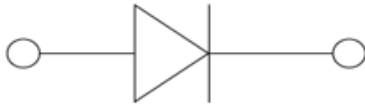


Small Signal Switching Diodes



SOD123

Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- V_{RRM} 120V to 250V
- I_{FAV} 200mA
- Part no. with suffix "Q" means AEC-Q101 qualified

Applications

- General Purpose Switches Diodes

Mechanical Data

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

| | Marking |
|---------|---------|
| BAV19WQ | A8 |
| BAV20WQ | T2 |
| BAV21WQ | T3 |

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

| PARAMETER | SYMBOL | UNIT | CONDITIONS | PART | VALUE |
|---|------------|--------------------|---------------------|---------|-------------|
| Reverse Voltage | V_R | V | | BAV19WQ | 100 |
| | | | | BAV20WQ | 150 |
| | | | | BAV21WQ | 200 |
| Repetitive Peak Reverse Voltage | V_{RRM} | V | | BAV19WQ | 120 |
| | | | | BAV20WQ | 200 |
| | | | | BAV21WQ | 250 |
| Average Forward Current | I_{FAV} | mA | | | 200 |
| Non-Repetitive Peak Forward Surge Current | I_{FSM} | A | $t_p < 10\text{ms}$ | | 1.7 |
| Power Dissipation | P_{tot} | mW | | | 410 |
| Thermal Resistance Junction to Ambient | R_{thJA} | K/W | | | 305 |
| Maximum Junction Temperature | T_j | $^{\circ}\text{C}$ | | | 150 |
| Storage Temperature Range | T_{stg} | $^{\circ}\text{C}$ | | | -55 to +150 |



BAV19WQ THRU BAV21WQ

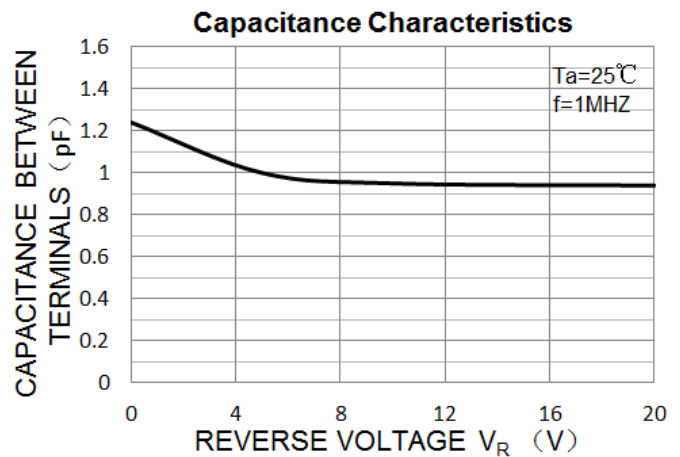
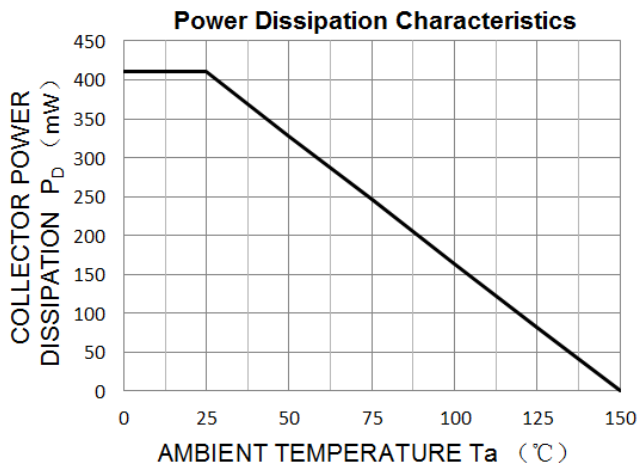
■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | CONDITIONS | | MIN | MAX |
|-----------------------|-----------------|------|---|-----------------------|-----|------|
| Reverse Voltage | V _R | V | BAV19WQ | I _R =100uA | 100 | |
| | | | BAV20WQ | I _R =100uA | 150 | |
| | | | BAV21WQ | I _R =100uA | 200 | |
| Forward Voltage | V _F | V | I _F =100mA | | | 1.0 |
| | | | I _F =200mA | | | 1.25 |
| Reverse Current | I _R | μA | BAV19WQ | V _R =100V | | 0.1 |
| | | | BAV20WQ | V _R =150V | | 0.1 |
| | | | BAV21WQ | V _R =200V | | 0.1 |
| Diode Capacitance | C _D | pF | V _R =V _F =0V, f =1MHz | | | 5 |
| Reverse Recovery Time | t _{rr} | ns | I _F =30mA, I _{rr} =0.1I _R , R _L =100Ω | | | 50 |

■ Ordering Information (Example)

| PREFERED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|----------------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| BAV19WQ THRU BAV21WQ | F2 | Approximate 0.010 | 3000 | 30000 | 120000 | 7" reel |

