TAYCHIPST

# High Voltage Schottky Rectifiers

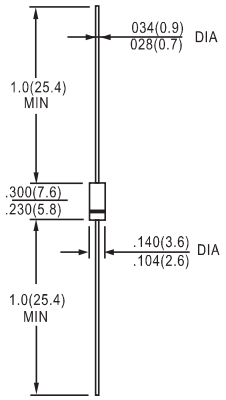
**SB2H90 THRU SB2H100**

**90V-100V 2.0A**

## FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Guardring for overvoltage protection

DO-15




Dimensions in inches and (millimeters)

## Mechanical Data

**Case:** JEDEC DO-204AC molded plastic over a passivated junction

**Terminals:** Solder Plated axial leads, solderable per MIL-STD-750, Method 2026

High temperature soldering guaranteed:
250°C/10 seconds 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.015 oz., 0.4 g

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

### Maximum Ratings and Thermal Characteristics ($T_A$ = 25°C unless otherwise noted)

| Parameter | Symbol | SB2H90 | SB2H100 | Unit |
|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 90 | 100 | V |
| Working Peak Reverse Voltage | $V_{RWM}$ | 90 | 100 | V |
| Maximum DC blocking voltage | $V_{DC}$ | 90 | 100 | V |
| Maximum average forward rectified current at $T_A$ = 25°C | $I_{F(AV)}$ | 2.0 | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 75 | | A |
| Peak repetitive reverse surge current at $t_p$ = 2.0µs, 1KHz | $I_{RRM}$ | 1.0 | | A |
| Critical rate of rise of reverse voltage | dv/dt | 10,000 | | V/µs |
| Typical thermal resistance (2) | $R_{\theta JA}$<br>$R_{\theta JL}$ | 45<br>14 | | °C/W |
| Storage temperature range | $T_{STG}$ | –55 to +175 | | °C |
| Maximum operating junction temperature | $T_J$ | +175 | | °C |

### Electrical Characteristics ($T_A$ = 25°C unless otherwise noted)

| | | | | |
|---|---|---|---|---|
| Max. instantaneous forward voltage(1) | $I_F$ = 2A, $T_J$ = 25°C<br>$I_F$ = 2A, $T_J$ = 125°C | $V_F$ | 0.79<br>0.65 | V |
| Maximum DC reverse current at rated DC blocking voltage | $T_J$ = 25°C<br>$T_J$ = 125°C | $I_R$ | 10<br>4 | µA<br>mA |

**Notes:** (1) Pulse test: 300µs pulse width, 1% duty cycle
(2) P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

**Fig. 1 – Forward Current Derating Curve**

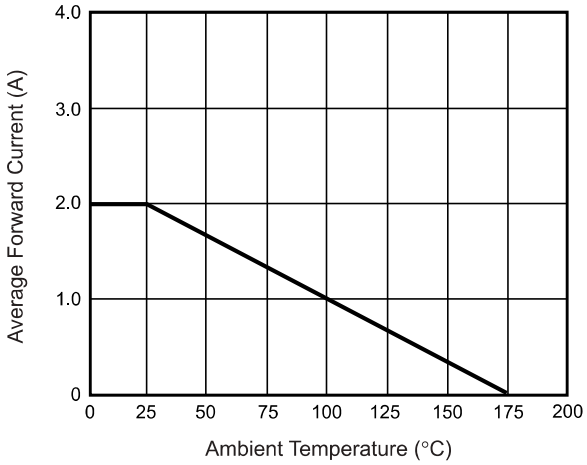



**Fig. 2 – Typical Instantaneous Forward Characteristics**

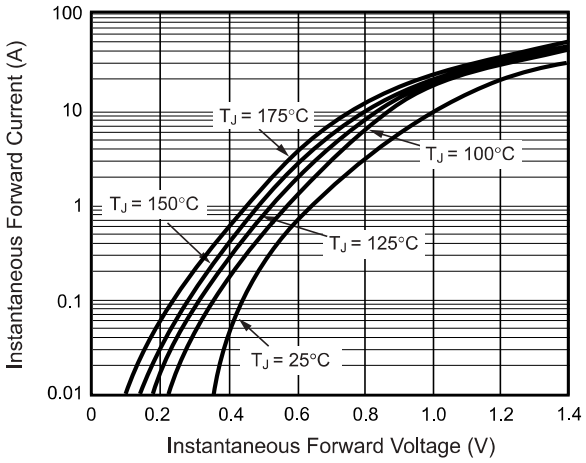



**Fig. 3 – Typical Reverse Characteristics**

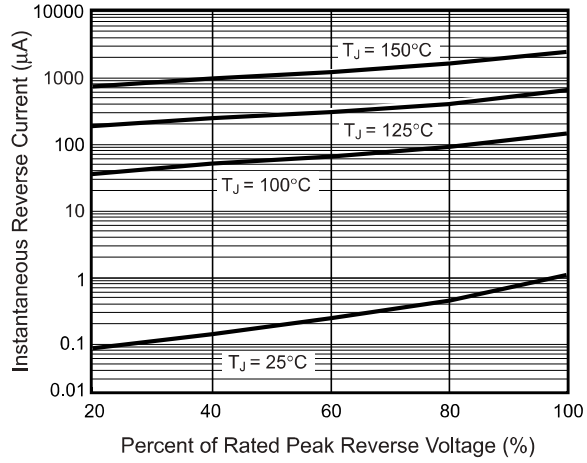



**Fig. 4 – Typical Junction Capacitance**

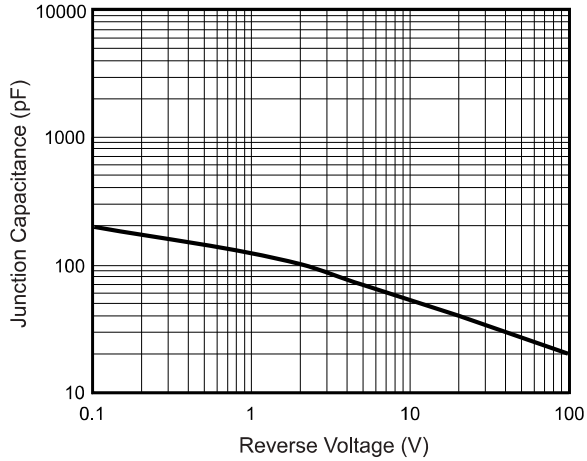



**Fig. 5 - Typical Transient Thermal Impedance**