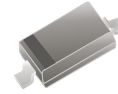


## BAT54WS-P2-HF

RoHS Device  
Halogen Free



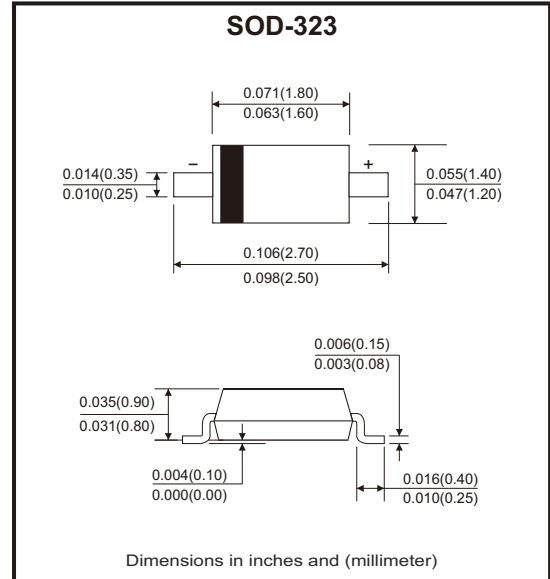
### Features

- Low forward voltage schottky rectifier.

### Mechanical data

- Case: SOD-323, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any.

### Circuit Diagram



### Maximum Ratings (at Ta=25°C unless otherwise noted)

| Parameter                                                              | Symbol    | Limits      | Unit |
|------------------------------------------------------------------------|-----------|-------------|------|
| Peak repetitive peak reverse voltage working                           | $V_{RRM}$ | 30          | V    |
| DC blocking voltage                                                    | $V_R$     | 30          | V    |
| Continuous forward current                                             | $I_O$     | 100         | mA   |
| Forward continuous current                                             | $I_F$     | 200         | mA   |
| Repetitive peak forward current                                        | $I_{FRM}$ | 300         | mA   |
| Non-repetitive peak forward surge current @8.3ms single half sine-wave | $I_{FSM}$ | 600         | mA   |
| Power dissipation                                                      | $P_D$     | 200         | mW   |
| Junction temperature                                                   | $T_J$     | 125         | °C   |
| Storage temperature range                                              | $T_{STG}$ | -65 to +125 | °C   |

### Electrical Characteristics (at Ta=25°C unless otherwise noted)

| Parameter                 | Conditions                                                | Symbol   | Min | Typ | Max  | Unit    |
|---------------------------|-----------------------------------------------------------|----------|-----|-----|------|---------|
| Reverse breakdown voltage | $I_R = 100\mu A$                                          | $V_{BR}$ | 30  |     |      | V       |
| Forward voltage           | $I_F = 0.1mA$                                             | $V_F$    |     |     | 240  | mV      |
|                           | $I_F = 1mA$                                               | $V_F$    |     |     | 320  |         |
|                           | $I_F = 10mA$                                              | $V_F$    |     |     | 400  |         |
|                           | $I_F = 30mA$                                              | $V_F$    |     |     | 500  |         |
|                           | $I_F = 100mA$                                             | $V_F$    |     |     | 1000 |         |
| Reverse current           | $V_R = 25V$                                               | $I_R$    |     |     | 2    | $\mu A$ |
| Capacitance               | $V_R = 1V, f = 1MHz$                                      | $C_J$    |     |     | 10   | pF      |
| Reverse recovery time     | $I_F = 10mA, I_R = 10mA \text{ to } 1mA, R_L = 100\Omega$ | $t_{rr}$ |     |     | 5    | nS      |

Typical Rating and Characteristic Curves (BAT54WS-P2-HF)

