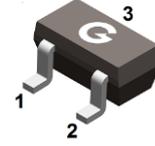
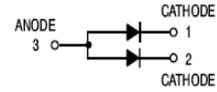


Features

- Fast switching speed
- High conductance
- For general purpose switching applications

HF



SOT-523

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

Ordering Information

| Part Number | Package | Shipping Quantity | Marking Code |
|-------------|---------|------------------------|--------------|
| BAW56T | SOT-523 | 3000 pcs / Tape & Reel | JD |

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

| Parameter | Symbol | Value | Unit |
|--|---------------------|-------|------|
| Peak Repetitive Peak Reverse Voltage | V _{RRM} | 85 | V |
| Working Peak Reverse Voltage | V _{RWM} | 85 | V |
| DC Blocking Voltage | V _R | 85 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 60 | V |
| Forward Continuous Voltage (Single Diode) | I _F | 155 | mA |
| Forward Continuous Voltage (Double Diode) | | 75 | mA |
| Non-repetitive Peak Forward Surge Current, t = 1μs | I _{FSM} | 4 | A |
| Non-repetitive Peak Forward Surge Current, t = 1ms | | 1 | A |
| Non-repetitive Peak Forward Surge Current, t = 1s | | 0.5 | A |

Thermal Characteristics

| Parameter | Symbol | Value | Unit |
|---|------------------|------------|------|
| Power Dissipation (T _A = 25°C) | P _D | 150 | mW |
| Thermal Resistance Junction-to-Air *1 | R _{θJA} | 165 | °C/W |
| Thermal Resistance Junction-to-Case *1 | R _{θJC} | 100 | °C/W |
| Thermal Resistance Junction-to-Lead *1 | R _{θJL} | 85 | °C/W |
| Operating Junction Temperature Range | T _J | -65 ~ +150 | °C |
| Storage Temperature Range | T _{STG} | -65 ~ +150 | °C |

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

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

| Parameter | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|------------------------------|-------------|---|------|------|-------|---------------|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | $I_R = 100\mu\text{A}$ | 85 | - | - | V |
| Forward Voltage | V_F | $I_F = 1\text{mA}$ | - | - | 0.715 | V |
| | | $I_F = 10\text{mA}$ | - | - | 0.855 | V |
| | | $I_F = 50\text{mA}$ | - | - | 1.000 | V |
| | | $I_F = 150\text{mA}$ | - | - | 1.250 | V |
| Maximum Peak Reverse Current | I_R | $V_R = 25\text{V}, T_J = 25^\circ\text{C}$ | - | - | 30 | nA |
| | | $V_R = 25\text{V}, T_J = 150^\circ\text{C}$ | - | - | 60 | μA |
| | | $V_R = 75\text{V}, T_J = 25^\circ\text{C}$ | - | - | 2 | μA |
| | | $V_R = 75\text{V}, T_J = 150^\circ\text{C}$ | - | - | 100 | μA |
| Total Capacitance | C_J | $V_R = 0\text{V}, f = 1.0\text{MHz}$ | - | - | 1.5 | pF |
| Reverse Recovery Time | t_{rr} | $I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$ | - | - | 4 | ns |

