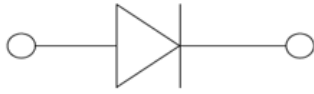


## Small Signal Schottky Diode



**SOD-123**

### Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Low Turn-on Voltage
- $V_R$  100V
- $I_{FAV}$  0.15A
- Part no. with suffix "Q" means AEC-Q101 qualified

### Mechanical Data

- **Case:** SOD-123
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end
- **Marking:** S9

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

| PARAMETER                              | SYMBOL     | UNIT             | CONDITIONS         | VALUE       |
|----------------------------------------|------------|------------------|--------------------|-------------|
| Repetitive Peak Reverse Voltage        | $V_{RRM}$  | V                |                    | 100         |
| Average Forward Current                | $I_{FAV}$  | mA               |                    | 150         |
| Peak Forward Surge Current             | $I_{FSM}$  | A                | $t_p=8.3\text{ms}$ | 0.75        |
| Power Dissipation                      | $P_{tot}$  | mW               |                    | 200         |
| Thermal Resistance Junction to Ambient | $R_{thJA}$ | K/W              |                    | 300         |
| Junction Temperature                   | $T_j$      | $^\circ\text{C}$ |                    | -55 to +125 |
| 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  |
|---------------------------|----------|---------------|--------------------------------|-----|------|
| Forward Voltage           | $V_F$    | V             | $I_F=0.1\text{mA}$             | -   | 0.25 |
|                           |          |               | $I_F=10\text{mA}$              | -   | 0.45 |
|                           |          |               | $I_F=250\text{mA}$             | -   | 1.00 |
| Reverse Current           | $I_R$    | $\mu\text{A}$ | $V_R=1.5\text{V}$              | -   | 0.3  |
|                           |          |               | $V_R=10\text{V}$               |     | 0.5  |
|                           |          |               | $V_R=50\text{V}$               |     | 1    |
|                           |          |               | $V_R=75\text{V}$               |     | 2    |
| Reverse Breakdown Voltage | $V_{BR}$ | V             | $I_R=100\mu\text{A}$           | 100 | -    |
| Diode Capacitance         | $C_D$    | pF            | $V_R=0\text{V}, f=1\text{MHz}$ | -   | 20   |
|                           |          |               | $V_R=1\text{V}, f=1\text{MHz}$ | -   | 12   |

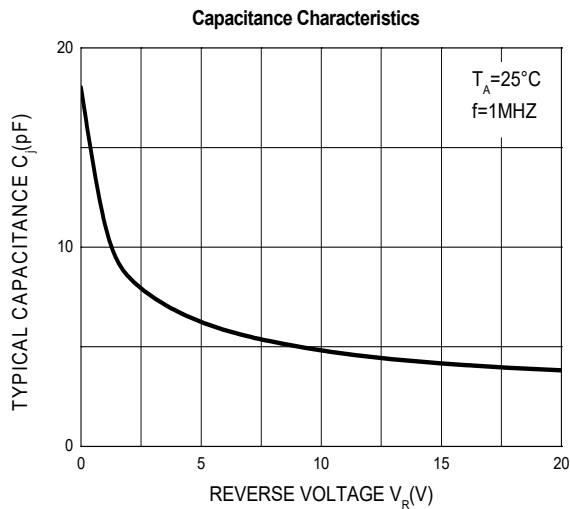
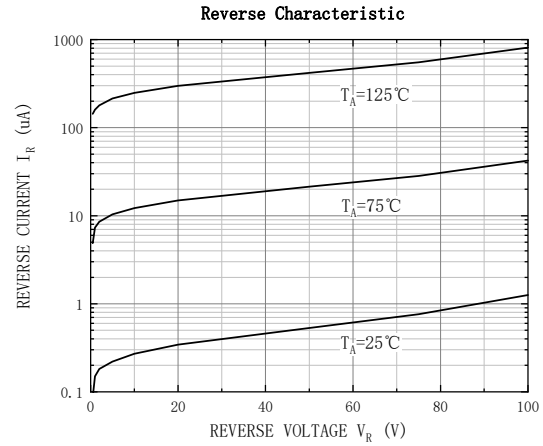
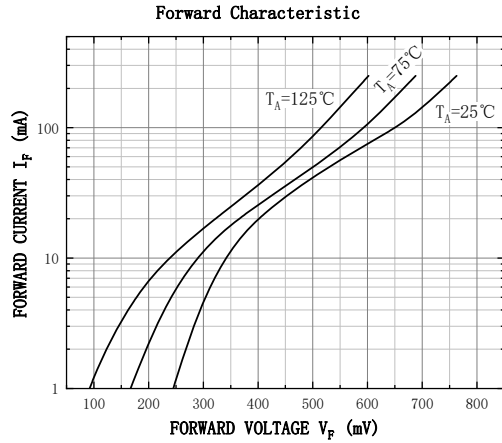


## BAT46WQ

### ■ 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       |

### ■ Characteristics (Typical)

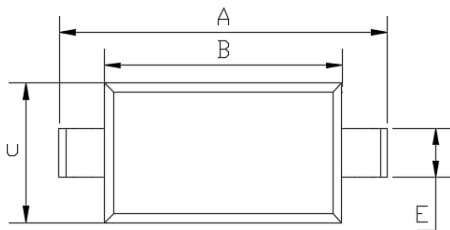




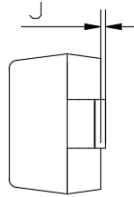
## BAT46WQ

### ■ Outline Dimensions

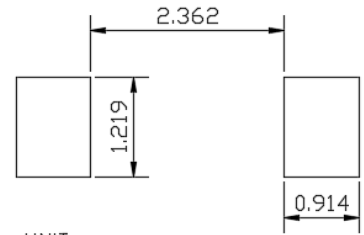
SOD-123



TOP VIEW

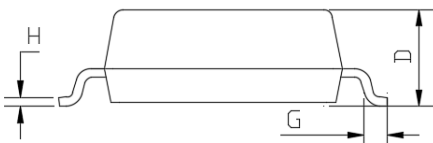


SIDE VIEW



UNIT: mm

SUGGESTED SOLDER PAD LAYOUT



SIDE VIEW

| DIMENSIONS |        |       |       |       |
|------------|--------|-------|-------|-------|
| DIM        | INCHES |       | MM    |       |
|            | MIN    |       | 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          | ---    | 0.053 | ---   | 1.350 |
| E          | 0.020  | 0.028 | 0.510 | 0.710 |
| G          | 0.006  | ---   | 0.150 | ---   |
| H          | ---    | 0.010 | ---   | 0.250 |
| J          | ---    | 0.006 | ---   | 0.150 |

### ■ Marking Information



Note:

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



## BAT46WQ

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### Disclaimer

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