Fig.1 - Typical Instantaneous Forward Characteristics

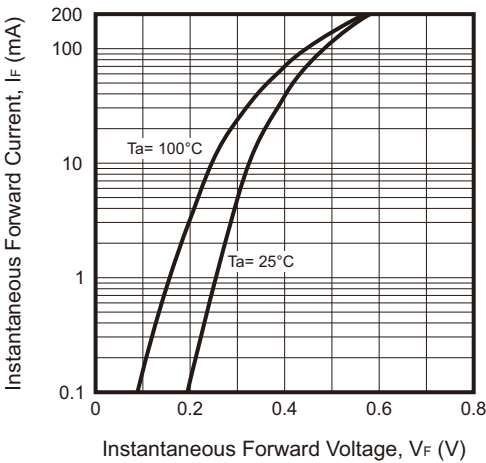


Fig.2 - Typical Reverse Leakage Characteristics

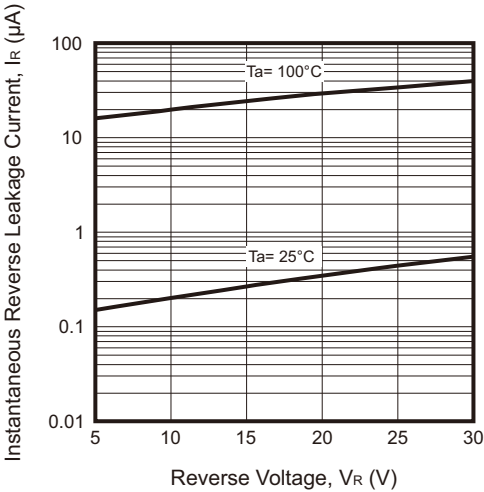
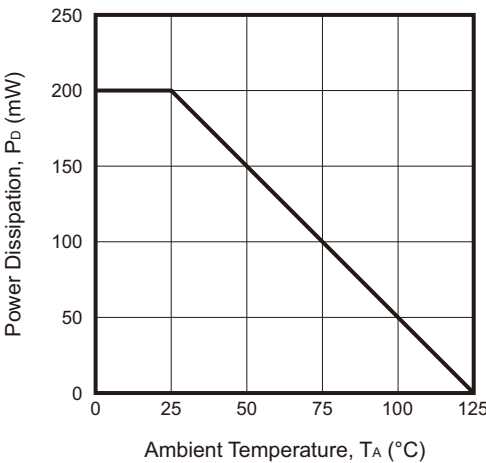
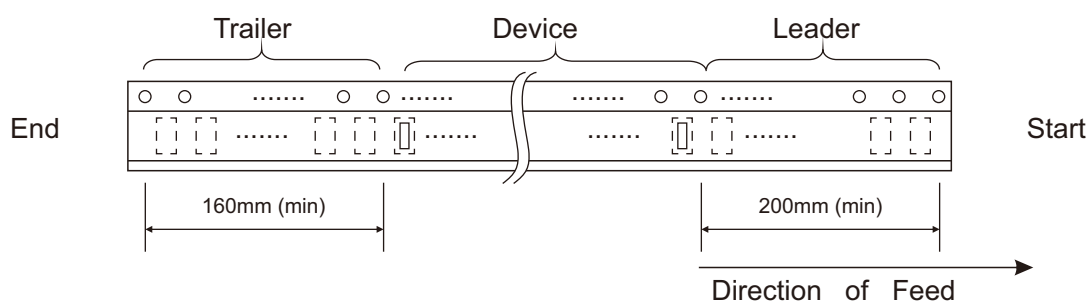
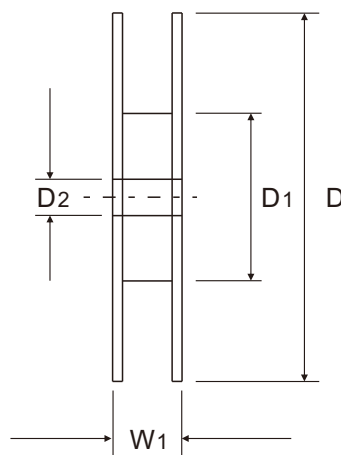
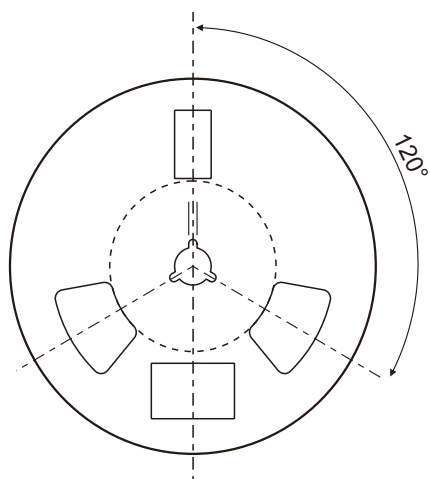
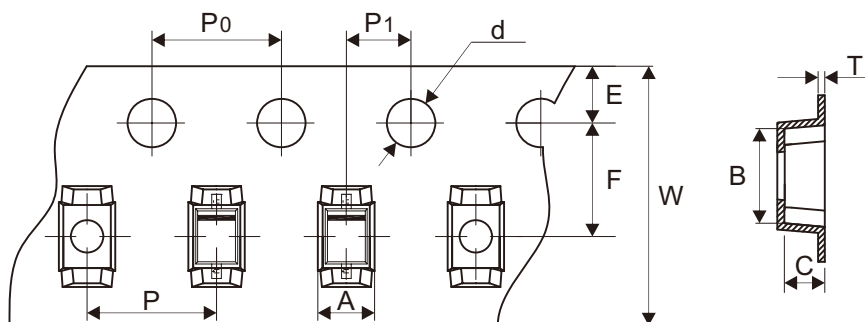


