

SB320E-G Thru. SB3100E-G

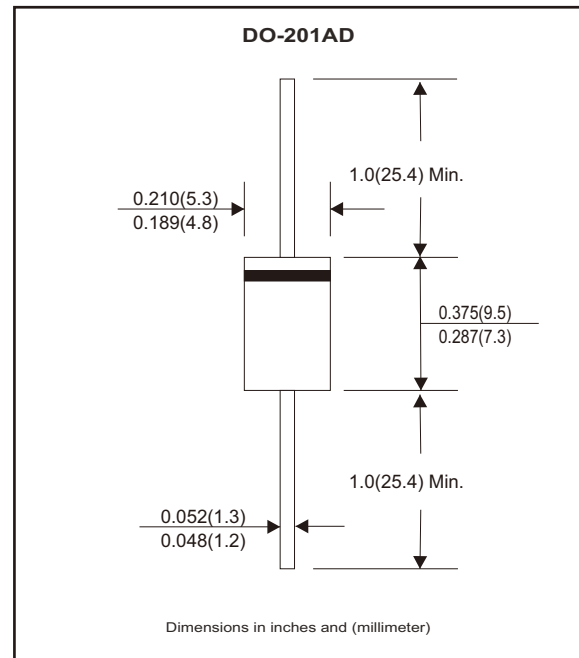
Voltage: 20 to 100 V
Current: 3.0 A
RoHS Device


Features

- Low drop down voltage.
- 3.0A operation at $T_A=75^{\circ}\text{C}$ with no thermal runaway.
- For use in low voltage, high frequency inverters free wheeling and polarity protection.
- Silicon epitaxial planar chips.
- ESD test under IEC6100-4-2 :
Standard: >15KV(Air) & 8KV(Contact)
- 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: 1.12 grams (approx.).



Circuit Diagram



Electrical Characteristics (at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

 Ratings at 25°C ambient temperature unless otherwise specified.

Parameter		Symbol	SB 320E-G	SB 340E-G	SB 345E-G	SB 350E-G	SB 360E-G	SB 380E-G	SB 3100E-G	Unit
Maximum recurrent peak reverse voltage		V _{RRM}	20	40	45	50	60	80	100	V
Maximum RMS voltage		V _{RMS}	14	28	30	35	42	56	70	V
Maximum DC blocking voltage		V _{DC}	20	40	45	50	60	80	100	V
Maximum average forward rectified current 0.5" (12.7mm) lead length at TA=75°C, See Figure 1		I(AV)	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) TL=110°C		IFSM	80							A
Maximum forward voltage at 3.0A (Note 1)		VF	0.50			0.70		0.85		V
Maximum DC reverse current At rated DC blocking voltage	TA= 25°C	IR	0.5							mA
	TA=100°C		30			20				
Typical junction capacitance (Note 2)		CJ	250							pF
Typical thermal resistance (Note 3)		RθJA	40.0							°C/W
		RθJL	20.0							
Operating junction temperature range		TJ	-65 to +125				-65 to +150			°C
Storage temperature range		TSTG	-65 to +150							°C

NOTES:

1. Pulse test : 300 μs pulse width, 1% duty cycle.
2. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
3. Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted 0.500" (12.7mm) lead length with 2.5x2.5" (63.5x63.5mm) copper pad.

RATING AND CHARACTERISTIC CURVES (SB320E-G Thru. SB3100E-G)

