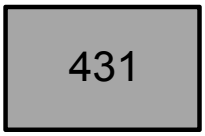
## Features

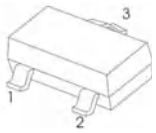
- Programmable output voltage to 36V
- Low dynamic output impedance 0.2ohm
- Sink current capability of 1.0 to 100mA
- Typical for operation over full rated operating temperature range

Marking




**SOT-23**

1.REFERENCE
2.CATHODE
3. ANODE




## Absolute Maximum Ratings (Tamb=25℃)

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Cathode Voltage | Vka | 37 | V |
| Cathode Current Range | Ikao | -100 +150 | mA |
| Reference Input Current Rang | Iref | -0.05 +10 | mA |
| Operating Junction Temperature | Tj | 150 | ℃ |
| Operating Ambient Temperature | Topr | 0 +70 | ℃ |
| Storage Temperature | Tstg | -65~150 | ℃ |

## RECOMMENDED OPERATING CONDITIONS

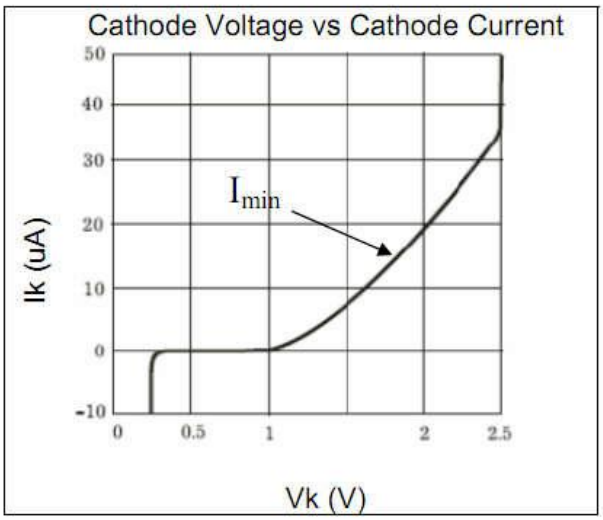
| Parameter | Symbol | Min | Typ | Max | Unit |
|---|---|---|---|---|---|
| Cathode Volltage | Vka | Vref | | 36 | V |
| Cathode Current | Ika | 1 | | 100 | mA |

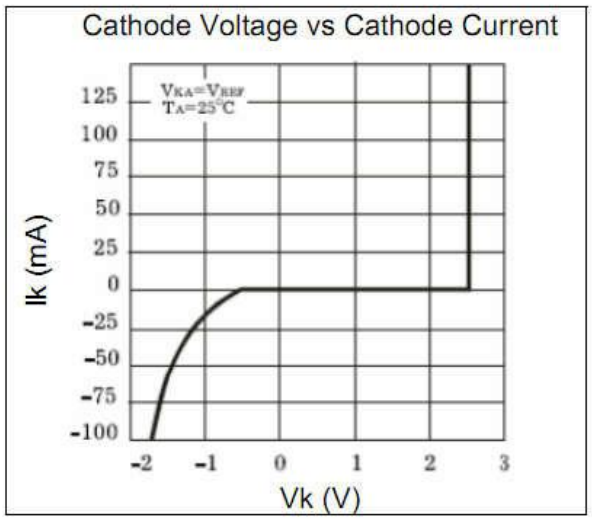
## Electrical Characteristic(Tamb=25℃)

