

## SB520-G Thru. SB5100-G

Voltage: 20 to 100 V

Current: 5.0 A

RoHS Device

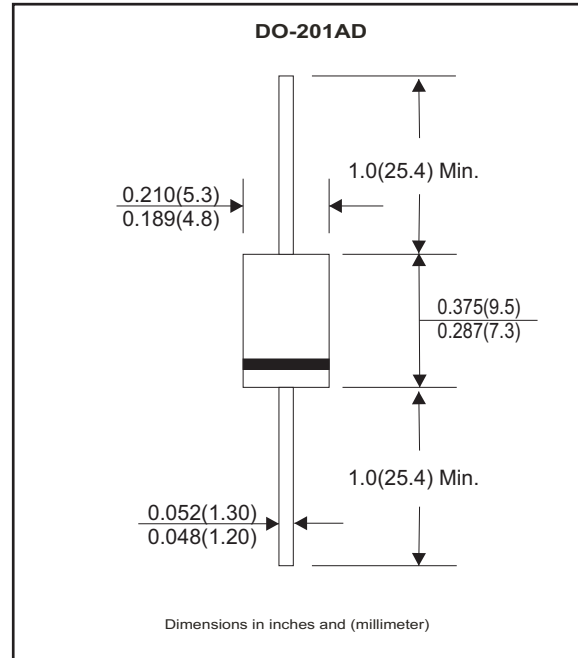


### Features

- Low drop down voltage.
- Metal-Semiconductor junction with guard ring
- High surge current capability
- Silicon epitaxial planar chips.
- For use in low voltage, high efficiency inverters, free wheeling, and polarity protection applications
- Lead-free part, meet RoHS requirements.

### Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case: Molded plastic body DO-201AD
- Terminals: Solderable per MIL-STD-750 Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 1.12grams



### Electrical Characteristics (at TA=25°C unless otherwise noted)

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	SB 520-G	SB 540-G	SB 545-G	SB 550-G	SB 560-G	SB 580-G	SB 5100-G	Unit
Maximum recurrent peak reverse voltage	V <sub>RRM</sub>	20	40	45	50	60	80	100	V
Maximum RMS voltage	V <sub>RMS</sub>	14	28	30	35	42	56	70	V
Maximum DC blocking voltage	V <sub>DC</sub>	20	40	45	50	60	80	100	V
Maximum average forward rectified current 0.375" (12.7mm) lead length at TA=75°C, See Figure 1	I <sub>(AV)</sub>	5.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) TL=110°C	I <sub>FSM</sub>	100							A
Maximum forward voltage at 5.0A (Note 1)	V <sub>F</sub>	0.55		0.70		0.85		V	
Maximum DC reverse current At rated DC blocking voltage	TA=25°C	0.5							mA
	TA=100°C	50					30		
Typical junction capacitance (Note 2)	C <sub>J</sub>	350					135		pF
Typical thermal resistance (Note 3)	R <sub>θJA</sub>	35.0							°C/W
	R <sub>θJL</sub>	15.0							
Operating junction temperature range	T <sub>J</sub>	-65 to +125			-65 to +150				°C
Storage temperature range	T <sub>STG</sub>	-65 to +150							°C

NOTES:

1. Pulse test 300µs pulse width, 1% duty cycle.
2. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
3. Thermal resistance junction to ambient and from junction to lead P.C.B mounted 0.500"(12.7mm)lead length with 2.5\*2.5"(63.5\*63.5mm) copper pad..

