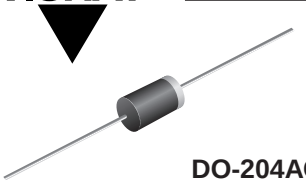
SB220 thru SB260

New Product

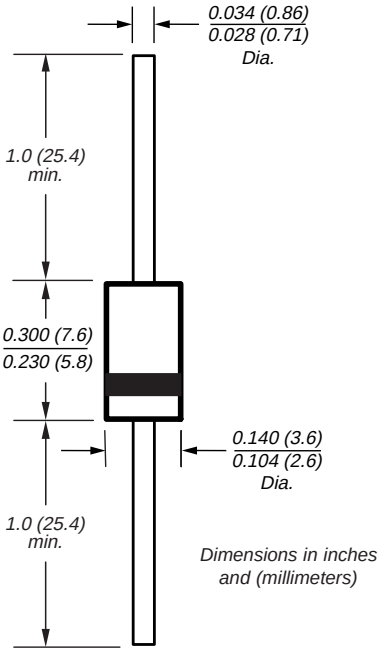
Vishay Semiconductors
formerly General Semiconductor



Schottky Barrier Rectifier

Reverse Voltage 20 to 60V
Forward Current 2.0A

DO-204AC (DO-15)



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
- High temperature soldering guaranteed: 250°C/10 seconds at terminals

Mechanical Data

Case: JEDEC DO-204AC molded plastic body over passivated chip

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

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.015 oz., 0.4 g

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

Parameter	Symbol	SB220	SB230	SB240	SB250	SB260	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)	$I_{F(AV)}$	2.0					A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50					A
Maximum Full Load Reverse Current, Full Cycle Average at T_A = 75°C	$I_{R(AV)}$	30					mA
Typical thermal resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	45 14					°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 2.0A (Note 1)		V_F	0.50	0.68	V
Maximum instantaneous reverse current at rated DC blocking voltage (Note 1)	T_A = 25°C	I_R	0.5		mA
	T_A = 100°C		15	8.0	
Typical Junction Capacitance		C_J	170		pF

Notes: (1) Pulse test: 300μs pulse width, 1% duty cycle
(2) Thermal resistance junction to lead P.C.B. mounted 0.375" (9.5mm) lead length

Ratings and Characteristic Curves

Fig. 1 - Forward Current Derating Curve

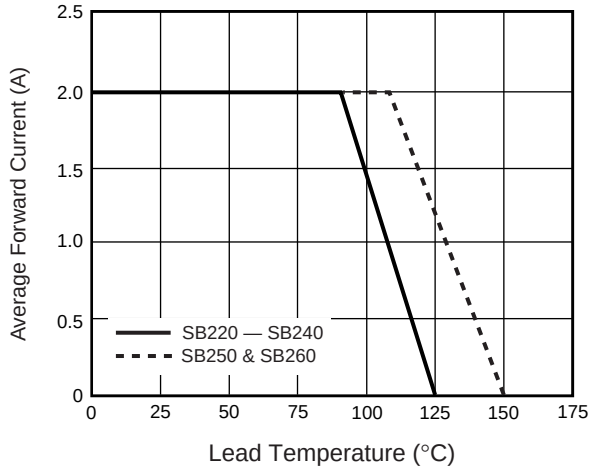


Fig. 2 - Maximum Non-repetitive Surge Current

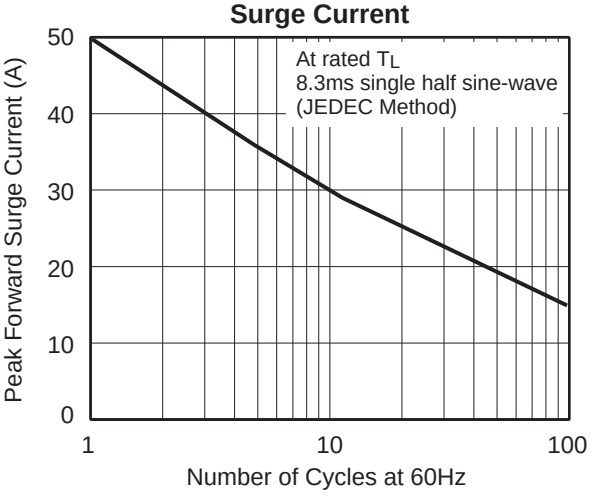


Fig. 3 - Typical Instantaneous Forward Characteristics

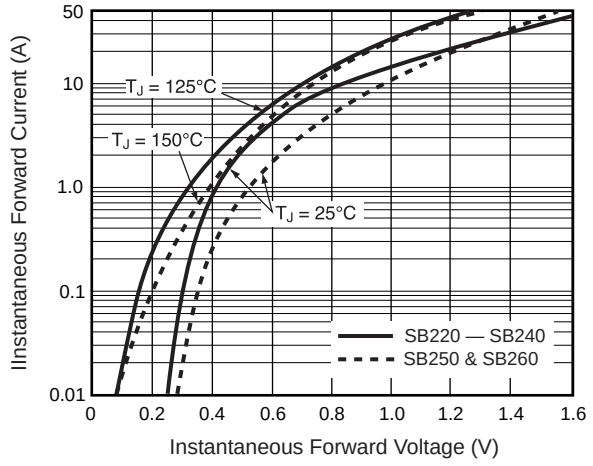


Fig. 4 - Typical Reverse Characteristics

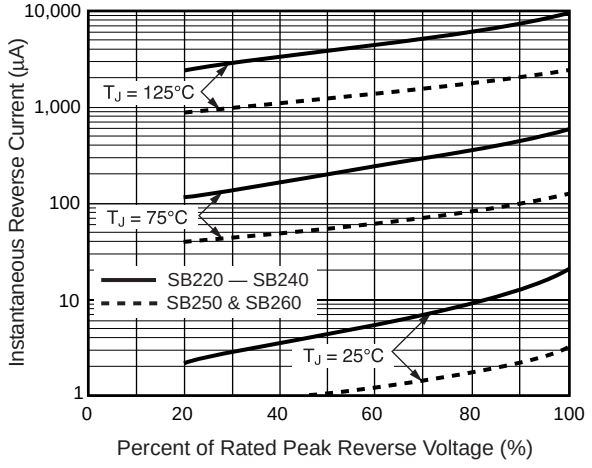


Fig. 5 - Typical Junction Capacitance

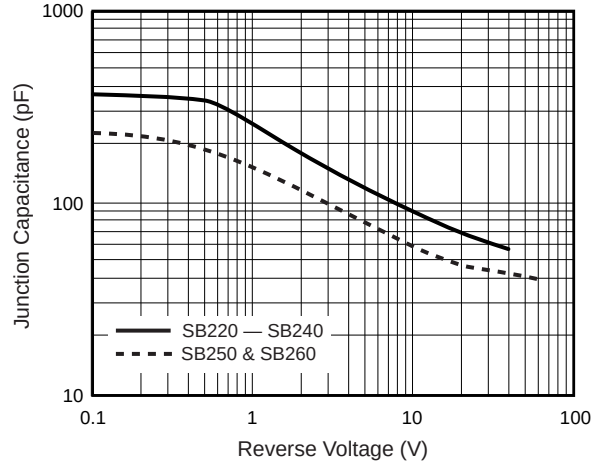


Fig. 6 - Typical Transient Thermal Impedance