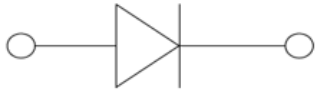


Small Signal Schottky Diode

Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Low Turn-on Voltage
- V_{RRM} 100V
- I_{FAV} 150mA
- Part no. with suffix "Q" means AEC-Q101 qualified



SOD123

Mechanical Data

- **Case:** SOD123
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

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

| PARAMETER | SYMBOL | UNIT | CONDITIONS | VALUE |
|---|------------|------------------|------------------|-------------|
| Maximum Repetitive peak reverse voltage | V_{RRM} | V | | 100 |
| Average Forward Current | I_{FAV} | mA | | 150 |
| Peak Forward Surge Current | I_{FSM} | A | 8.3ms, half sine | 5 |
| Power Dissipation | P_{tot} | mW | | 200 |
| Thermal Resistance Junction to Ambient | R_{thJA} | K/W | | 500 |
| Junction Temperature | T_J | $^\circ\text{C}$ | | -55 to +125 |
| Storage Temperature Range | T_{stg} | $^\circ\text{C}$ | | -55 to +150 |



BAT46WQ

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

| PARAMETER | SYMBOL | UNIT | CONDITIONS | MIN | MAX |
|---------------------------|-----------------|------|--|-----|------|
| Forward Voltage | V _F | V | I _F =0.1mA | | 0.25 |
| | | | I _F =10mA | | 0.45 |
| | | | I _F =250mA | | 1 |
| Reverse Leakage Current | I _R | uA | V _R =1.5V | | 0.3 |
| | | | V _R =10V | | 0.5 |
| | | | V _R =50V | | 1 |
| | | | V _R =75V | | 2 |
| Reverse Breakdown Voltage | V _{BR} | V | I _R =100uA | 100 | |
| Junction Capacitance | C _J | pF | V _R =0V, f =1MHz | | 20 |
| | | | V _R =1V, f =1MHz | | 12 |
| Reverse Recovery Time | t _{rr} | ns | I _F =I _R =10mA, I _{rr} =1mA, R _L =100Ω | | 3 |

■ Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| BAT46WQ | F2 | Approximate 0.010 | 3000 | 30000 | 120000 | 7" reel |



BAT46WQ

■ Characteristics (Typical)

