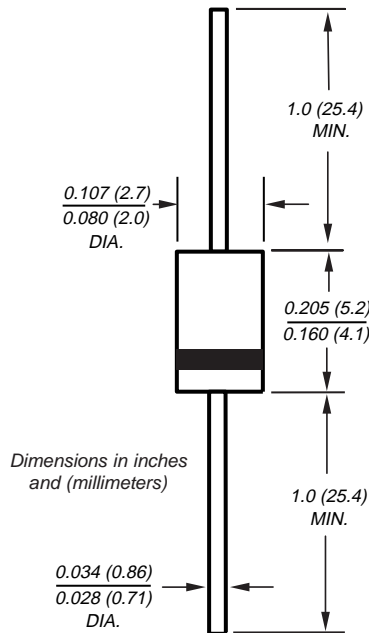


High Voltage Schottky Rectifiers

Reverse Voltage 90 to 100V
Forward Current 1.0A

DO-204AL (DO-41)



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

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

Packaging Codes-Options:

1-5K per Bulk box, 50K/carton

4-5.5K per 13" reel (52.4mm Tape), 22K/carton

23-3K per Ammo mag. (52.4mm Tape), 27K/carton

Maximum Ratings and Thermal Characteristics (TA = 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 _{θJA} R _{θJL}	57 15		°C/W
Maximum operating junction temperature	T _J	175		°C
Storage temperature range	T _{STG}	-55 to +175		°C

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

Maximum instantaneous forward voltage at: ⁽¹⁾	I _F = 1.0A, T _J = 25°C	V _F	0.77	V
	I _F = 1.0A, T _J = 125°C		0.62	
	I _F = 2.0A, T _J = 25°C		0.86	
	I _F = 2.0A, T _J = 125°C		0.70	
Maximum DC reverse current at rated DC blocking voltage ⁽¹⁾	T _J = 25°C	I _R	1.0	µA mA
	T _J = 125°C		0.5	

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

SB1H90 and SB1H100

Vishay Semiconductor



Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

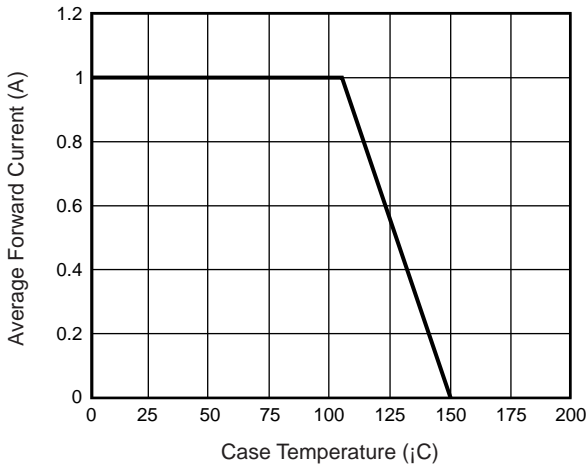


Fig. 2 – Typical Instantaneous Forward Characteristics

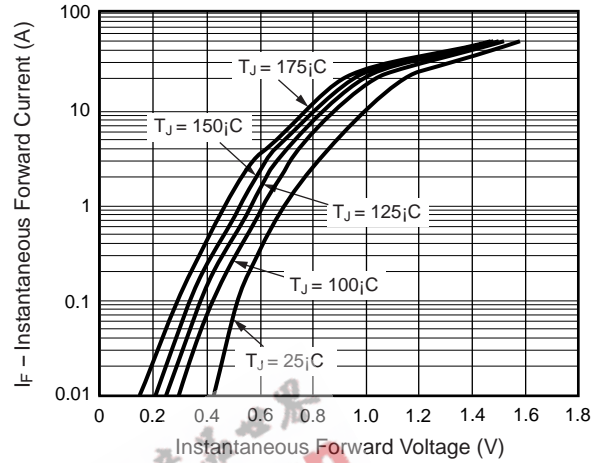


Fig. 3 – Typical Reverse Characteristics

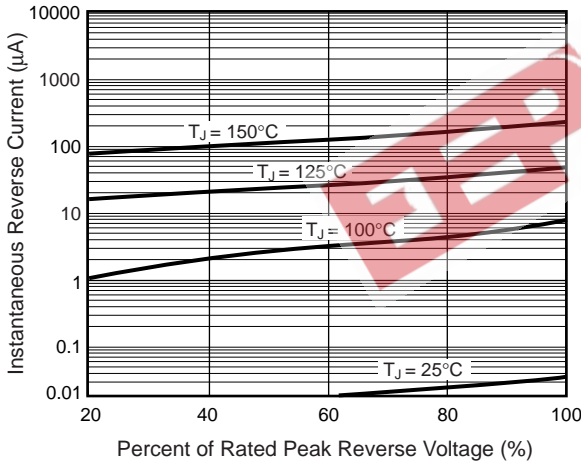


Fig. 4 – Typical Junction Capacitance

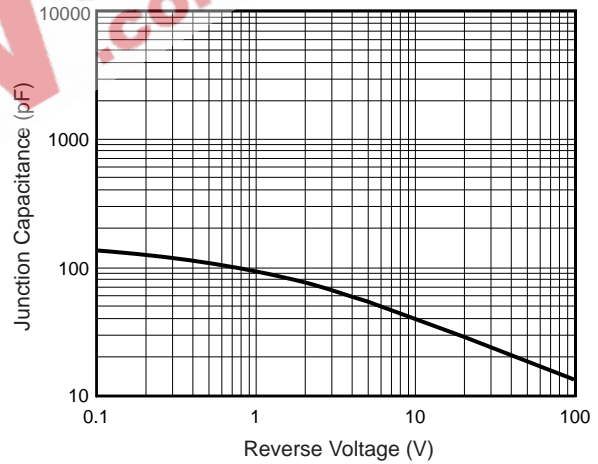


Fig. 5 – Typical Transient Thermal Impedance

