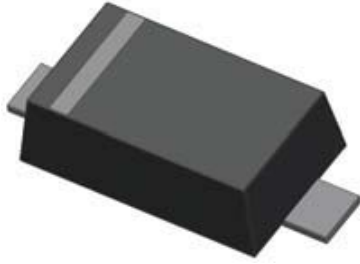


Small-Signal Fast Switching Diodes

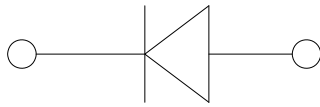


Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- V_R 75V
- I_{FAV} 200mA
- Part no. with suffix "Q" means AEC-Q101 qualified

Typical Applications

- Fast Switching Speed



Mechanical Data

- **Package:** SOD523
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end
- **Marking:** S1

■ Maximum Ratings ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | Conditions | VALUE |
|--|------------|---------------------------|----------------------|-------------|
| Repetitive peak reverse voltage | V_{RRM} | V | | 75 |
| Reverse voltage | V_R | V | $I_R=100\mu\text{A}$ | 75 |
| Peak forward surge current | I_{FSM} | A | $T_P=1\text{ms}$ | 1 |
| Average forward current | I_{FAV} | mA | | 200 |
| Power dissipation | P_{tot} | mW | | 200 |
| Thermal Resistance Junction to Ambient | R_{thJA} | $^\circ\text{C}/\text{W}$ | | 625 |
| Maximum junction temperature | T_J | $^\circ\text{C}$ | | -55 to +150 |
| Storage temperature range | T_{stg} | $^\circ\text{C}$ | | -55 to +150 |

■ Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER | Symbol | UNIT | Conditions | Min | Max |
|-------------------------|----------|------|--|-----|------|
| Breakdown Voltage | V_R | V | $I_R=100\mu\text{A}$ | 75 | |
| Forward Voltage | V_F | V | $I_F=1\text{mA}$ | | 0.9 |
| | | | $I_F=10\text{mA}$ | | 1.0 |
| | | | $I_F=50\text{mA}$ | | 1.1 |
| | | | $I_F=150\text{mA}$ | | 1.25 |
| Reverse Leakage Current | I_R | nA | $V_R=75\text{V}$ | | 5 |
| Capacitance | C_J | pF | $V_R=0\text{V}, f=1\text{MHz}$ | | 2 |
| Reverse Recovery Time | T_{RR} | us | $I_F=I_R=10\text{mA}, I_{tr}=0.1*I_R, R_L=100\Omega$ | | 3 |



BAS716Q

Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| BAS716Q | F2 | Approximate 0.002 | 8000 | 80000 | 320000 | 7" reel |

Characteristics (Typical)

