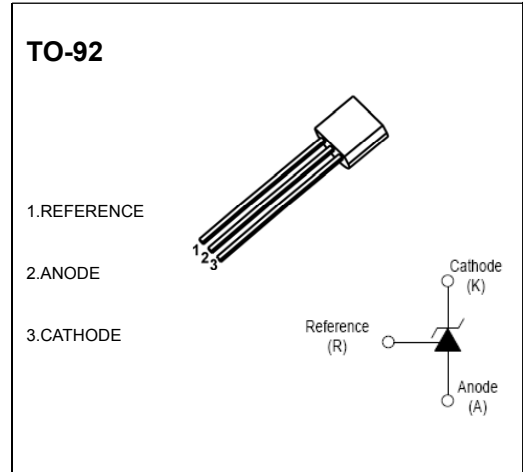


CJ431K Adjustable Accurate Reference Source

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
- ESD protected up to 2KV



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 |
| Thermal Resistance from Junction to Ambient | $R_{\theta JA}$ | 162 | °C/W |
| Operating temperature | T_{opr} | -25~+125 | °C |
| Junction Temperature | T_J | 150 | °C |
| Storage Temperature Range | T_{stg} | -65~+150 | °C |

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

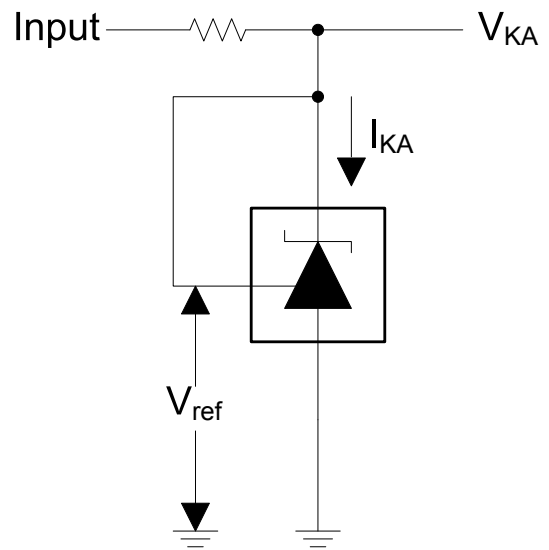
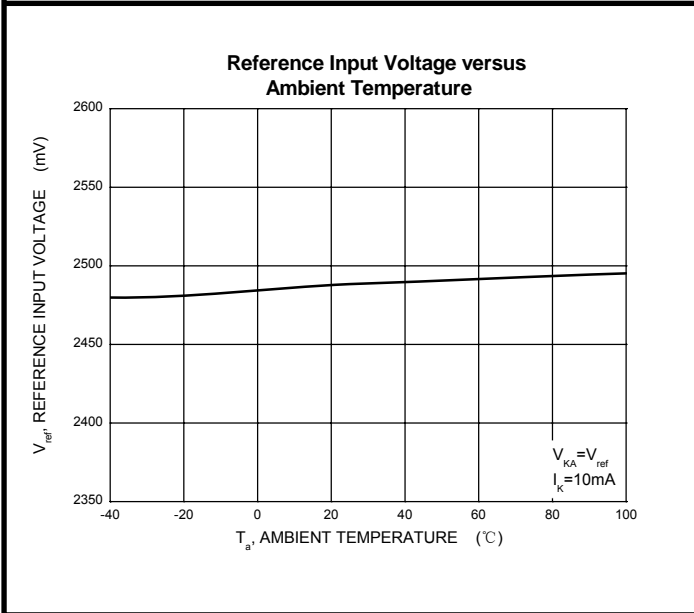
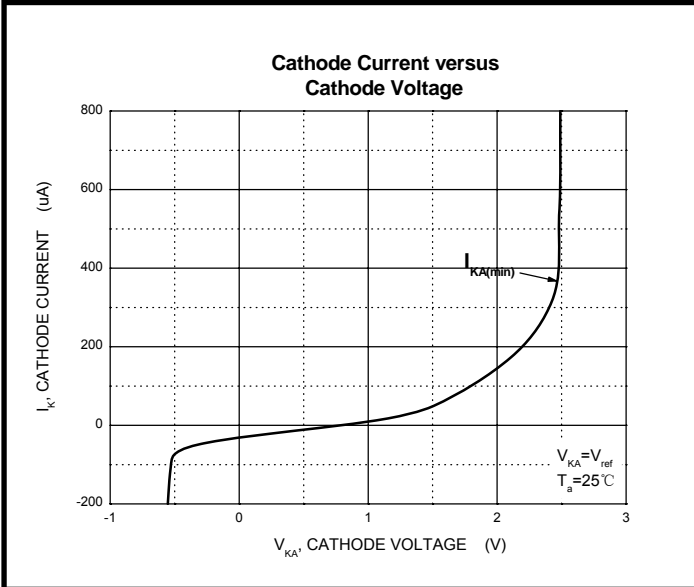
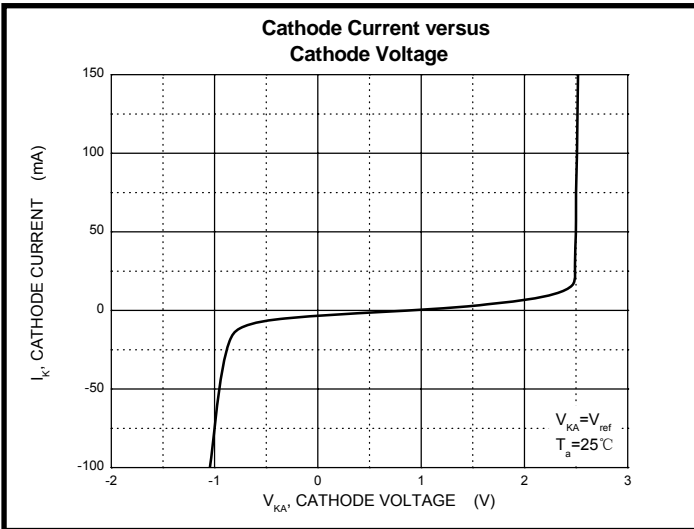
| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|---|--------------------------------|--|----------------------------------|------|-------|------|
| Reference input voltage | V_{ref} | $V_{KA}=V_{REF}, I_{KA}=10mA$ | 2.470 | | 2.520 | V |
| Deviation of reference input voltage over 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 | mV/V |
| | | | $\Delta V_{KA}=36V \sim 10V$ | -0.5 | -2.0 | mV/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 | $\Delta I_{ref}/\Delta T$ | $I_{KA}=10mA, R_1=10k\Omega$ $R_2=\infty$ $T_A=-25$ to $125^\circ C$ | | 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 | $I_{KA(OFF)}$ | $V_{KA}=40V, V_{REF}=0$ | | 0.05 | 0.5 | μA |
| Dynamic impedance | Z_{KA} | $V_{KA}=V_{REF}, I_{KA}=1$ to $100mA$ $f \leq 1.0kHz$ | | 0.15 | 0.5 | Ω |