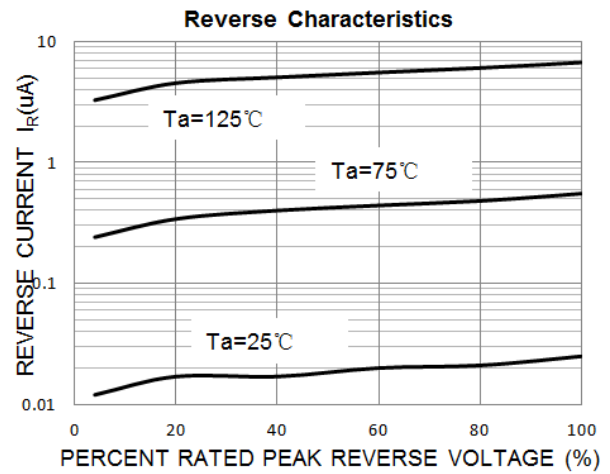
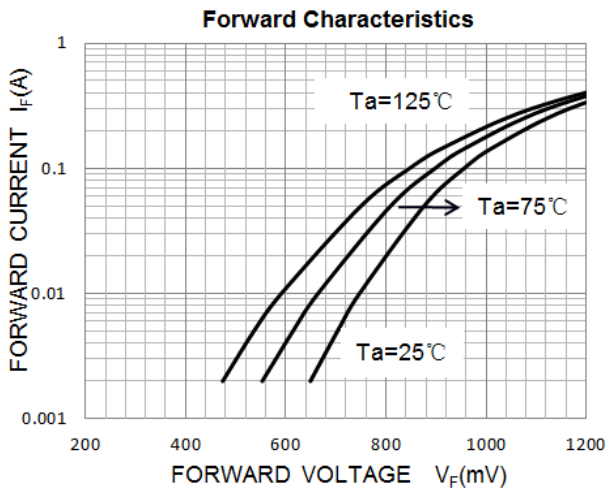
■ Characteristics (Typical)



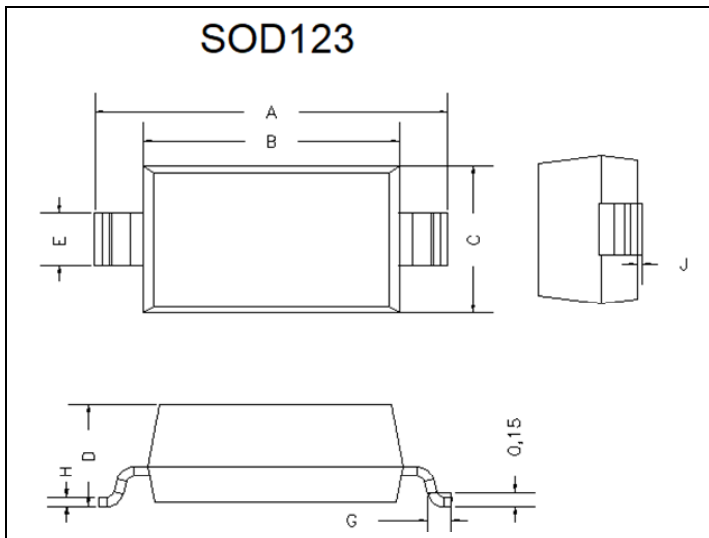


BAV19WQ THRU BAV21WQ

■ Characteristics (Typical)

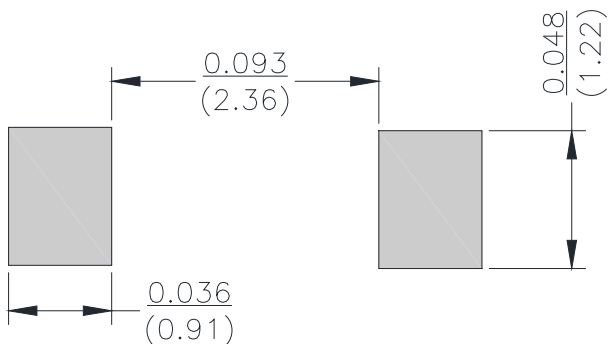


■ Outline Dimensions



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.140 | 0.152 | 3.55 | 3.85 | |
| B | 0.100 | 0.112 | 2.55 | 2.85 | |
| C | 0.055 | 0.071 | 1.40 | 1.80 | |
| D | - | 0.053 | - | 1.35 | |
| E | 0.012 | 0.031 | 0.30 | 0.78 | |
| G | 0.006 | - | 0.15 | - | |
| H | - | 0.010 | - | 0.25 | |
| J | - | 0.006 | - | 0.15 | |

■ Soldering Footprint



Unit: $\frac{\text{inch}}{\text{mm}}$



BAV19WQ THRU BAV21WQ

Disclaimer

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