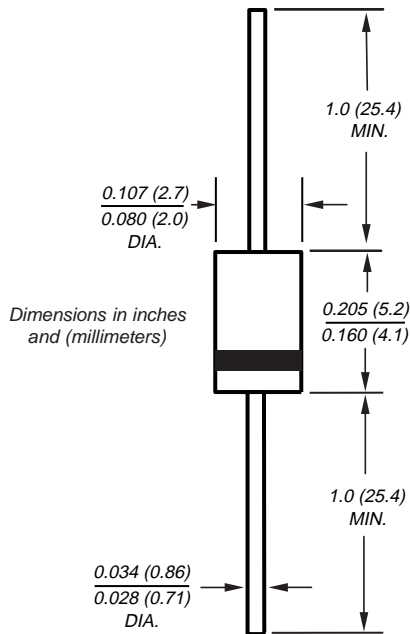


Schottky Barrier Rectifier

Reverse Voltage 20 to 60V
Forward Current 1.0A

DO-204AL (DO-41)



Dimensions in inches and (millimeters)

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 0.375" (9.5mm) lead length,
 5lbs. (2.3kg) tension

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.012 ounce, 0.34 gram

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

Parameter	Symbol	SB120	SB130	SB140	SB150	SB160	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	50	60	V
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	V
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	V
Maximum average forward rectified current at 0.375" (9.5mm) lead length (See Fig. 1)	I _{F(AV)}	1.0					A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	40					A
Typical thermal resistance ⁽¹⁾	R _{θJA} R _{θJL}	50 15					°C/W
Operating junction temperature range	T _J	-65 to +125			-65 to +150		°C
Storage temperature range	T _{STG}	-65 to +150					°C

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

Maximum instantaneous forward voltage at 1.0A ⁽²⁾	V _F	0.50		0.70		V
Maximum instantaneous reverse current at rated DC blocking voltage ⁽²⁾	I _R	10		5.0		mA
		0.5				

Notes: (1) Thermal resistance junction to lead P.C.B. mounted 0.375" (9.5mm) lead length