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

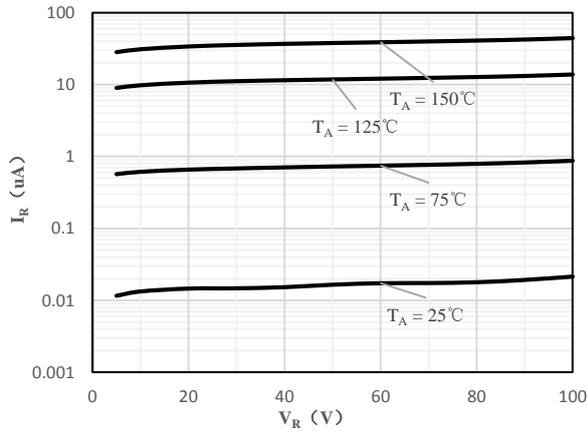


Fig 1 Typical Reverse Characteristic

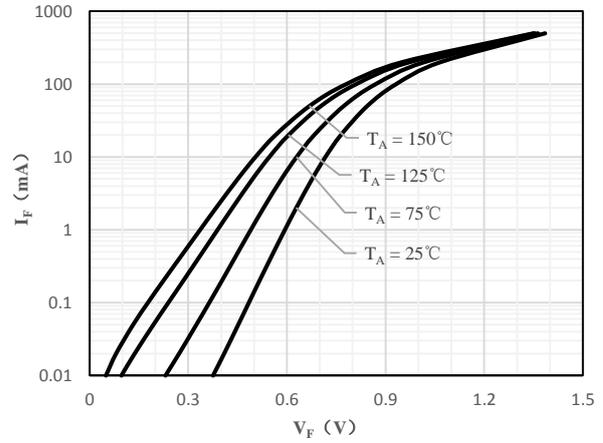


Fig 2 Typical Forward Characteristics

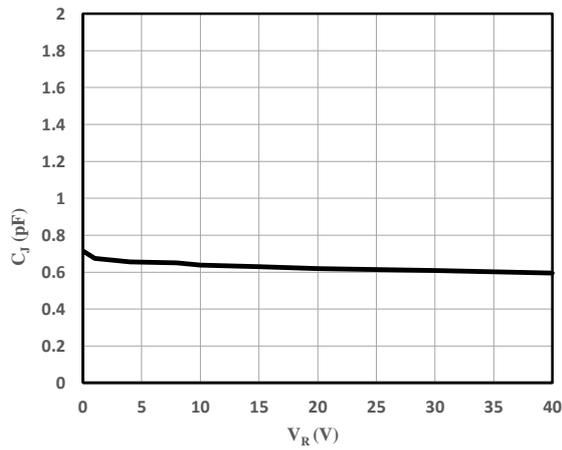
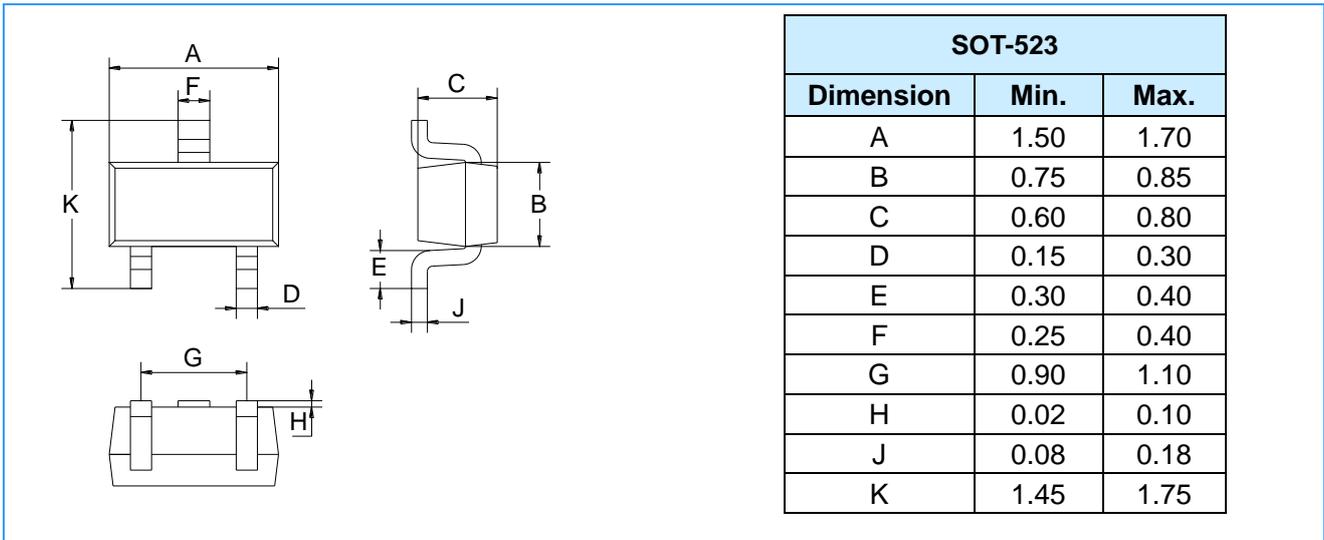
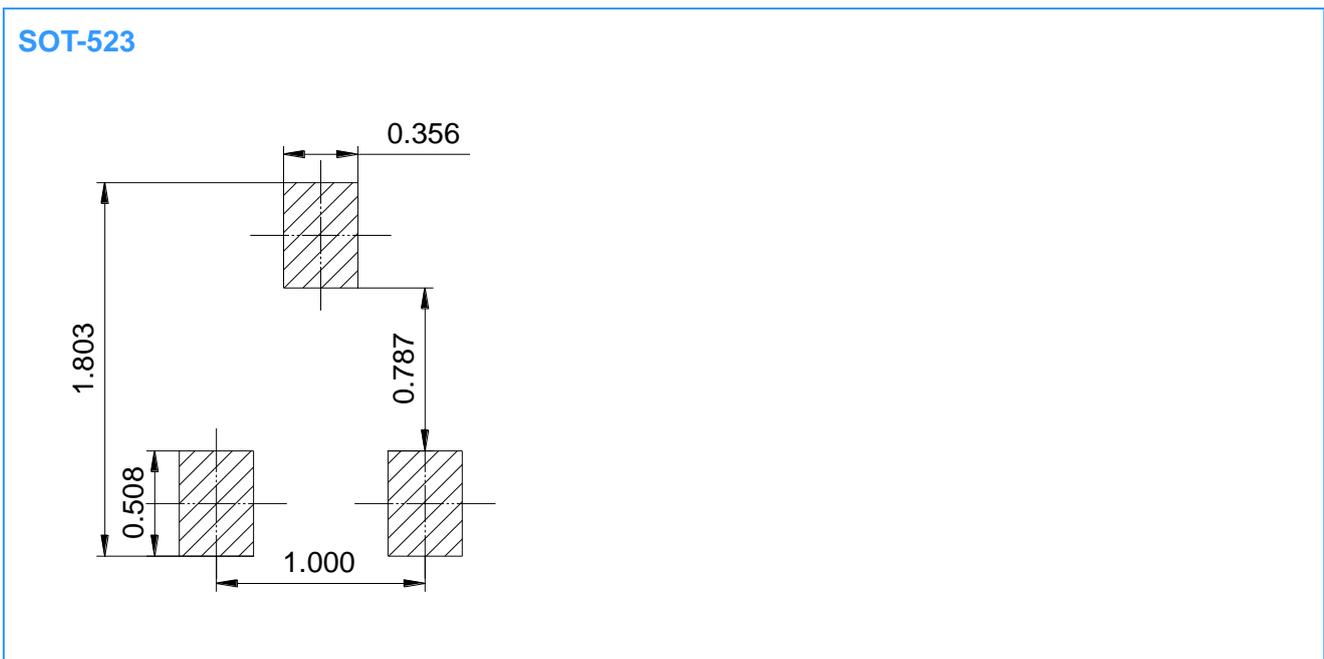


Fig 3 Capacitance vs. Reverse Voltage

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



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