

## SB120-G Thru. SB1100-G

Voltage: 20 to 100 V

Current: 1.0 A

RoHS Device

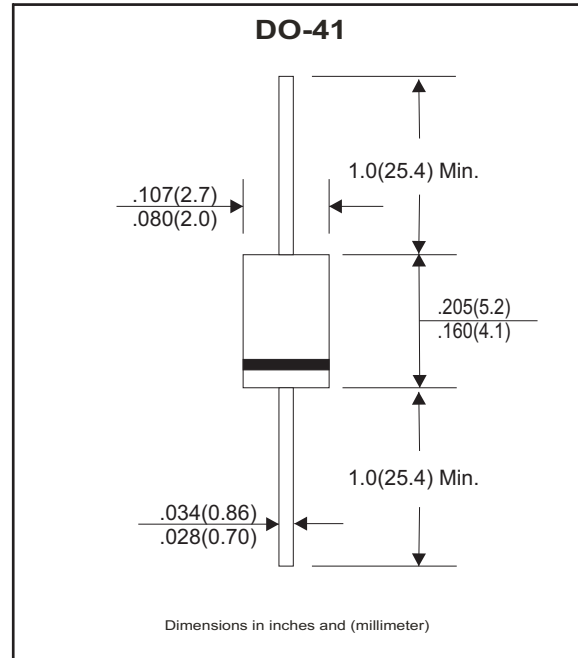


### Features

- 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-41
- Terminals: Solderable per MIL-STD-750 Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.34grams



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

Ratings at Ta=25°C unless otherwise noted.

Parameter	Symbol	SB 120-G	SB 140-G	SB 145-G	SB 150-G	SB 160-G	SB 180-G	SB 1100-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" (9.5mm) lead length at TA=75°C, See Figure 1	I <sub>(AV)</sub>	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) TL=110°C	I <sub>FSM</sub>	30							A
Maximum forward voltage at 1.0A	V <sub>F</sub>	0.50		0.70		0.85		V	
Maximum DC reverse current At rated DC blocking voltage	I <sub>R</sub>	0.5							mA
TA=25°C TA=100°C		10		5					
Typical junction capacitance (Note 1)	C <sub>J</sub>	110		80		30		pF	
Typical thermal resistance (Note 2)	R <sub>θJA</sub> R <sub>θJL</sub>	50.0 30.0							°C/W
Operating junction temperature range	T <sub>J</sub>	-55 to +125			-55 to +150				°C
Storage temperature range	T <sub>STG</sub>	-55 to +150							°C

NOTES:

1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
2. Thermal resistance junction to ambient and junction to lead.

