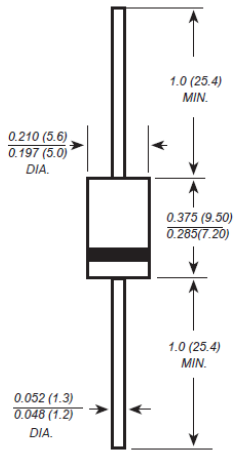
SB520 THRU SB5A0

Schottky Barrier Rectifiers
Reverse Voltage – 20 to 100 V
Forward Current – 5 A

DO-201AD



Dimensions in inches and (millimeters)

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed:250℃/10 seconds at terminals, 0.375”(9.5mm)lead length, 5lb.(2.3kg) tension

Mechanical Data

- **Case:** Molded plastic body, JEDEC DO-201AD.
- **Terminals:** Axial leads, solderable per MIL-STD-750, method 2026
- **Polarity:** Color band denotes cathode end.
- **Mounting Position:** Any

Absolute Maximum Ratings and Characteristics

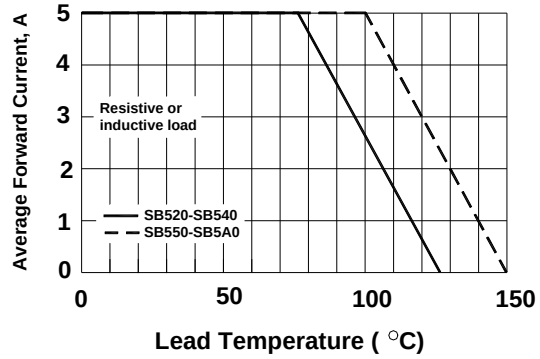
Ratings at 25℃ ambient temperature unless otherwise specified. Single phase, half wave, resistive or inductive load. For capacitive load, derate by 20%

	Symbols	SB 520	SB 530	SB 540	SB 550	SB 560	SB 580	SB 5A0	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	57	71	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current 0.375” (9.5mm)lead length	$I_{(AV)}$	5							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed On Rated Load (JEDEC method)	I_{FSM}	150							A
Maximum Instantaneous Forward Voltage at 5 A [1]	V_F	0.55			0.7		0.8	0.85	V
Maximum Reverse Current T_A = 25°C	I_R	2.5							mA
at Rated Reverse Voltage [1] T_A = 100°C		50			25				
Typical Junction Capacitance [2]	C_{tot}	500			400				pF
Typical Thermal Resistance, Junction To Ambient [3]	$R_{\theta JA}$	25							℃/W
Typical Thermal Resistance, Junction To Lead [3]	$R_{\theta JL}$	8							℃/W
Operating Junction Temperature Range	T_J	-65 to +125			-65 to +150				℃
Storage Temperature Range	T_{Stg}	-65 to +150							℃

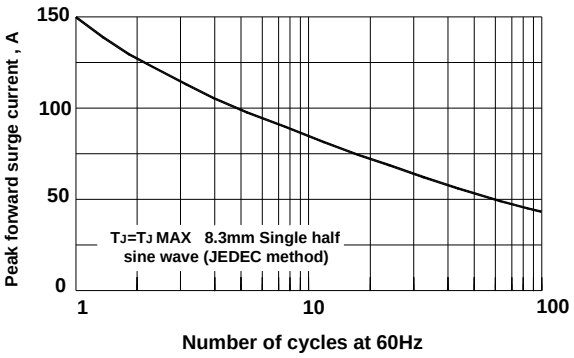
[1] Pulse test: 300 μs pulse width, 1% duty cycle
[2] Measured at 1MHz and applied reverse voltage of 4 V
[3] Thermal Resistance from Junction to lead vertical P.C.B, mounted with 0.375”(9.5mm) lead length

Dated : 01/12/2020 Rev : 01

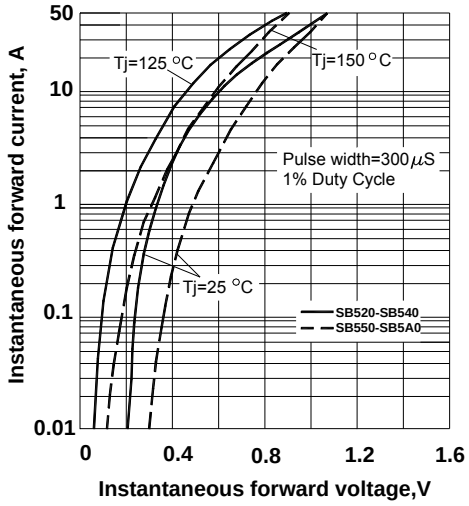
Forward Current Derating Curve



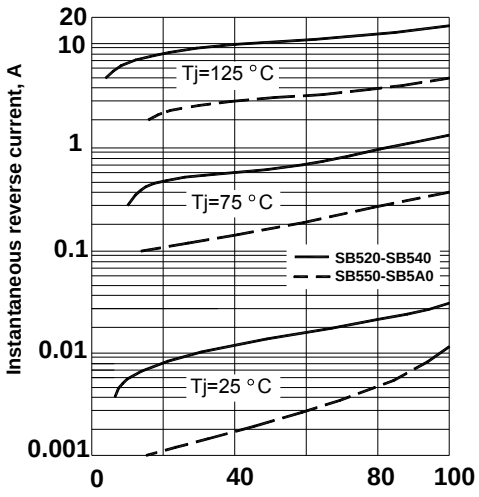
Maximum non-repetitive peak forward surge current



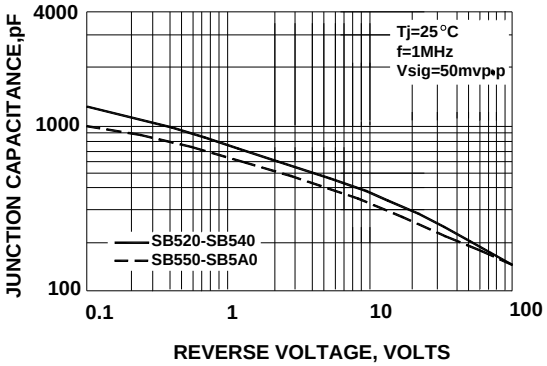
Typical instantaneous forward characteristics



Typical reverse characteristics



TYPICAL JUNCTION CAPACITANCE



TYPICAL TRANSIENT THERMAL IMPEDANCE