(2) Pulse test: 300µs pulse width, 1% duty cycle

SB120 thru SB160

Vishay Semiconductors
formerly General Semiconductor



Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

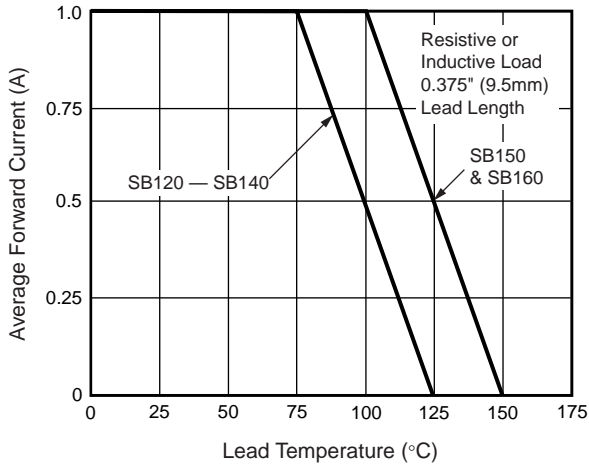


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

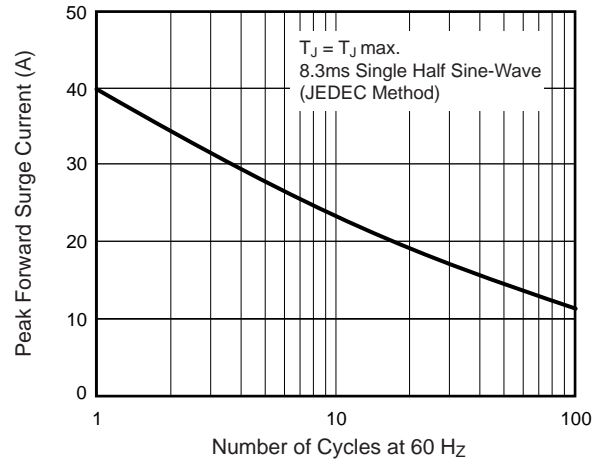


Fig. 3 - Typical Instantaneous Forward Characteristics

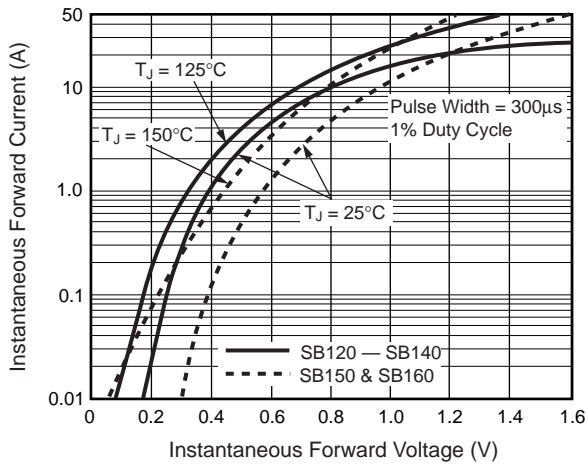


Fig. 4 - Typical Reverse Characteristics

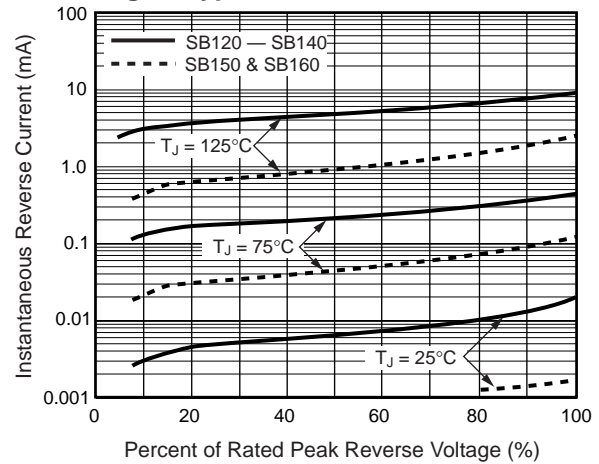


Fig. 5 - Typical Junction Capacitance

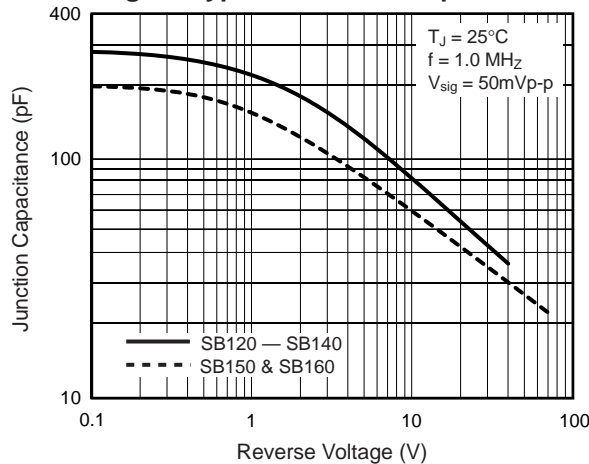
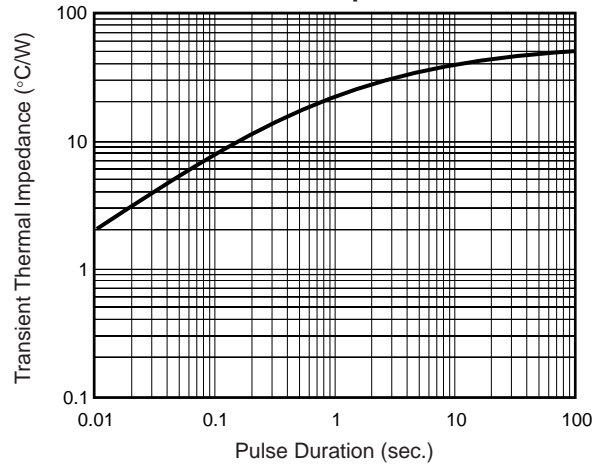


Fig. 6 - Typical Transient Thermal Impedance



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