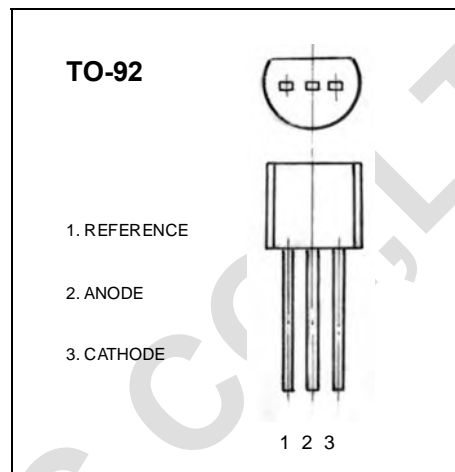


WEJ431 Adjustable Accurate Reference Source

FEATURES

- The output voltage can be adjusted to 36V
- Low dynamic output impedance, its typical value is 0.2Ω
- Trapping current capability is 1 to 100mA
- The typical value of the equivalent temperature factor in the whole temperature scope is 50 ppm/°C
- The effective temperature compensation in the working range of full temperature
- Low output noise voltage
- Fast on -state response



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

| Parameter | SYMBOL | VALUE | UNITS |
|------------------------------------|-----------|-----------|-------|
| Cathode Voltage | V_{KA} | 37 | V |
| Cathode Current Range (Continuous) | I_{KA} | -100~+150 | mA |
| Reference Input Current Range | I_{ref} | 0.05~+10 | mA |
| Power Dissipation | P_D | 770 | mW |
| Operating temperature | T_{opr} | 0~70 | °C |
| Storage temperature Range | T_{stg} | -65~+150 | °C |

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|---|--------------------------------|---|----------------------------------|------|-------|----------|
| Reference Input Voltage | V_{ref} | $V_{KA}=V_{REF}, I_{KA}=10mA$ | 2.475 | 2.5 | 2.525 | V |
| Deviation of reference input Voltage Over temperature (note) | $\Delta V_{ref}/\Delta T$ | $V_{KA}=V_{REF}, I_{KA}=10mA$ $T_{min} \leq T_a \leq T_{max}$ | | 4.5 | 17 | mV |
| Ratio Of Change in Reference Input Voltage to the change in Cathode Voltage | $\Delta V_{ref}/\Delta V_{KA}$ | $I_{KA}=10mA$ | $\Delta V_{KA}=10V \sim V_{REF}$ | -1.0 | -2.7 | m V/V |
| | | | $\Delta V_{KA}=36V \sim 10V$ | -0.5 | -2.0 | m V/V |
| Reference Input Current | I_{ref} | $I_{KA}=10mA, R_1=10K\Omega$ $R_2=\infty$ | | 1.5 | 4 | μA |
| Deviation Of Reference Input Current Over Full Temperature Range | $\Delta I_{ref}/\Delta T$ | $I_{KA}=10mA, R_1=10K\Omega$ $R_2=\infty$ $T_A=full\ Temperature$ | | 0.4 | 1.2 | μA |
| Minimum cathode current for regulation | $I_{KA}(min)$ | $V_{KA}=V_{REF}$ | | 0.45 | 1.0 | mA |
| Off-state cathode Current | $I_{KA}(OFF)$ | $V_{KA}=36V, V_{REF}=0$ | | 0.05 | 1.0 | μA |
| Dynamic Impedance | Z_{KA} | $V_{KA}=V_{REF}, I_{KA}=1\ to\ 100mA$ $f \leq 1.0KHZ$ | | 0.15 | 0.5 | Ω |

Note: $T_{MIN}=0^{\circ}C, T_{MAX}=+70^{\circ}C$

CLASSIFICATION OF V_{ref}

| Rank | WEJ431 | WEJ431 A | WEJ431 B |
|-------|-------------|-------------|-------------|
| Range | 2.487-2.512 | 2.475-2.525 | 2.450-2.550 |