Fig.1: P_D-T_A

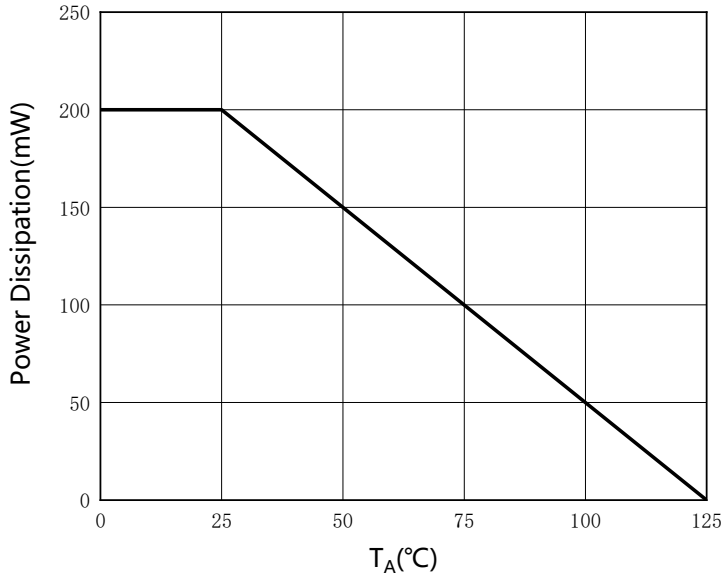


Fig.2: Capacitance Characteristics

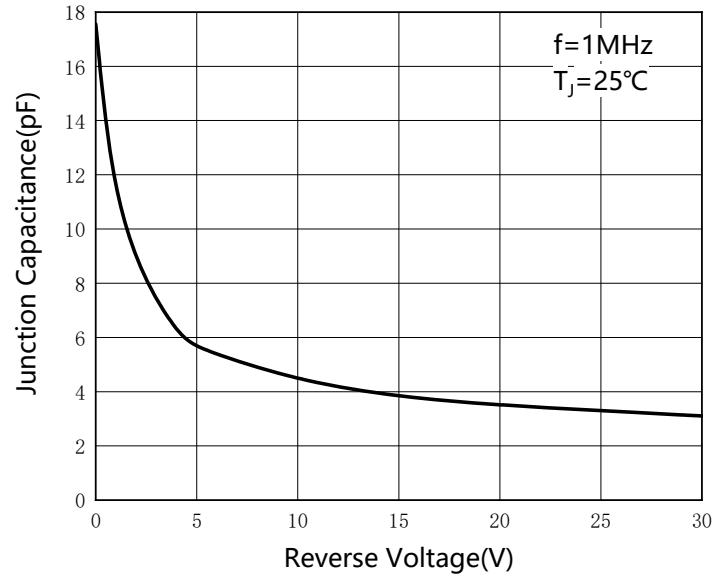


Fig.3: Forward Characteristics

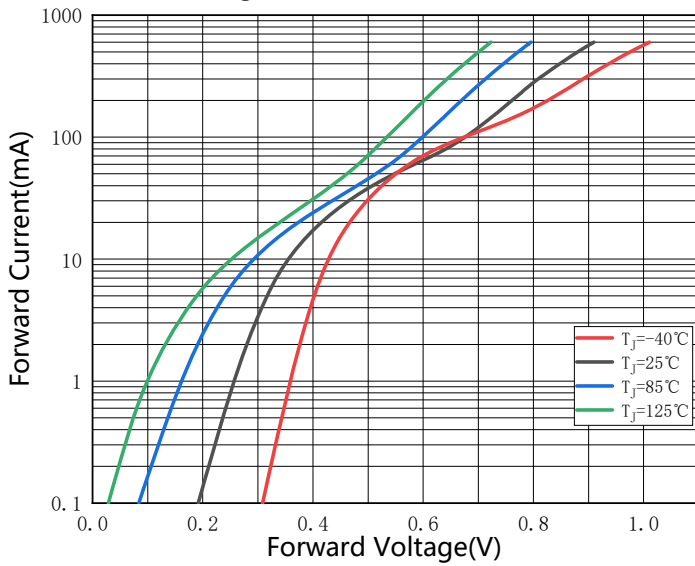
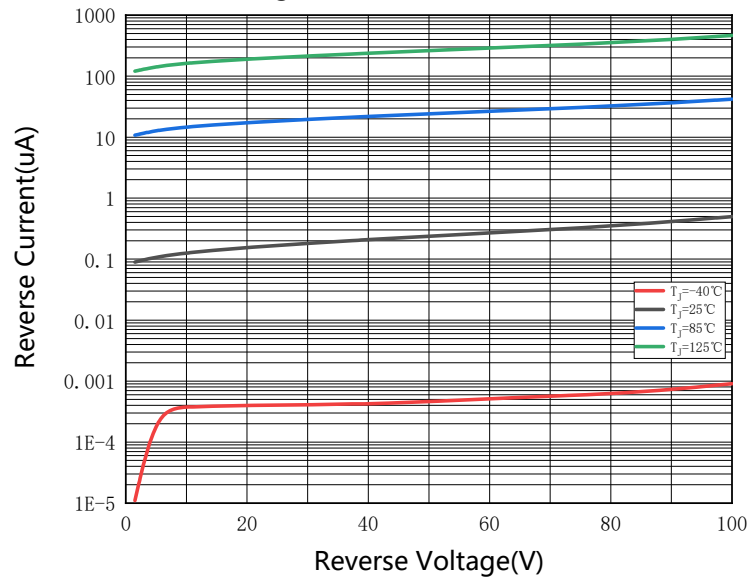


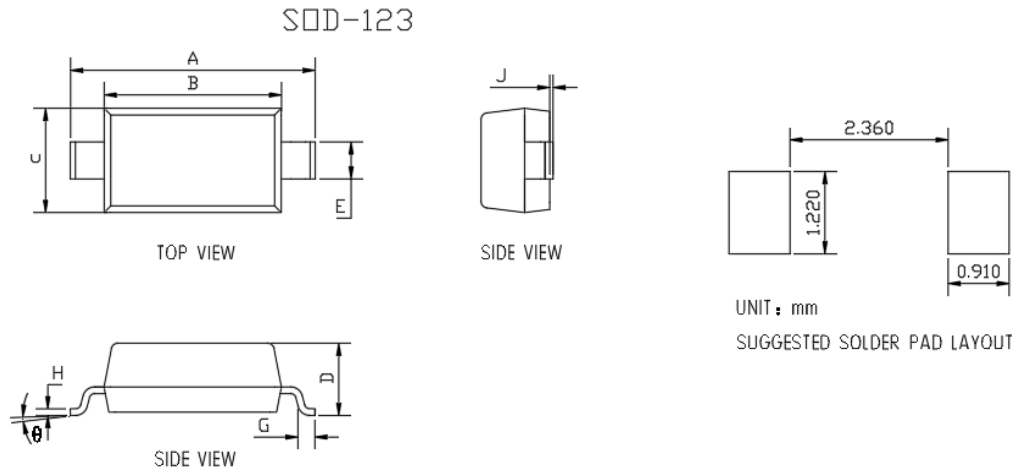
Fig.4: Reverse Characteristics





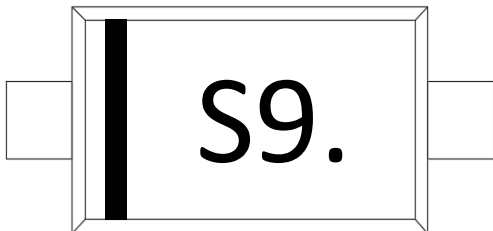
BAT46WQ

■ Outline Dimensions



| DIMENSIONS | | | | |
|------------|--------|-------|-------|-------|
| DIM | INCHES | | MM | |
| | MIN | MAX | MIN | MAX |
| A | 0.140 | 0.152 | 3.550 | 3.850 |
| B | 0.100 | 0.112 | 2.550 | 2.850 |
| C | 0.055 | 0.071 | 1.400 | 1.800 |
| D | 0.037 | 0.053 | 0.950 | 1.350 |
| E | 0.020 | 0.028 | 0.510 | 0.710 |
| G | 0.006 | 0.018 | 0.150 | 0.450 |
| H | 0.003 | 0.010 | 0.080 | 0.250 |
| J | 0.000 | 0.006 | 0.000 | 0.150 |
| θ | 0 | 8° | 0 | 8° |

■ Marking Information



Note:

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



BAT46WQ

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