Fig1: Forward Characteristics

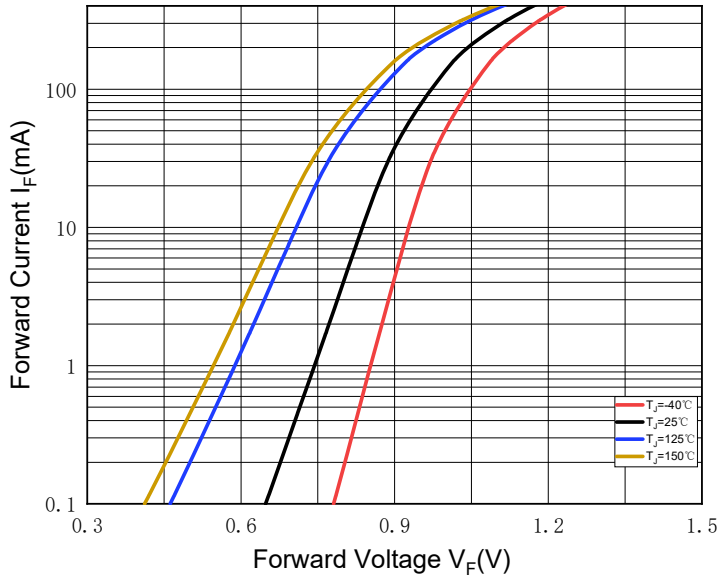


Fig.2: Reverse Characteristics

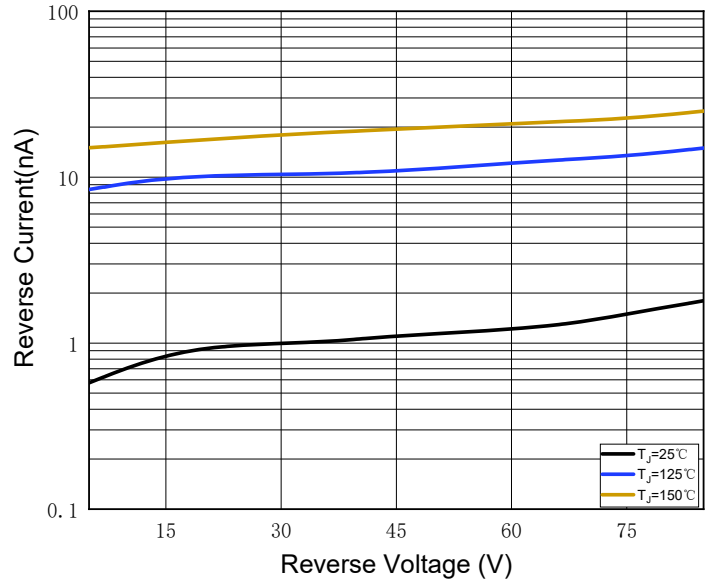
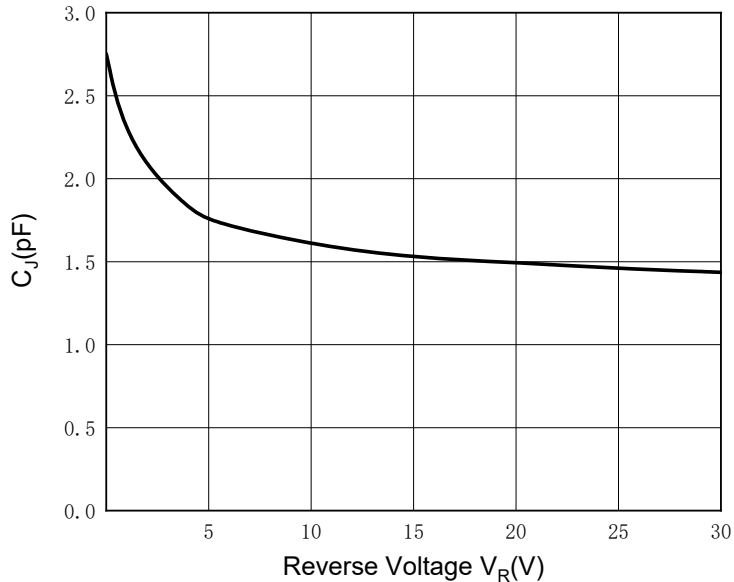
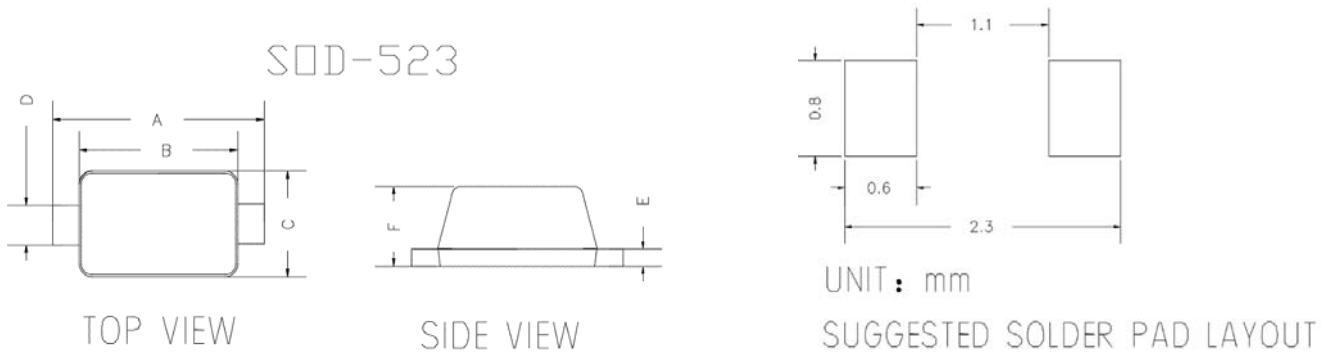


Fig.3: Capacitance Characteristics

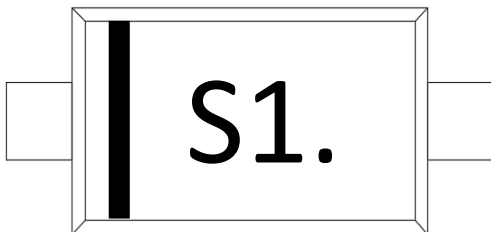


■ Outline Dimensions



| DIMENSIONS | | | | |
|------------|--------|-------|-------|-------|
| DIM | INCHES | | MM | |
| | MIN | MAX | MIN | MAX |
| A | 0.059 | 0.067 | 1.500 | 1.700 |
| B | 0.043 | 0.051 | 1.100 | 1.300 |
| C | 0.028 | 0.035 | 0.700 | 0.900 |
| D | 0.010 | 0.014 | 0.250 | 0.350 |
| E | 0.002 | 0.008 | 0.050 | 0.200 |
| F | 0.020 | 0.028 | 0.500 | 0.700 |

■ Marking Information



Note:

1. All marking is at middle of the product body
2. All marking is in laser marking
3. Body color: Black



BAS716Q

Disclaimer

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