## RATING AND CHARACTERISTIC CURVES (SB120-G Thru. SB1100-G)

Fig.1- Forward Current Derating Curve

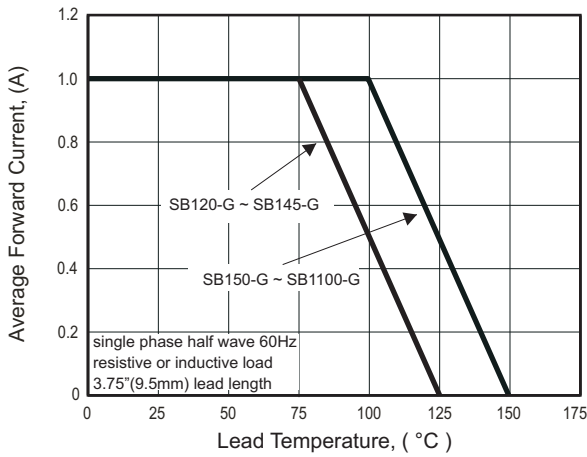


Fig.2 - Maximum Non-repetitive Peak Forward Surge Current

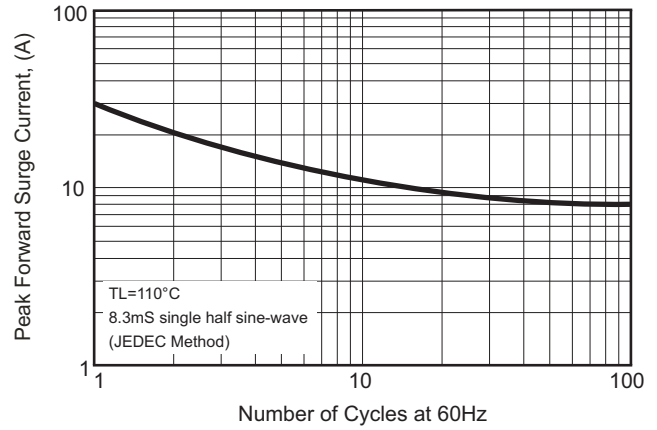


Fig.3 - Typical Instantaneous Forward Characteristics

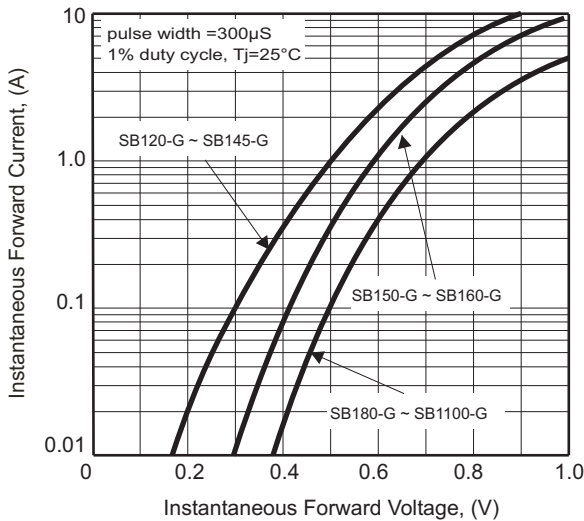


Fig.4A - Typical Reverse Characteristics

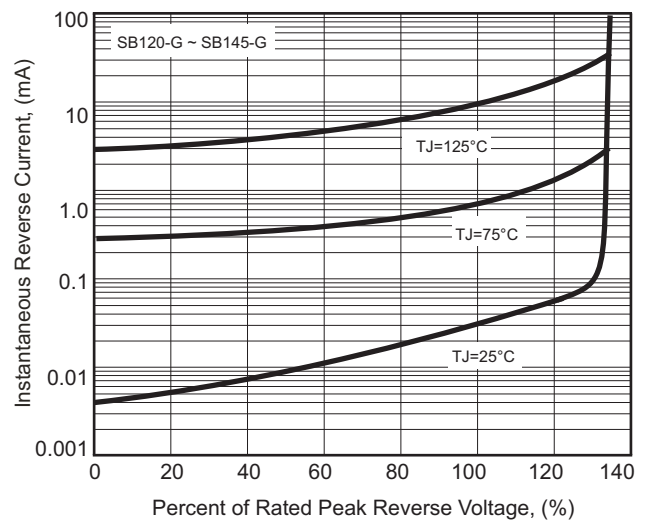


Fig.5 - Typical Junction Capacitance

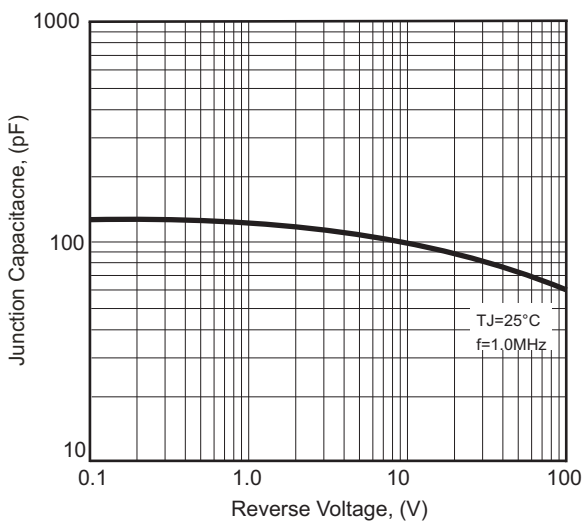
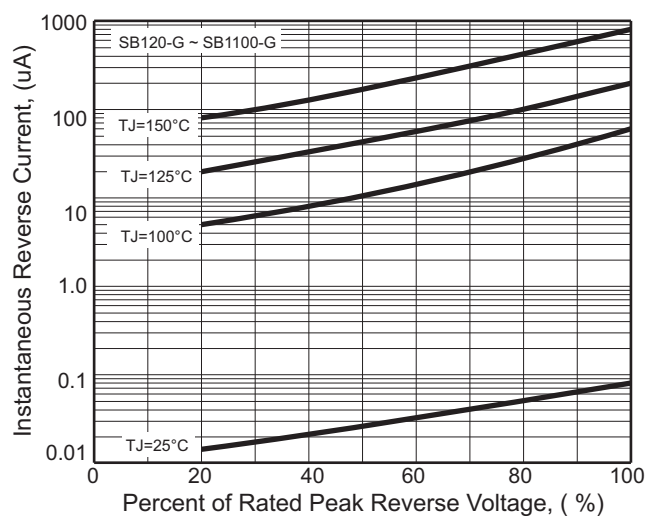
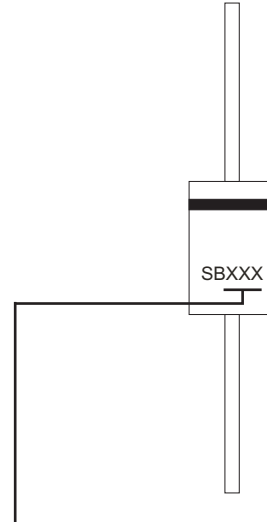


Fig. 4B - Typical Reverse Characteristic



## Marking Code

Part Number	Marking Code	Packaging
SB120T-G	SB120	REEL
SB140T-G	SB140	REEL
SB145T-G	SB145	REEL
SB150T-G	SB150	REEL
SB160T-G	SB160	REEL
SB180T-G	SB180	REEL
SB1100T-G	SB1100	REEL
SB120A-G	SB120	AMMO
SB140A-G	SB140	AMMO
SB145A-G	SB145	AMMO
SB150A-G	SB150	AMMO
SB160A-G	SB160	AMMO
SB180A-G	SB180	AMMO
SB1100A-G	SB1100	AMMO
SB120B-G	SB120	BULK
SB140B-G	SB140	BULK
SB145B-G	SB145	BULK
SB150B-G	SB150	BULK
SB160B-G	SB160	BULK
SB180B-G	SB180	BULK
SB1100B-G	SB1100	BULK



XXX / XXXX = Product type marking code

Note:

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

Packaging	Code
REEL PACK	T
AMMO PACK	A
BULK PACK	B

## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
DO-41	5,000	13

Case Type	BULK PACK
	BOX ( pcs )
DO-41	1000

Case Type	AMMO PACK
	BOX ( pcs )
DO-41	5,000