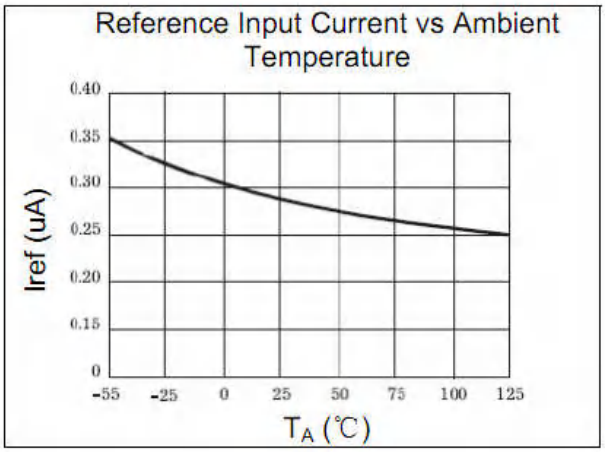
| Parameter | Symbol | Test Condition | Min | | Max | Unit |
|---|---|---|---|---|---|---|
| Reference Input Voltage | Vref | Vka=Vref,Ika=10mA | 2.44 | 2.495 | 2.55 | V |
| Deviation of reference input Voltage Over temperature | ⊿Vref/⊿T | Vka=Vref,Ika=10mA; 0℃≦Ta≦70℃ | | 4.5 | 17 | mV |
| Ratio of change in reference input voltage to the change in cathode voltage | ⊿Vref/⊿Vka | Ika=10mA,⊿Vka=10V～Vref | | -1 | -2.7 | mV/V |
| Ratio of change in reference input voltage to the change in cathode voltage | ⊿Vref/⊿Vka | Ika=10mA,⊿Vka=36V～10V | | -0.5 | -2 | mV/V |
| Reference Input Current | Iref | Ika=10V,R1=10Kohm,R2=∞ | | 1.5 | 4 | uA |
| Deviation of reference input Current Over Full Temperature Range | ⊿Iref/⊿T | Ika=10V,R1=10Kohm,R2=∞, Ta=full tempertaure | | 0.4 | 1.2 | uA |
| Minimum Cathode Current for Regulation | $Ika_{(min)}$ | Vka=Vref | | 0.45 | 1 | mA |
| Off-State Cathode Current | $Ika_{(off)}$ | Vka=36V,Vref=0 | | 0.05 | 1.0 | uA |
| Dynamic Impedance | Zka | Vka=Vref,Ika=1 to 100mA,f=1.0kHz | | 0.15 | 0.5 | ohm |

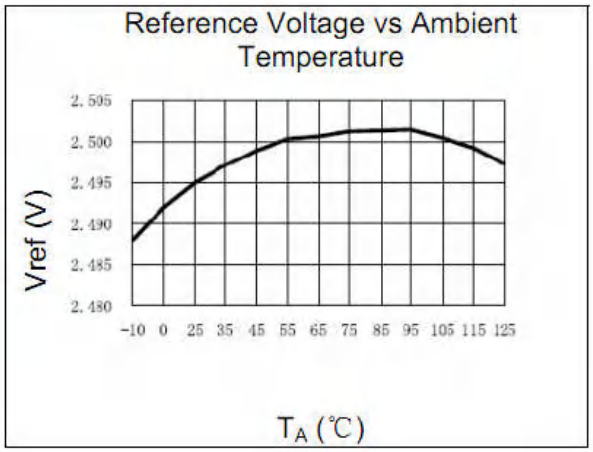
| | |
|---|---|
| Rank | 0.3% |
| Range | 2.487-2.503 |

