TAYCHIPST

High Voltage Schottky Rectifiers

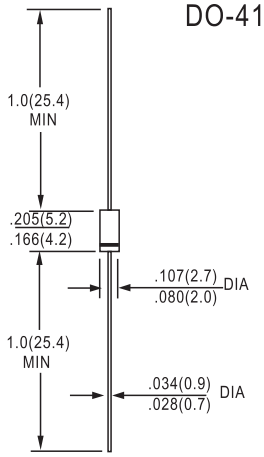
SB1H90 THRU SB1H100

90V-100V 1.0A

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-41



Dimensions in inches and (millimeters)

Mechanical Data

Case: JEDEC DO-204AL molded plastic body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
High temperature soldering guaranteed: 250°C/10 seconds at terminals
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.012oz., 0.34g

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Parameter	Symbols	SB1H90	SB1H100	Units
Maximum repetitive peak reverse voltage	V_{RRM}	90	100	V
Maximum RMS voltage	V_{RMS}	63	70	V
Maximum DC blocking voltage	V_{DC}	90	100	V
Maximum average forward rectified current	$I_{F(AV)}$	1.0		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50		A
Peak repetitive reverse surge current at t_p = 2.0μs, 1KHz	I_{RRM}	1.0		A
Maximum thermal resistance (2)	$R_{\theta JA}$ $R_{\theta JL}$	57 15		°C/W
Maximum operating junction temperature	T_J	175		°C
Storage temperature range	T_{STG}	–55 to +175		°C

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

Maximum instantaneous forward voltage at: (1)	I_F = 1.0A, T_J = 25°C I_F = 1.0A, T_J = 125°C I_F = 2.0A, T_J = 25°C I_F = 2.0A, T_J = 125°C	V_F	0.77 0.62 0.86 0.70	V
Maximum DC reverse current at rated DC blocking voltage(1)	T_J = 25°C T_J = 125°C	I_R	1.0 0.5	μA 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

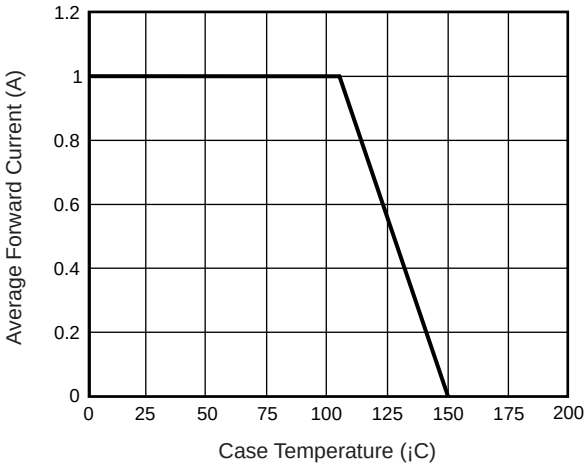


Fig. 2 – Typical Instantaneous Forward Characteristics

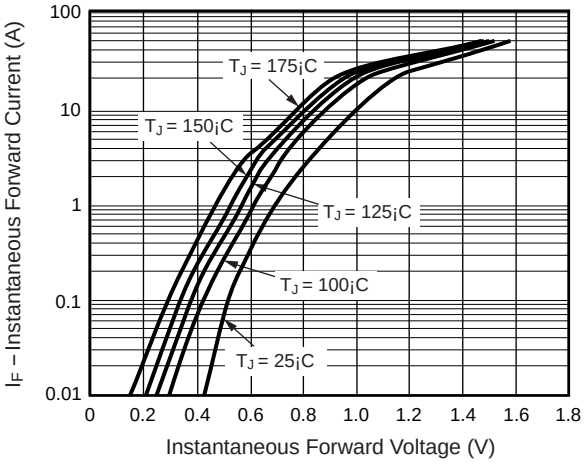


Fig. 3 – Typical Reverse Characteristics

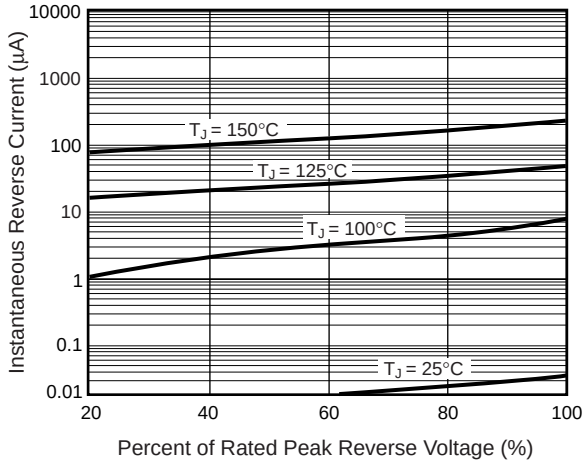


Fig. 4 – Typical Junction Capacitance

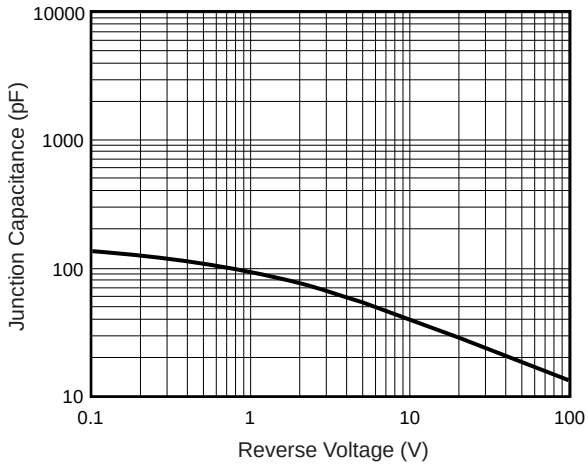


Fig. 5 – Typical Transient Thermal Impedance