

SB520 THRU SB5A0

SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage – 20 to 100 Volts

Forward Current – 5.0 Amperes

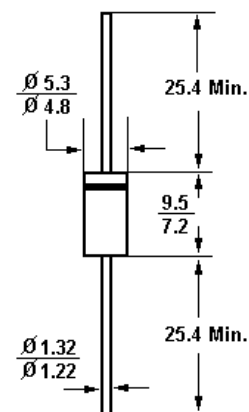
DO-201AD

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°C/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



Dimensions in mm

Absolute Maximum Ratings and Characteristics

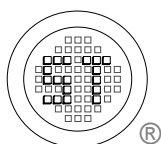
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, resistive or inductive load. For capacitive load, derate by 20%

	Symbols	SB 520	SB 530	SB 540	SB 550	SB 560	SB 580	SB 5A0	Units
Maximum recurrent 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)	5.0							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 (Note 1)	V _F	0.55			0.70		0.80	0.85	V
Maximum reverse current T _A = 25 °C at rated reverse voltage(Note 1) T _A = 100 °C	I _R	2.5							mA
		50			25				
Typical junction capacitance (Note 2)	C _{tot}	500			400				pF
Typical thermal resistance, from junction to ambient(Note 3)	R _{θJA}	25							°C/W
Typical thermal resistance, from junction to lead(Note 3)	R _{θJL}	8.0							°C/W
Operating junction temperature range	T _J	-65 to +125			-65 to +150				°C
storage temperature range	T _S	-65 to +150							°C

Notes: (1) Pulse test: 300 μ s pulse width, 1% duty cycle

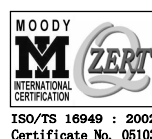
(2) Measured at 1MHz and applied reverse voltage of 4 Volts

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



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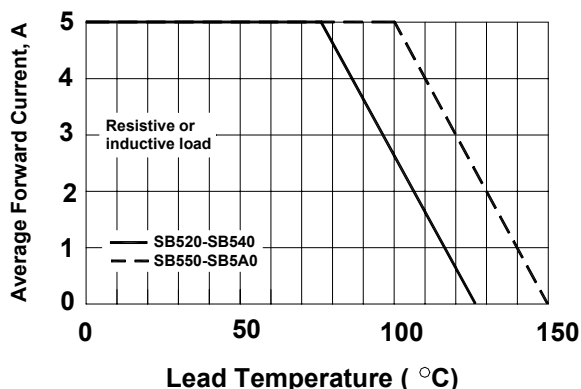
(Subsidiary of Semtech International Holdings Limited, a company
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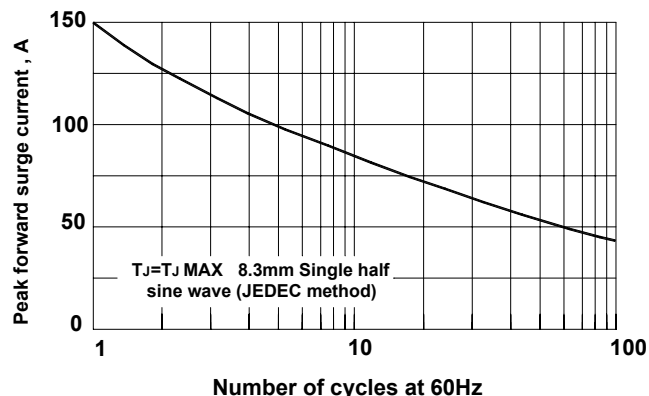
Dated : 19/05/2003