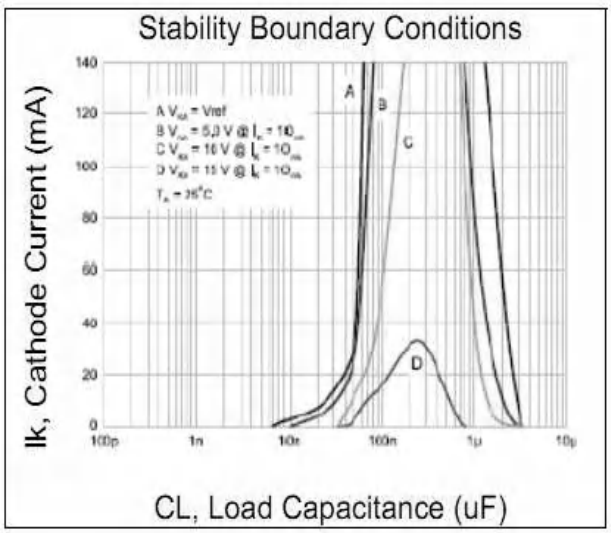
## RATING AND CHARACTERISTIC CURVES

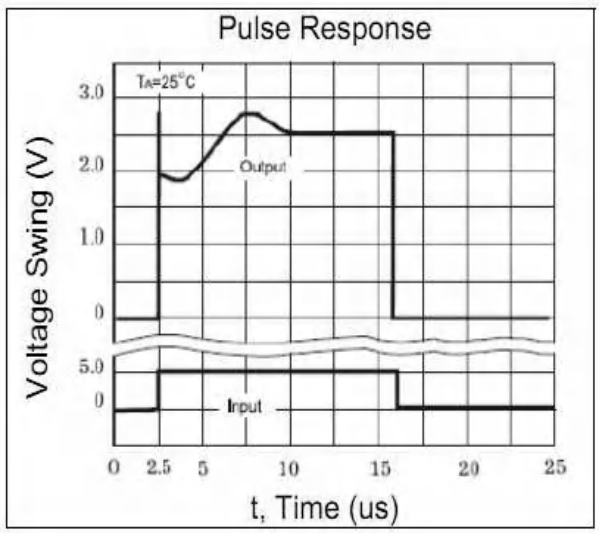


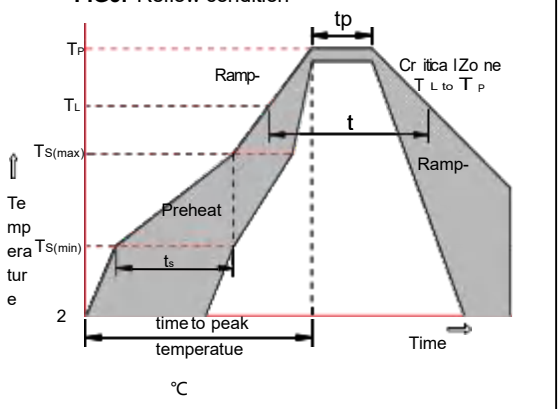



## Soldering parameters

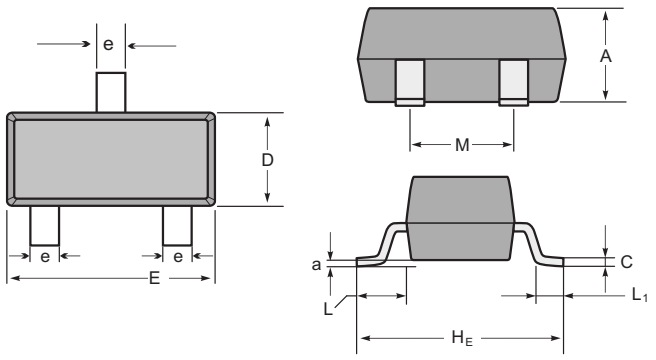
| Reflow Condition | | Pb-Free assembly (see as bellow) |
|---|---|---|
| Pre Heat | -Temperature Min ($T_{s(min)}$) | +150℃ |
| | -Temperature Max($T_{s(max)}$) | +200℃ |
| | -Time (Min to Max) (ts) | 60-180 secs. |
| Average ramp up rate (Liquid us Temp ($T_L$) to peak) | | 3℃/sec. Max |
| $T_{s(max)}$ to $T_L$ - Ramp-up Rate | | 3℃/sec. Max |
| Reflow | -Temperature($T_L$)(Liquid us) | +217℃ |
| | -Temperature($t_L$) | 60-150 secs. |
| Peak Temp ($T_p$) | | +260(+0/-5)℃ |
| Time within 5℃ of actual Peak Temp ($t_p$) | | 30 secs. Max |
| Ramp-down Rate | | 6℃/sec. Max |
| Time 25℃ to Peak Temp ($T_P$) | | 8 min. Max |
| Do not exceed | | +260℃ |