## RATING AND CHARACTERISTIC CURVES (SB520-G Thru. SB5100-G)

Fig.1- Forward Current Derating Curve

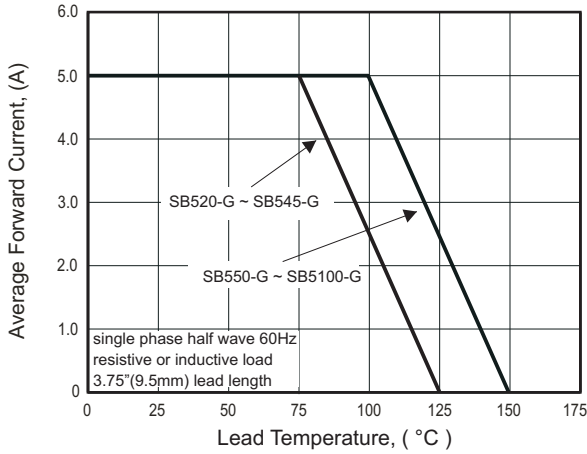


Fig.2 - Maximum Non-repetitive Peak Forward Surge Current

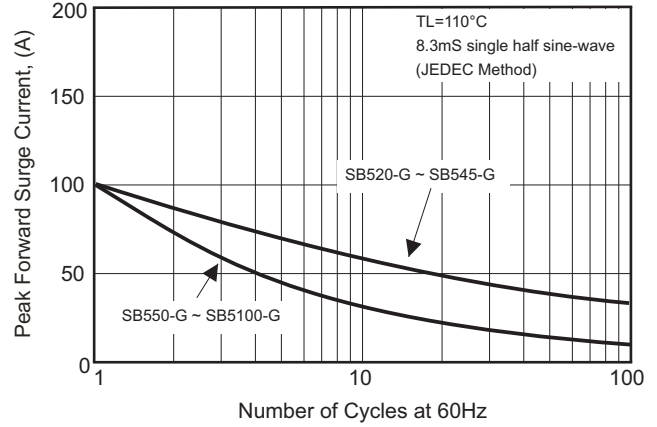


Fig.3 - Typical Instantaneous Forward Characteristics

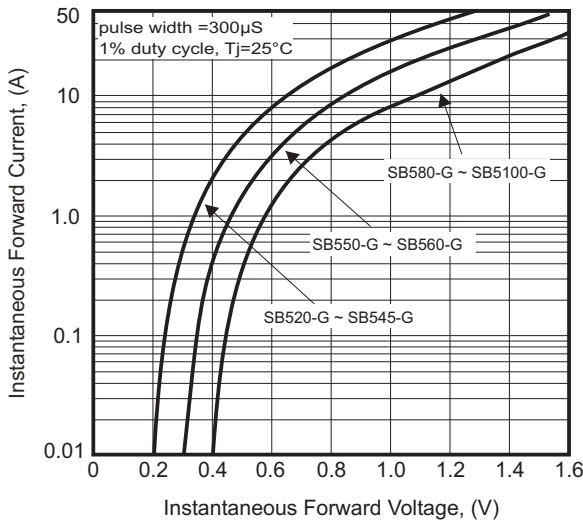


Fig.4A - Typical Reverse Characteristics

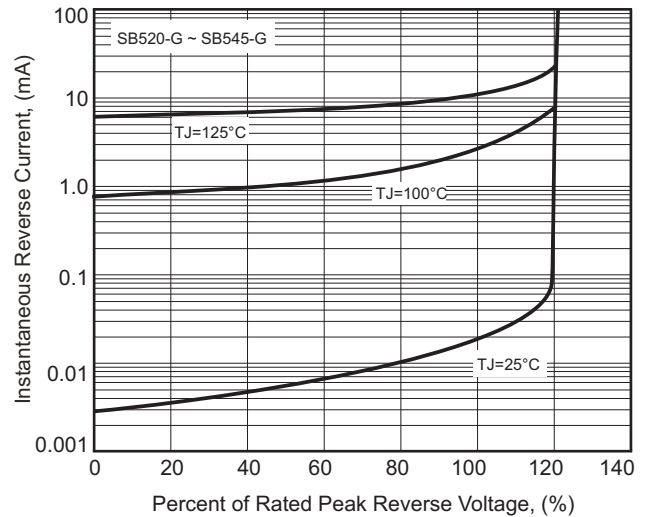


Fig.5 - Typical Junction Capacitance

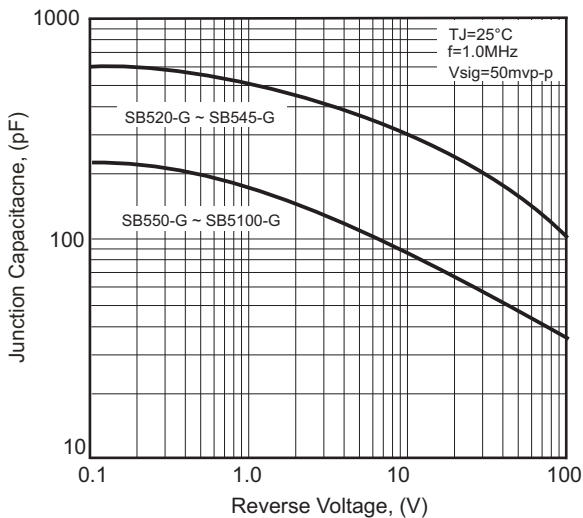
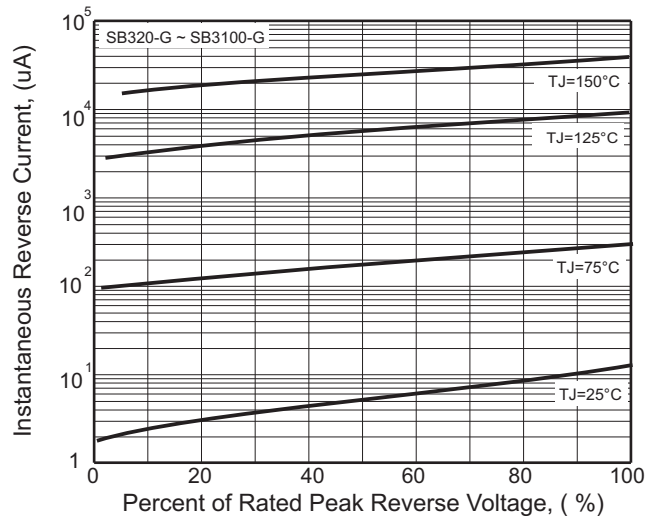


Fig. 4B - Typical Reverse Characteristic



## Marking Code

Part Number	Marking code	Packaging
SB520T-G	SB520	AMMO REEL
SB540T-G	SB540	AMMO REEL
SB545T-G	SB545	AMMO REEL
SB550T-G	SB550	AMMO REEL
SB560T-G	SB560	AMMO REEL
SB580T-G	SB580	AMMO REEL
SB5100T-G	SB5100	AMMO REEL
SB520B-G	SB520	BULK
SB540B-G	SB540	BULK
SB545B-G	SB545	BULK
SB550B-G	SB550	BULK
SB560B-G	SB560	BULK
SB580B-G	SB580	BULK
SB5100B-G	SB5100	BULK



**XXX / XXXX = Product type marking code**

Note:

1) Suffix code after part number to specify packaging item .

Packaging	Code
AMMO Reel PACK	T
BULK PACK	B

## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
DO-201AD	1,200	13

Case Type	BULK PACK	
	BOX ( pcs )	CARTON ( pcs )
DO-201AD	200	12,000

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