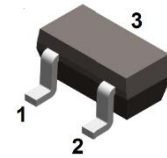
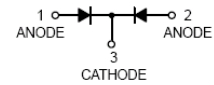




Features

- Ultra-small surface mount package
- Fast switching speed
- For general purpose switching applications
- Low conductance



Mechanical Data

- Case: SOT-523
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

SOT-523

Ordering Information

| Part Number | Package | Shipping Quantity | Marking Code |
|-------------|---------|------------------------|--------------|
| DAN222 | SOT-523 | 3000 pcs / Tape & Reel | N |

Maximum Ratings (@ T_A = 25 °C unless otherwise specified)

| Parameter | | Value | Unit |
|---------------------------------------|------------------|-------|------|
| Repetitive Peak Reverse Voltage | V _{RM} | 80 | V |
| Reverse Voltage | V _R | 80 | V |
| Average Rectified Output Current | I _F | 100 | mA |
| Forward Continuous Current (Peak) | I _{FM} | 300 | mA |
| Peak Forward Surge Current, (t = 1μs) | I _{FSM} | 2 | A |

Thermal Characteristics

| Parameter | Symbol | Value | Unit |
|--|------------------|------------|------|
| Power Dissipation | P _D | 150 | mW |
| Thermal Resistance Junction-to-Air *1 | R _{θJA} | 150 | °C/W |
| Thermal Resistance Junction-to-Case *1 | R _{θJC} | 85 | °C/W |
| Thermal Resistance Junction-to-Lead *1 | R _{θJL} | 75 | °C/W |
| Operating Junction Temperature Range | T _J | -55 ~ +150 | °C |
| Storage Temperature Range | T _{STG} | -55 ~ +150 | °C |

Note 1: The data tested by surface mounted on a 1 inch² FR-4 board with 20Z copper

Electrical Characteristics (@ $T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test Condition | Min. | Typ. | | Unit |
|------------------------------|------------|--|------|------|-----|---------------|
| Reverse Breakdown Voltage | $V_{(BR)}$ | $I_R = 100\mu\text{A}$ | 80 | - | - | V |
| Forward Voltage | V_F | $I_F = 100\text{mA}$ | - | - | 1.2 | V |
| Maximum Peak Reverse Current | I_R | $V_R = 70\text{V}$ | - | - | 0.1 | μA |
| Total Capacitance | C_J | $V_R = 6\text{V}, f = 1.0\text{MHz}$ | - | - | 3.5 | pF |
| Reverse Recovery Time | t_{rr} | $I_F = I_R = 5.0\text{mA}, I_{rr} = 0.1 \cdot I_R$ $R_L = 100\Omega, V_R = 6.0\text{V}$ | - | - | 4 | ns |

Ratings and Characteristics Curves (@ $T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified)

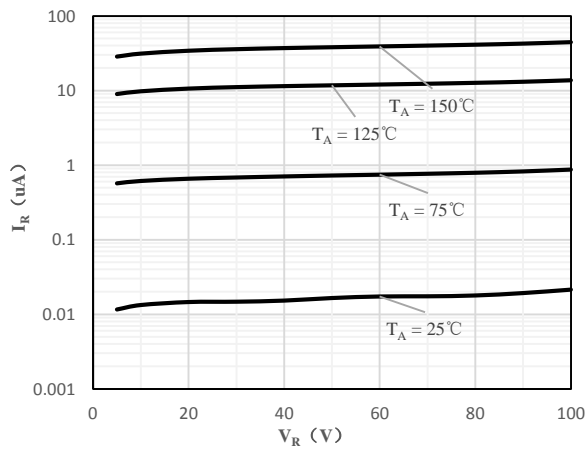


Fig 1 Typical Reverse Characteristic

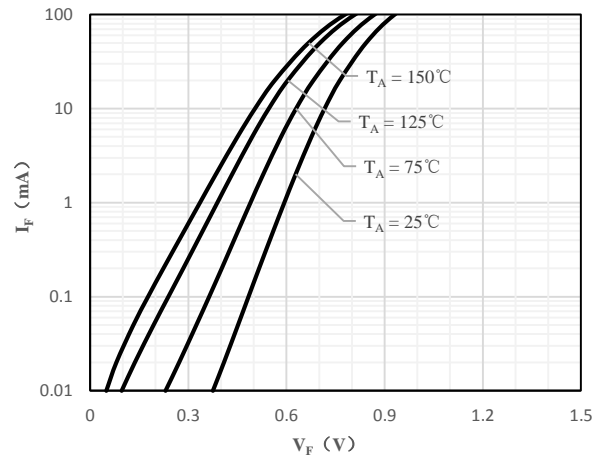


Fig 2 Typical Forward Characteristics

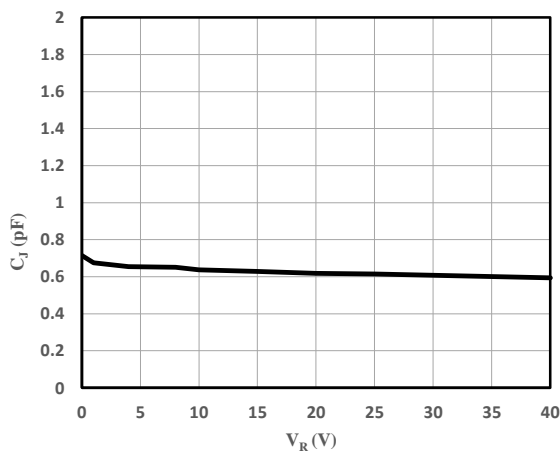
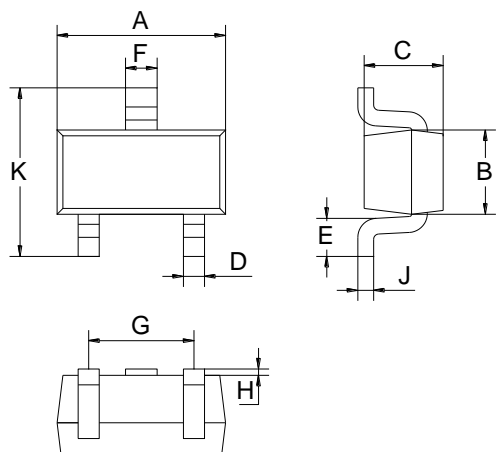


Fig 3 Capacitance vs. Reverse Voltage

Package Outline Dimensions (Unit: mm)


| SOT-523 | | |
|-----------|------|------|
| Dimension | Min. | Max. |
| A | 1.50 | 1.70 |
| B | 0.75 | 0.85 |
| C | 0.60 | 0.80 |
| D | 0.15 | 0.30 |
| E | 0.30 | 0.40 |
| F | 0.25 | 0.40 |
| G | 0.90 | 1.10 |
| H | 0.02 | 0.10 |
| J | 0.08 | 0.18 |
| K | 1.45 | 1.75 |

Mounting Pad Layout (Unit: mm)

SOT-523