Note: $T_{MIN}=-25^\circ C, T_{MAX}=+125^\circ C$

CLASSIFICATION OF V_{ref}

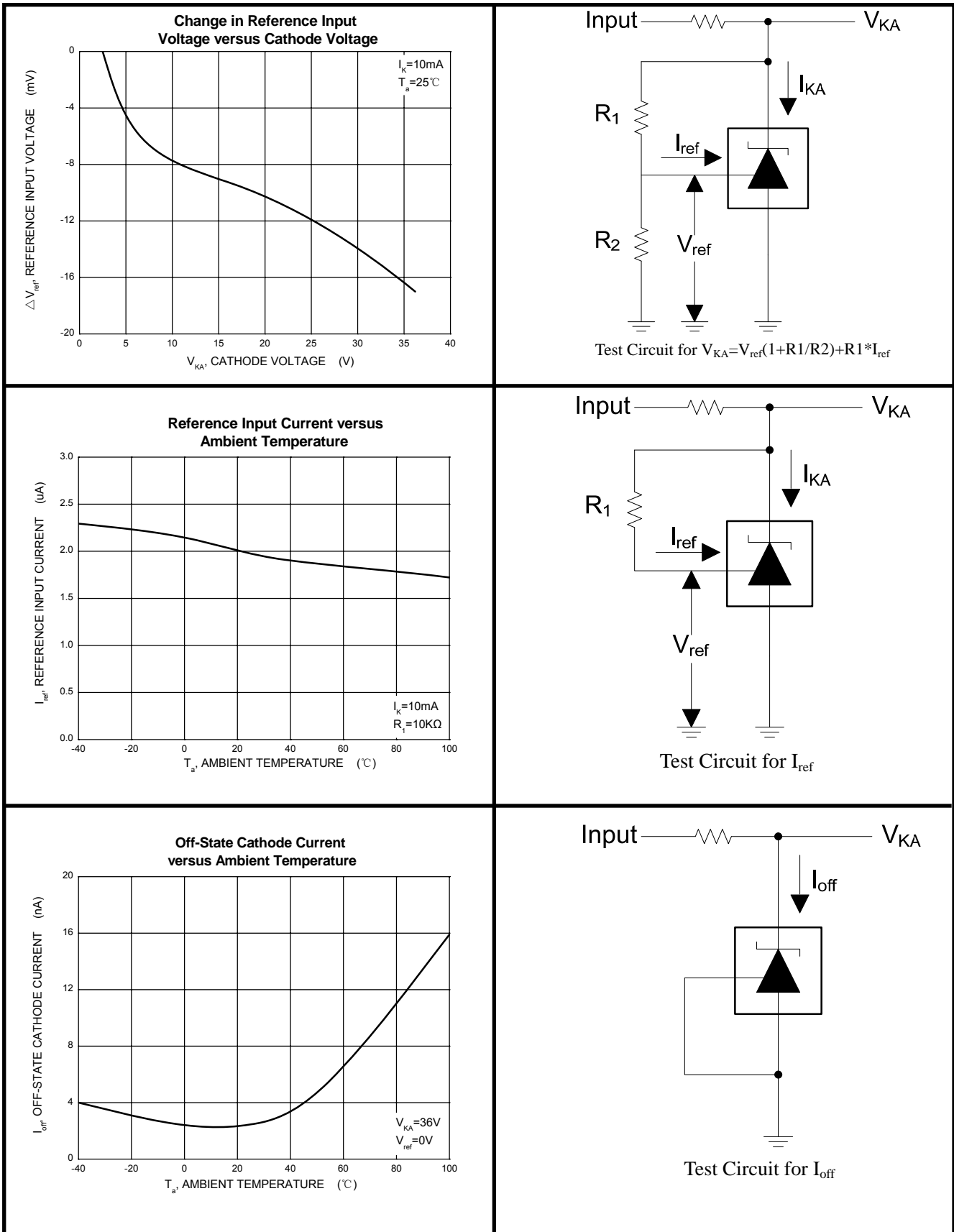
| Rank | 0.5% | 1% |
|-------|-------------|-----------|
| Range | 2.482-2.508 | 2.47-2.52 |

Typical Characteristics

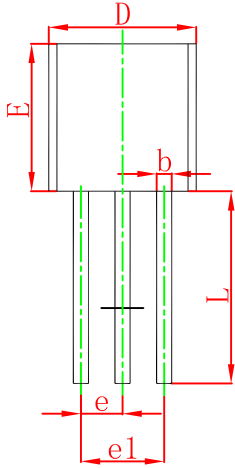
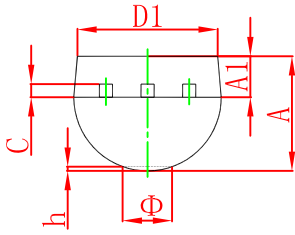


Test Circuit for $V_{KA} = V_{ref}$

Typical Characteristics

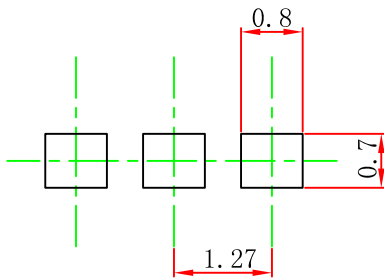


TO-92 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|--------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 3.400 | 3.600 | 0.134 | 0.142 |
| A1 | 1.150 | 1.350 | 0.045 | 0.053 |
| b | 0.380 | 0.550 | 0.015 | 0.022 |
| c | 0.410 | 0.510 | 0.016 | 0.020 |
| D | 4.400 | 4.600 | 0.173 | 0.181 |
| D1 | 3.430 | | 0.135 | |
| E | 4.400 | 4.600 | 0.173 | 0.181 |
| 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