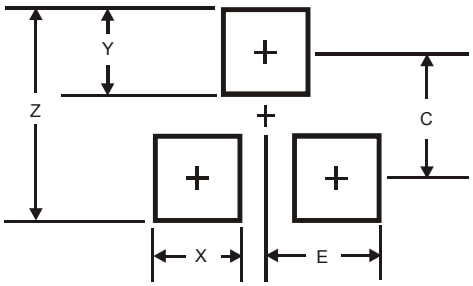
**FIG5:** Reflow condition




## Package Dimensions & Suggested Pad Layout

**SOT23**



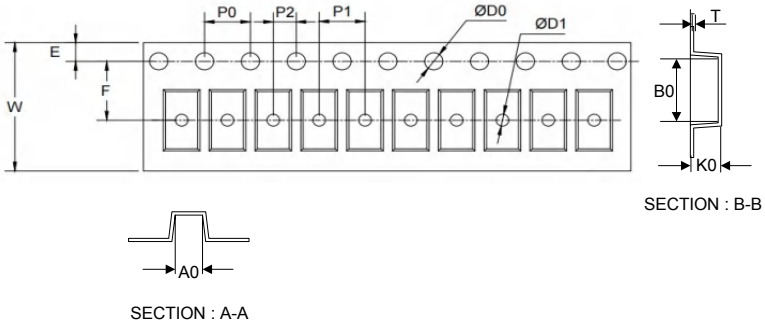

SOT-23 mechanical data

| UNIT | | A | C | D | E | $H_E$ | e | M | L | $L_1$ | a |
|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | max | 1.1 | 0.15 | 1.4 | 3.0 | 2.6 | 0.5 | 1.95 | 0.55 (ref) | 0.36 (ref) | 0.0 |
| | min | 0.9 | 0.08 | 1.2 | 2.8 | 2.2 | 0.3 | 1.7 | | | 0.15 |
| mil | max | 43 | 6 | 55 | 118 | 102 | 20 | 77 | 22 (ref) | 14 (ref) | 0.0 |
| | min | 35 | 3 | 47 | 110 | 87 | 12 | 67 | | | 6 |

| Dimensions | SOT23 |
|---|---|
| Z | 2.9 |
| X | 0.8 |
| Y | 0.9 |
| C | 2.0 |
| E | 1.35 |

## Tape & rell specification

Tape



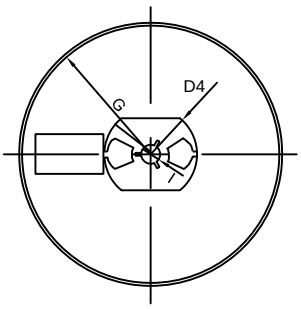

SECTION : B-B

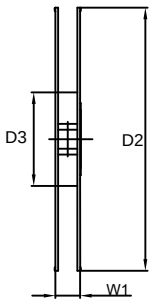



SECTION : A-A

| Symbol | Dimension (mm) |
|---|---|
| P0 | 4.00±0.10 |
| P1 | 4.00±0.10 |
| P2 | 2.00±0.10 |
| D0 | 1.55±0.10 |
| D1 | 1.05±0.10 |
| E | 1.55±0.10 |
| F | 3.60±0.10 |
| W | 8.00±0.10 |
| A0 | 3.80±0.20 |
| B0 | 3.25±0.20 |
| K0 | 1.45±0.10 |
| T | 0.25±0.05 |

7” Reel




| | |
|---|---|
| D2 | 178.0±3.0 |
| D3 | 55Min. |
| D4 | R24.0±3.0 |
| G | R82.0±3.0 |
| I | 13.0±2.0 |
| W1 | 11.0±3.0 |

Quantity: 3000PCS