                                       |     |     | 1.5 | mA            |
|                          |              | $T_J = 0\sim 125^\circ\text{C}$ , $1\text{mA} \leq I_o \leq 40\text{mA}$                                      |     |     | 0.1 | mA            |
| Output Noise Voltage     | $V_N$        | $T_J = 25^\circ\text{C}$ , $10\text{Hz} \leq f \leq 100\text{KHz}$  |     | 54  |     | $\mu\text{V}$ |
| Ripple Rejection         | RR           | $T_J = 0\sim 125^\circ\text{C}$ , $13\text{V} \leq V_i \leq 23\text{V}$ , $f = 120\text{Hz}$                  | 37  | 46  |     | dB            |
| Dropout Voltage          | $V_D$        | $T_J = 25^\circ\text{C}$  |     | 1.7 |     | V             |

## ■ Typical Application



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

## KA080Q08

## ■ Typical Characteristics