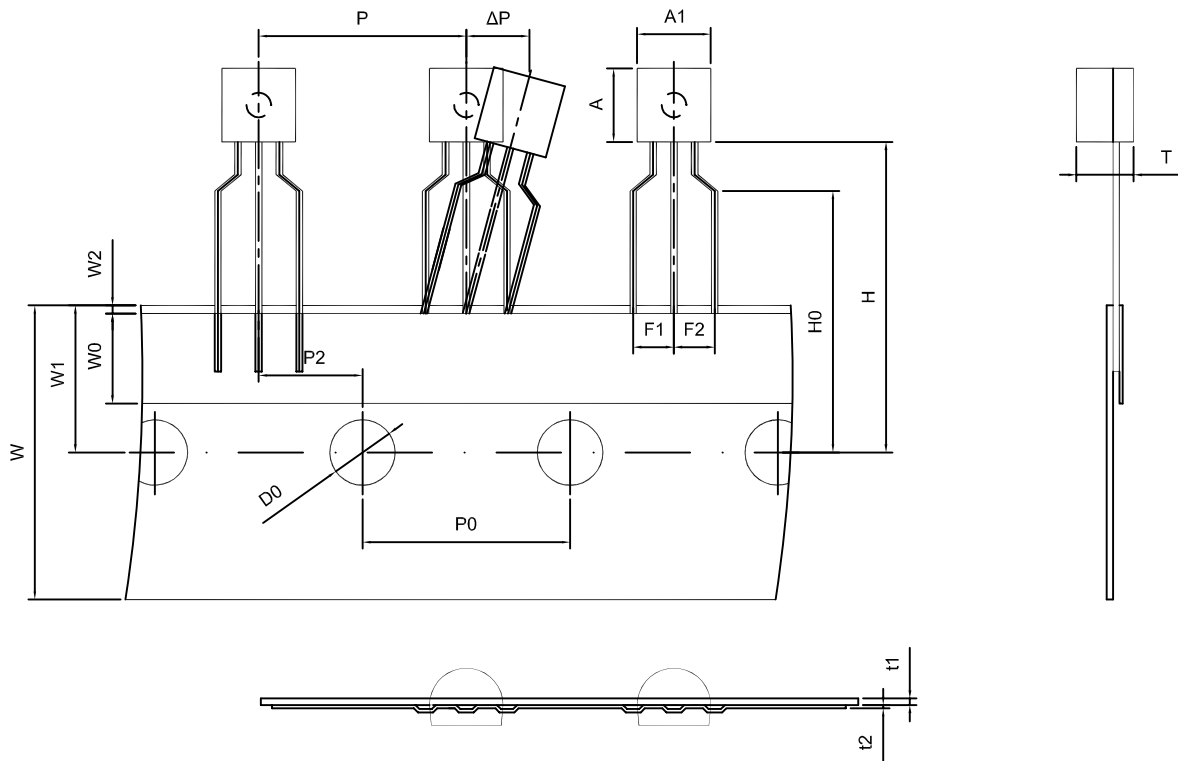
Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

NOTICE

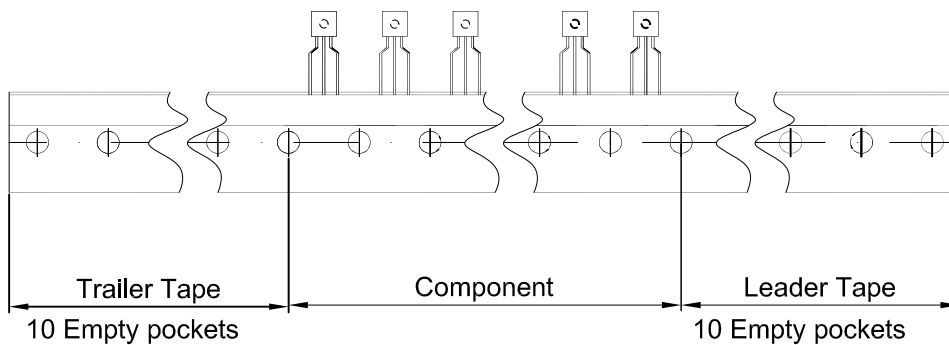
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TO-92 PACKAGE TAPEING DIMENSION



Dimensions are in millimeter

| A1 | A | T | P | P0 | P2 | F1 | F2 | W |
|---------|---------|----------|----------|----------|----------|----------|----------|---------------|
| 4.5±0.2 | 4.5±0.2 | 3.5±0.2 | 12.7±0.3 | 12.7±0.2 | 6.35±0.3 | 2.5±0.3 | 2.5±0.3 | 18.0+1.0/-0.5 |
| W0 | W1 | W2 | H | H0 | D0 | t1 | t2 | ΔP |
| 6.0±0.5 | 9.0±0.5 | 1.0 MAX. | 19.0±1.0 | 16.0±0.5 | 4.0±0.5 | 0.4±0.05 | 0.2±0.05 | 0 ± 1.0 |



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

单击下面可查看定价，库存，交付和生命周期等信息

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