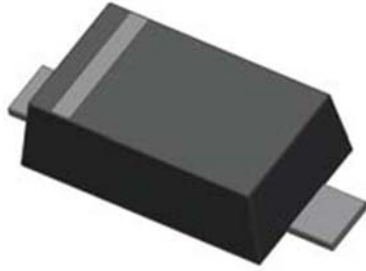


BAS521Q

Small-Signal Switching Diodes

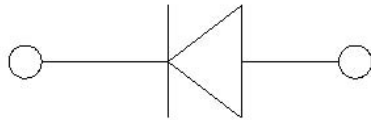


Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- V_{RRM} 250V
- I_{FAV} 200mA
- Part no. with suffix "Q" means AEC-Q101 qualified

Typical Applications

- General Purpose Switches Diodes
- Automotive



Mechanical Data

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

■ Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | Conditions | VALUE |
|---|------------------|------|-------------------------|-------------|
| Repetitive peak reverse voltage | V_{RRM} | V | | 250 |
| Reverse Voltage | V_R | V | | 250 |
| Non-Repetitive Peak Forward Surge Current | I_{FSM} | A | t=8.3ms, Half sine-wave | 2 |
| Average forward current | I_{FAV} | mA | | 200 |
| Thermal Resistance Junction to Ambient | $R_{thJA}^{(1)}$ | K/W | | 833 |
| Power dissipation | P_D | mW | | 150 |
| Junction temperature range | T_J | °C | | -55 to +150 |
| Storage temperature range | T_{stg} | °C | | -55 to +150 |

(1) Device mounted on an FR4 PCB (1.0 x 1.0 x 0.06 inch), single-sided copper, tin-plated and standard footprint.

■ Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | Conditions | Min | Max |
|-----------------------|----------|------|--|-----|-----|
| Forward voltage | V_F | V | $I_F=100mA$ | | 1.1 |
| Reverse current | I_R | nA | $V_R=250V$ | | 150 |
| Breakdown voltage | V_R | V | $I_R=100\mu A$ | 250 | |
| Diode capacitance | C_D | pF | $V_R=0V, f=1MHz$ | | 5 |
| Reverse recovery time | t_{rr} | ns | $I_F=30mA, I_{rr}=0.1I_R, R_L=100\Omega$ | | 50 |



BAS521Q

Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| BAS521Q | F2 | Approximate 0.002 | 8000 | 80000 | 320000 | 7" reel |

Characteristics(Typical)