Fig.3 - Power Derating Curve



## Reel Taping Specification



| SOD-323 | SYMBOL | A                 | B                 | C                 | d                 | D                 | D1                | D2                |
|---------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|         | (mm)   | $1.46 \pm 0.10$   | $2.925 \pm 0.075$ | $1.25 \pm 0.10$   | $1.55 \pm 0.05$   | $178.00 \pm 2.00$ | $50.00 \pm 0.50$  | $13.00 \pm 0.25$  |
|         | (inch) | $0.057 \pm 0.004$ | $0.115 \pm 0.003$ | $0.049 \pm 0.004$ | $0.061 \pm 0.002$ | $7.008 \pm 0.079$ | $1.969 \pm 0.020$ | $0.512 \pm 0.010$ |

| SOD-323 | SYMBOL | E                 | F                 | P                 | P0                | P1                | T                 | W                       | W1                |
|---------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------------|-------------------|
|         | (mm)   | $1.75 \pm 0.10$   | $3.50 \pm 0.10$   | $4.00 \pm 0.10$   | $4.00 \pm 0.10$   | $2.00 \pm 0.05$   | $0.254 \pm 0.02$  | $8.00 + 0.30 - 0.10$    | $9.50 \pm 0.50$   |
|         | (inch) | $0.069 \pm 0.004$ | $0.138 \pm 0.004$ | $0.157 \pm 0.004$ | $0.157 \pm 0.004$ | $0.079 \pm 0.002$ | $0.010 \pm 0.001$ | $0.315 + 0.012 - 0.004$ | $0.374 \pm 0.020$ |

Marking Code

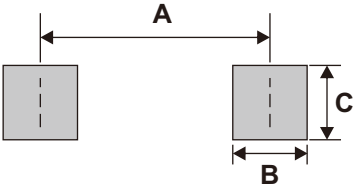
| Part Number   | Marking Code |
|---------------|--------------|
| BAT54WS-P2-HF | L9           |



 = Cathode band

Suggested P.C.B. PAD Layout

| SIZE | SOD-323 |        |
|------|---------|--------|
|      | (mm)    | (inch) |
| A    | 2.15    | 0.085  |
| B    | 0.70    | 0.028  |
| C    | 0.70    | 0.028  |



Standard Packaging

| Case Type | REEL PACK       |                     |
|-----------|-----------------|---------------------|
|           | REEL<br>( pcs ) | Reel Size<br>(inch) |
| SOD-323   | 3,000           | 7                   |