SB520 THRU SB5A0

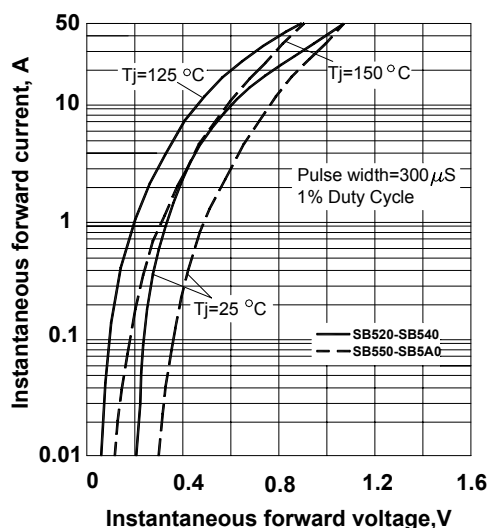
Forward Current Derating Curve



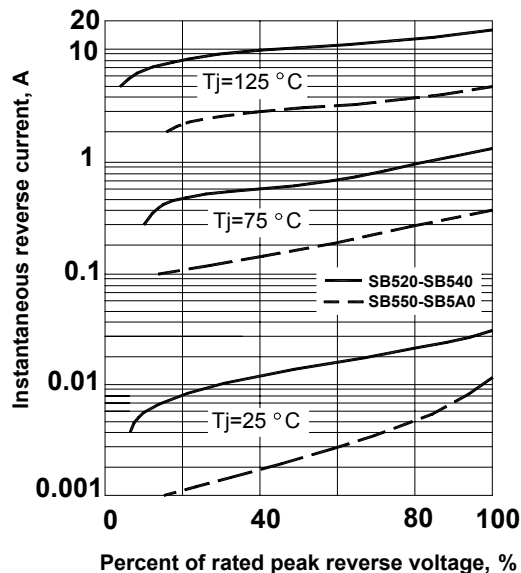
Maximum non-repetitive peak forward surge current



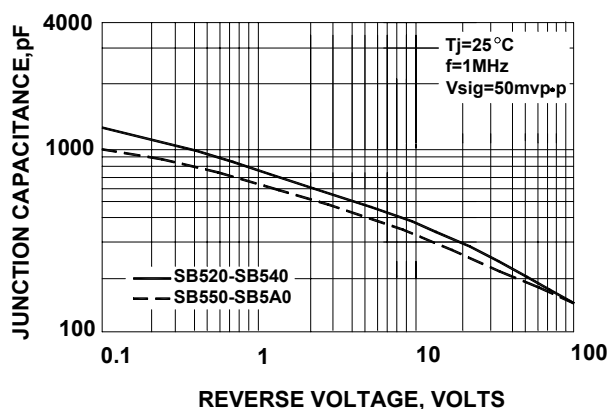
Typical instantaneous forward characteristics



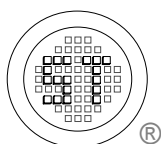
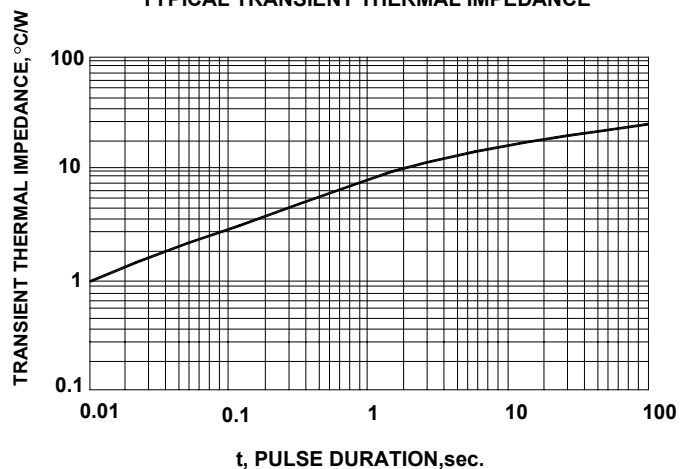
Typical reverse characteristics



TYPICAL JUNCTION CAPACITANCE

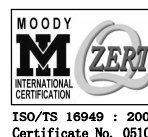


TYPICAL TRANSIENT THERMAL IMPEDANCE



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