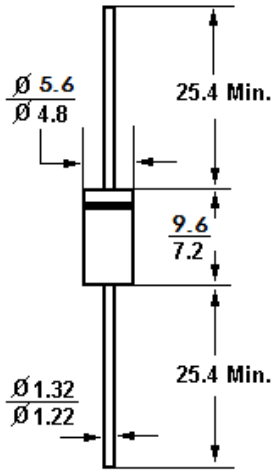
SB5200-HAF

Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 200 V
Forward Current - 5 A

DO-201AD



Dimnsions in mm

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Halogen and Antimony Free(HAF), RoHS compliant

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

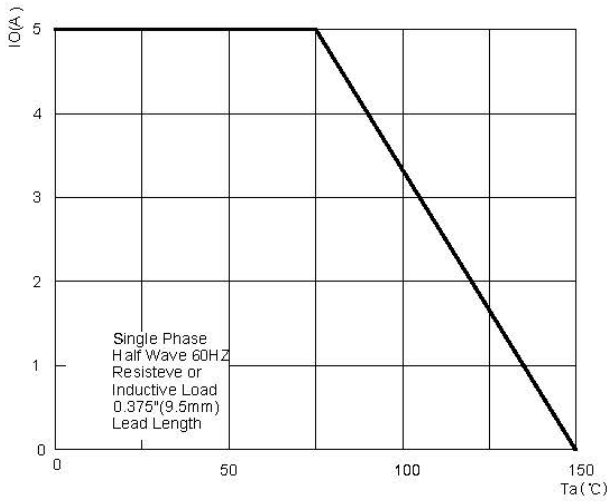
Maximum Ratings and Electrical Characteristics

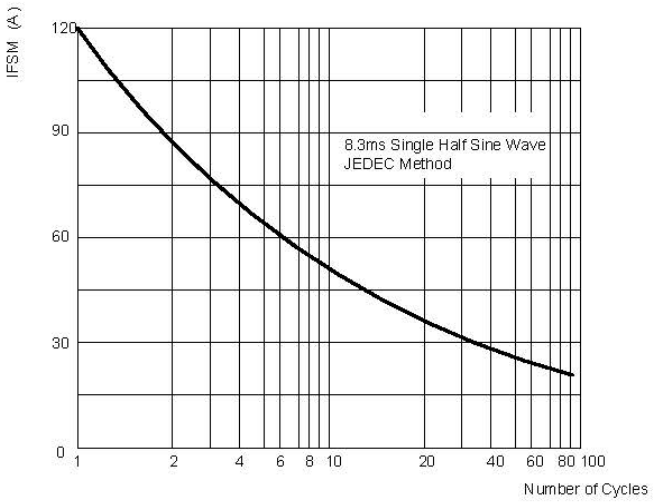
Ratings at 25℃ ambient temperature unless otherwise specified. Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

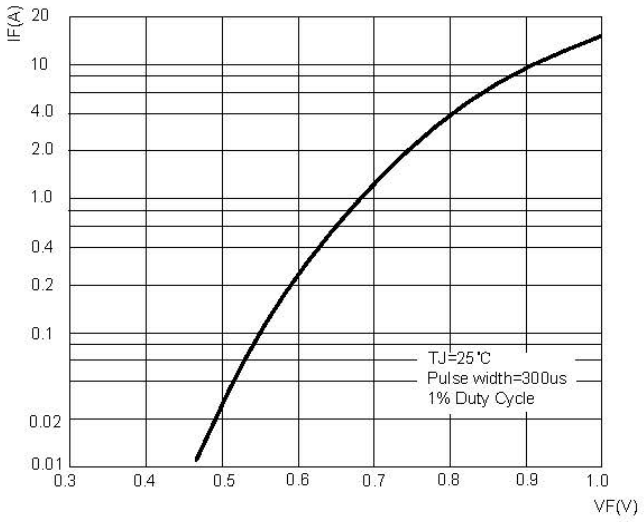
Parameter	Symbols	SB5200	Unit
	Marking	SB5200	-
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	V
Maximum RMS Voltage	V_{RMS}	140	V
Maximum DC Blocking Voltage	V_{DC}	200	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5	A
Peak Forward Surge Current 8.3 ms Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	120	A
Maximum Instantaneous Forward Voltage at 3 A	V_F	0.85	V
Maximum DC Reverse Current at T_a = 25℃ Rated DC Blocking Voltage T_a = 100℃	I_R	0.1 1	mA
Typical Junction Capacitance [1]	C_j	120	pF
Typical Thermal Resistance [2]	$R_{\theta JA}$	10	℃/W
Typical Thermal Resistance [2]	$R_{\theta JC}$	2	℃/W
Operating Junction Temperature Range	T_j	- 55 to + 150	℃
Storage Temperature Range	T_{stg}	- 55 to + 150	℃

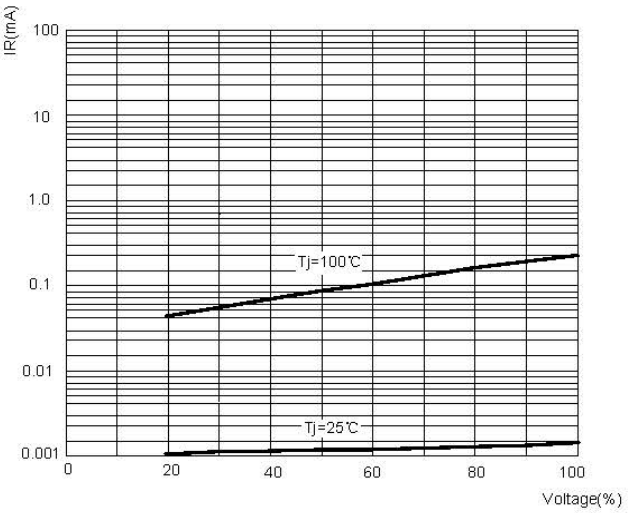
[1] Measured at 1MHz and applied reverse voltage of 4 V D.C.

[2] Thermal Resistance from Junction to lead vertical P.C.B, mounted with 0.375"(9.5mm) lead length


IO(A)
5
4
3
2
1
0
Single Phase
Half Wave 60HZ
Resisteve or
Inductive Load
0.375"(9.5mm)
Lead Length
0
50
100
150
Ta(℃)


IFSM (A)
120
90
60
30
0
8.3ms Single Half Sine Wave
JEDEC Method
1
2
4
6
8
10
20
40
60
80
100
Number of Cycles


IF(A)
20
10
4.0
2.0
1.0
0.4
0.2
0.1
0.02
0.01
TJ=25℃
Pulse width=300us
1% Duty Cycle
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
VF(V)


IR(mA)
100
10
1.0
0.1
0.01
0.001
Tj=100℃
Tj=25℃
0
20
40
60
80
100
Voltage(%)