Fig.1: P_D-T_A

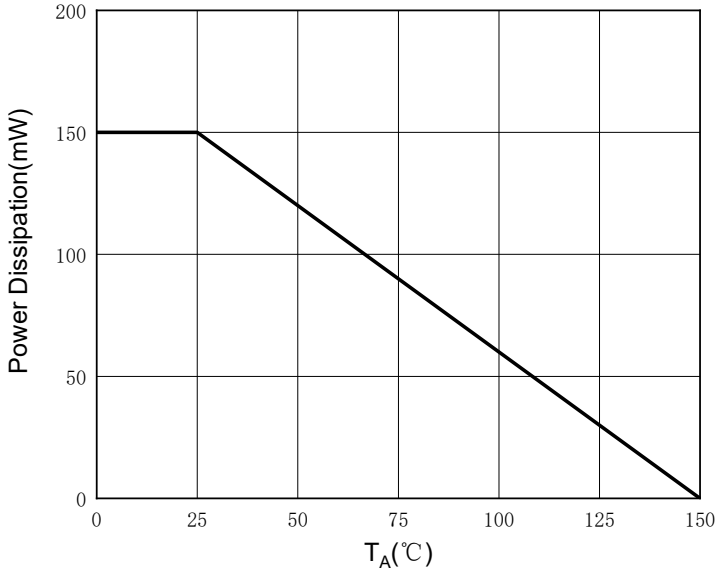


Fig.2: Forward Characteristics

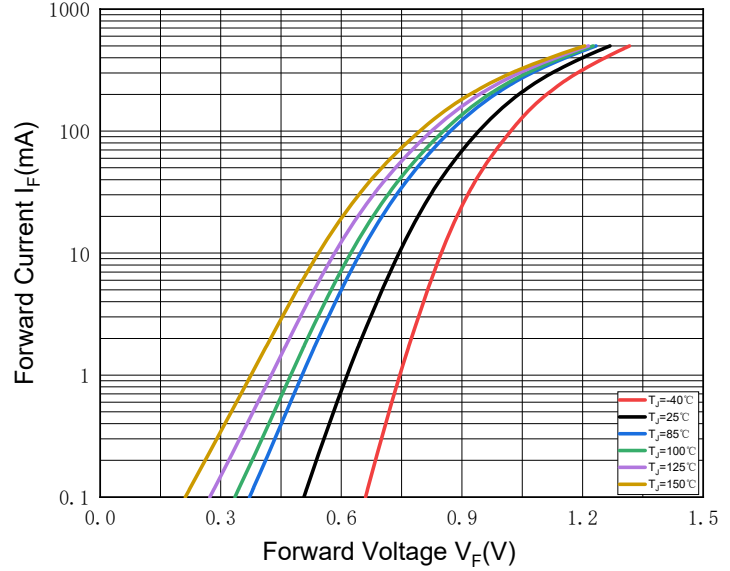


Fig.3: Reverse Characteristics

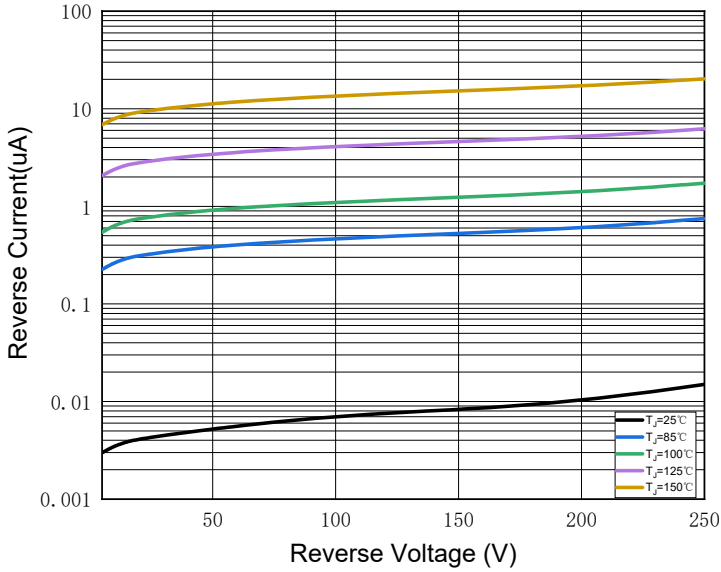
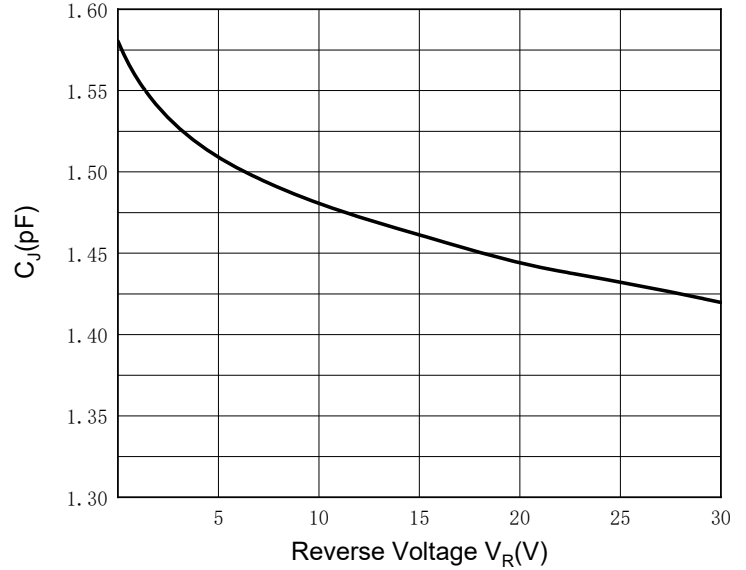


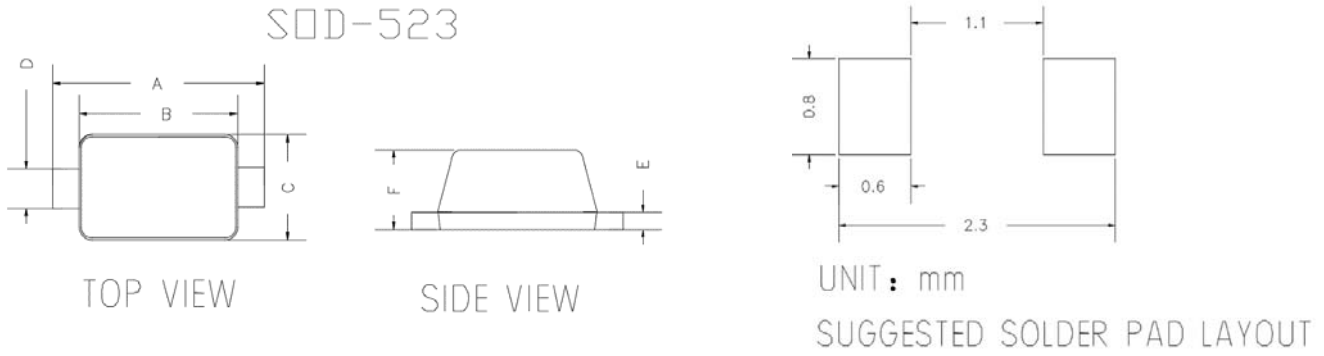
Fig.4: Capacitance Characteristics





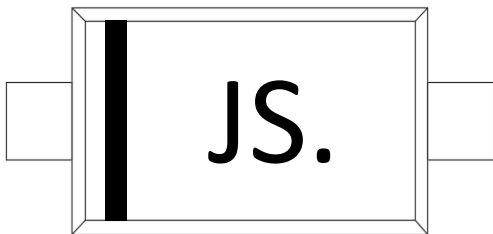
BAS521Q

■ 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



BAS521Q

Disclaimer

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