

## **Dual Switching Diode Common Cathode**

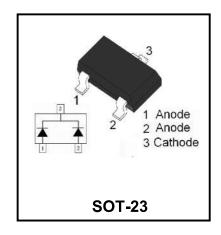
#### **Features**

≻High Conductance: I<sub>F</sub>= 100 mA

➤ Fast Switching Speed: trr < 4 ns Maximum

➤ Small Plastic SOT-23 Package

| Marking Code |   |  |  |
|--------------|---|--|--|
| DAN202K      | N |  |  |



## Absolute Maximum Ratings (Ta=25℃)

| Parameter                                | Symbol                 | Values          | Units |
|------------------------------------------|------------------------|-----------------|-------|
| Reverse Voltage                          | $V_R$                  | 80              | V     |
| Forward current                          | I <sub>F</sub>         | 100             | mA    |
| Peak Forward Surge Current               | I <sub>FM(surge)</sub> | 300             | mA    |
| Power dissipation T <sub>S</sub> ≤ 55 °C | P <sub>D</sub>         | 200             | mW    |
| Operating temperature range              | T <sub>j</sub>         | <b>-</b> 55∼150 | °C    |
| Storage Temperature Range                | T <sub>stg</sub>       | <b>-</b> 55∼150 | °C    |
| Thermal Resistance, Junction to Ambient  | $R_{	heta JA}$         | 357             | K/W   |

## **Electrical Characteristics (Ta=25°CUnless otherwise noted)**

| Parameter                      | Symbol              | Test Conditions                   | Min. | Тур | Max. | Units |  |
|--------------------------------|---------------------|-----------------------------------|------|-----|------|-------|--|
| DC Characteristics             |                     |                                   |      |     |      |       |  |
| Breakdown Voltage, per Diode   | V <sub>R</sub>      | I <sub>R</sub> = 100μA            | 80   |     |      | V     |  |
|                                |                     | I <sub>F</sub> = 1 mA             |      |     | 0.7  | · V   |  |
| Forward voltage, per Diode     |                     | I <sub>F</sub> = 10 mA            |      |     | 8.0  |       |  |
|                                | V <sub>F</sub>      | I <sub>F</sub> = 50 mA            |      |     | 1.0  |       |  |
|                                |                     | I <sub>F</sub> = 100 mA           |      |     | 1.2  |       |  |
| Reverse Leakage, per Diode     | I <sub>R</sub>      | V <sub>R</sub> = 70V              |      |     | 0.1  | μΑ    |  |
| Total Capacitance, per Diode   | Ст                  | V <sub>R</sub> = 6 V, f = 1.0 MHz |      |     | 3.5  | pF    |  |
| Reverse-Recovery Time, per Dic | ode t <sub>rr</sub> | $V_R$ =6 $V$ , $I_F$ = 5 $mA$     |      |     | 4    | ns    |  |

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#### **Typical Characteristic**

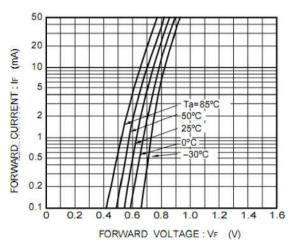


Figure 1. Forward characteristics

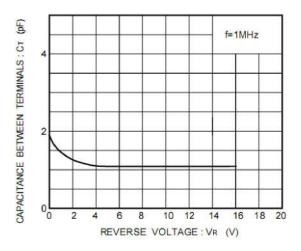


Figure 3. Capacitance between terminals characteristics

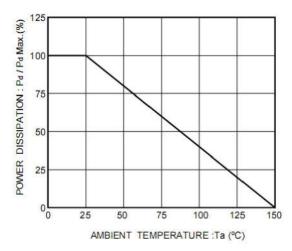


Figure 5. Power attenuation curve

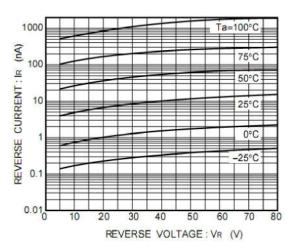


Figure 2. Reverse characteristics

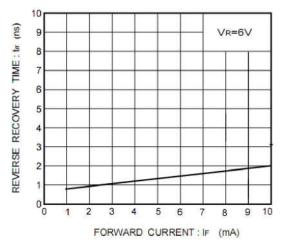


Figure Reverse recovery time

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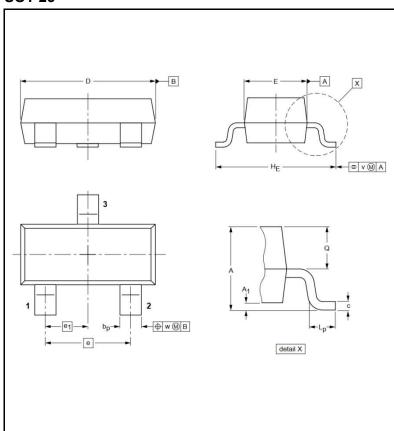


## **Ordering information**

| Package Packing Description |  | Base Quantity | Packing Quantity              |  |
|-----------------------------|--|---------------|-------------------------------|--|
| SOT-23 Tape/Reel,7"reel     |  | 3000pcs/Reel  | 24000PCS/Box 120000PCS/Carton |  |

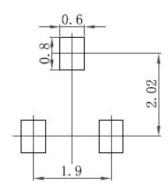
## **Package Dimensions**

#### SOT-23



| Dim. | Millimeter<br>(mm) |      | mil  |      |  |
|------|--------------------|------|------|------|--|
|      | Min.               | Max. | Min. | Max. |  |
| Α    | 0.9                | 1.15 | 35   | 45   |  |
| A1   | 0.1                |      | 3.9  |      |  |
| bp   | 0.38               | 0.48 | 15   | 19   |  |
| O    | 0.09               | 0.15 | 3.54 | 5.9  |  |
| D    | 2.8                | 3.0  | 110  | 118  |  |
| Е    | 1.2                | 1.4  | 47   | 55   |  |
| Е    | 1.9                |      | 75   |      |  |
| E1   | 0.95               |      | 37   | 7    |  |
| HE   | 2.1                | 2.55 | 83   | 100  |  |
| Lp   | 0.15               | 0.45 | 5.9  | 18   |  |
| Q    | 0.45               | 0.55 | 18   | 22   |  |
| V    | 0.2                |      | 7.9  |      |  |
| W    | 0.1                |      | 4    |      |  |

# The recommended mounting pad size





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