

SOD-123 SCHOTTKY BARRIER DIODE

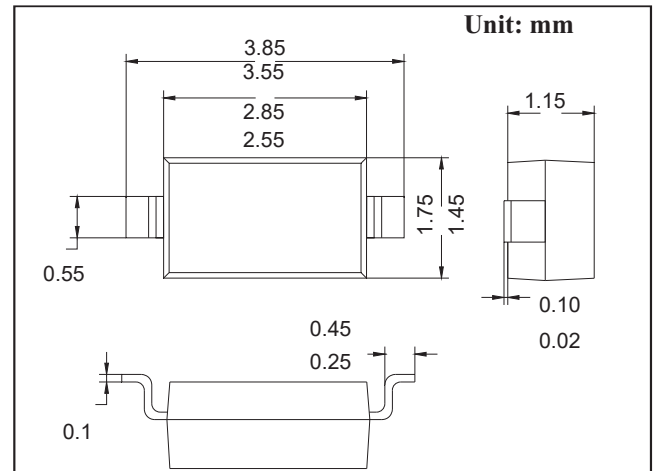
VOLTAGE RANGE: 30V PEAK PULSE POWER:500mW

FEATURES

- Low Forward Voltage Drop
- Guard Ring Construction for Transient
- Protection Negligible Reverse Recovery Time
- Very Low Reverse Capacitance

MECHANICAL DATA

- Case: SOD-123 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

| Parameter | Symbol | BAT42W/BAT43W | Unit |
|---|-----------------|---------------|------|
| Peak Repetitive Peak Reverse Voltage | V_{RRM} | 30 | V |
| Working Peak Reverse Voltage | V_{RWM} | | |
| DC Blocking Voltage | V_R | | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 21 | V |
| Forward Continuous Current | I_{FM} | 200 | mA |
| Repetitive Peak Forward Current @ $t < 1.0s$ | I_{FRM} | 500 | mA |
| Non-repetitive Peak Forward Surge Current @ $t = 8.3ms$ | I_{FSM} | 4.0 | A |
| Power Dissipation | P_D | 500 | mW |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 200 | °C/W |
| Junction temperature | T_J | 125 | °C |
| Storage Temperature | T_{STG} | -55~+150 | °C |

Electrical Specification ($T_A = 25^\circ C$ unless otherwise specified)

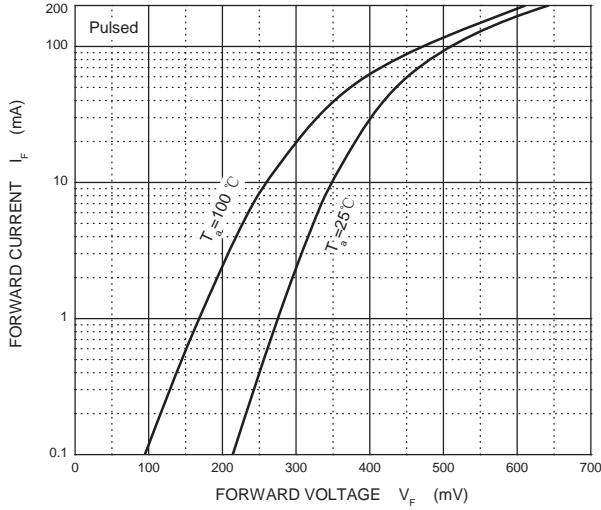
| Parameter | Symbol | Min | Typ | Max | Unit | Conditions |
|-------------------------------|------------|------------|------|------|---------|--|
| Reverse breakdown voltage | $V_{(BR)}$ | 30 | | | V | $I_R = 10\mu A$ |
| Forward voltage | V_F | A II Types | | 1.0 | V | $I_F = 200mA$ |
| | | BAT42W | | 0.4 | V | $I_F = 10mA$ |
| | | BAT42W | | 0.65 | V | $I_F = 50mA$ |
| | | BAT43W | 0.26 | 0.33 | V | $I_F = 2mA$ |
| | | BAT43W | | 0.45 | V | $I_F = 15mA$ |
| Reverse current | I_R | | | 0.5 | μA | $V_R = 25V$ |
| Capacitance between terminals | C_T | | | 10 | pF | $V_R = 1.0V, f = 1.0MHz$ |
| Reverse recovery time | t_{rr} | | | 5 | ns | $I_F = I_R = 10mA$ $I_{rr} = 0.1I_R, R_L = 100\Omega$ |

MARKING:

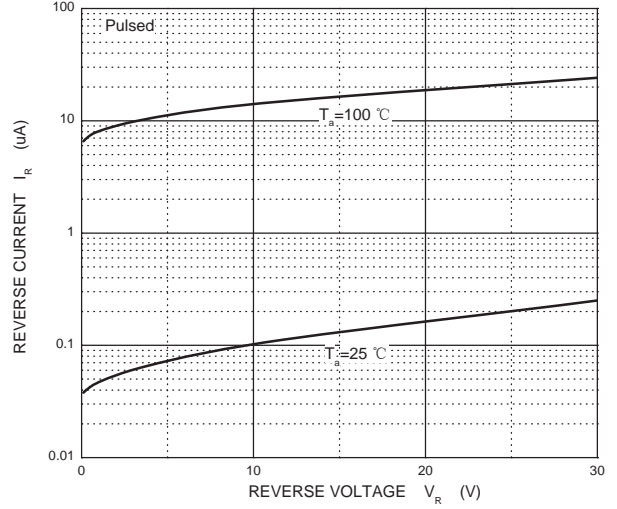
| BAT42W | BAT43W |
|--------|--------|
| S7 | S8 |

RATINGS AND CHARACTERISTIC CURVES

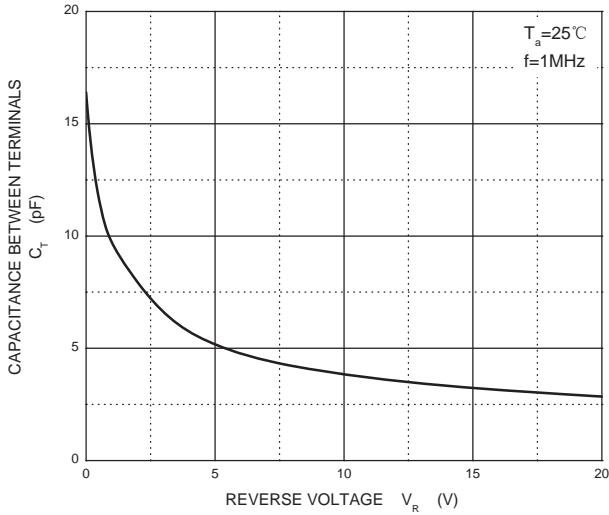
Forward Characteristics



Reverse Characteristics



Capacitance Characteristics



Power Derating Curve