Fig.1- Forward Current Derating Curve

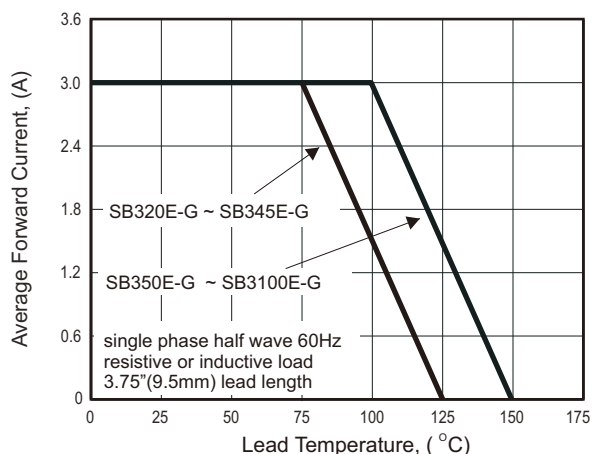


Fig.2- Maximum Non-repetitive Peak Forward Surge Current

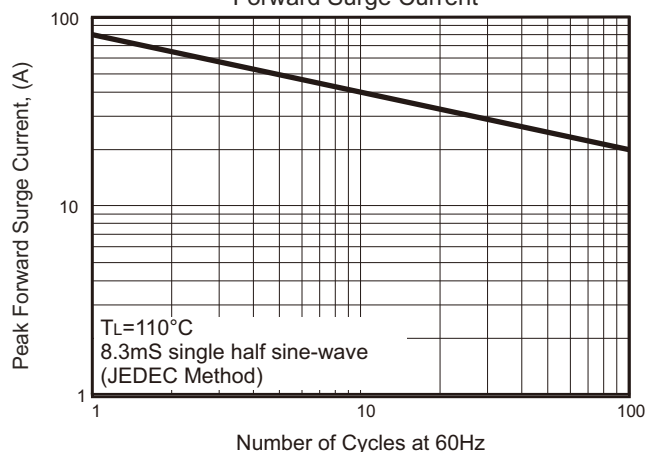


Fig.3- Typical Instantaneous Forward Characteristics

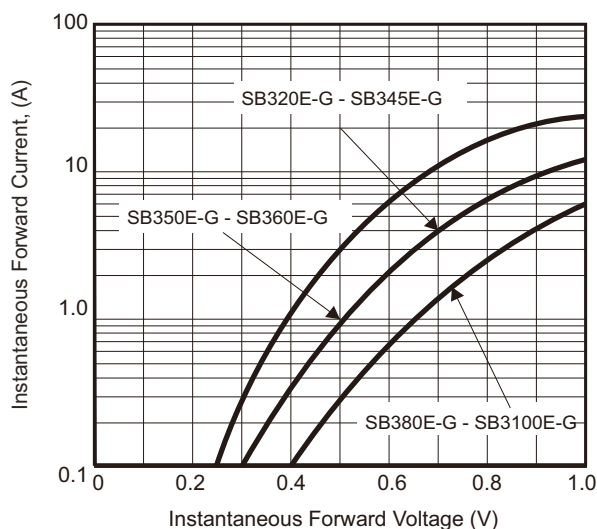


Fig.4A- Typical Reverse Characteristics

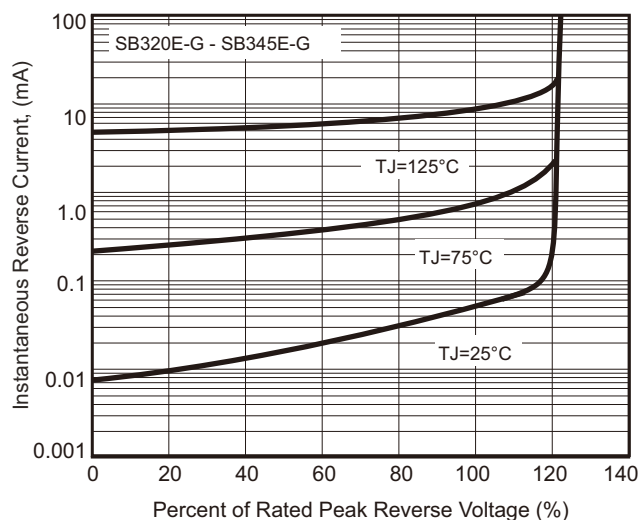


Fig.5- Typical Junction Capacitance

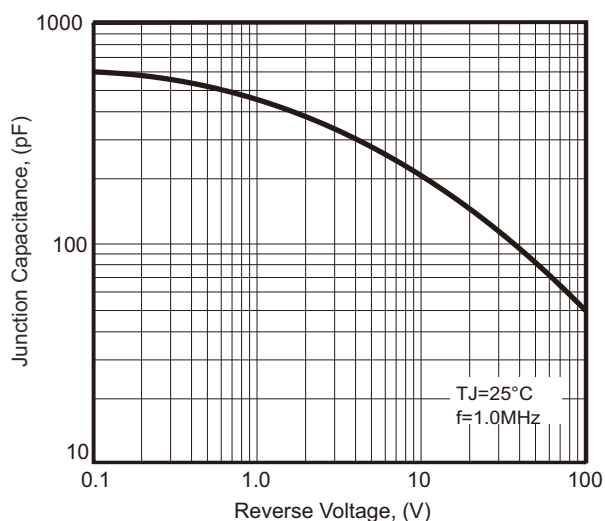
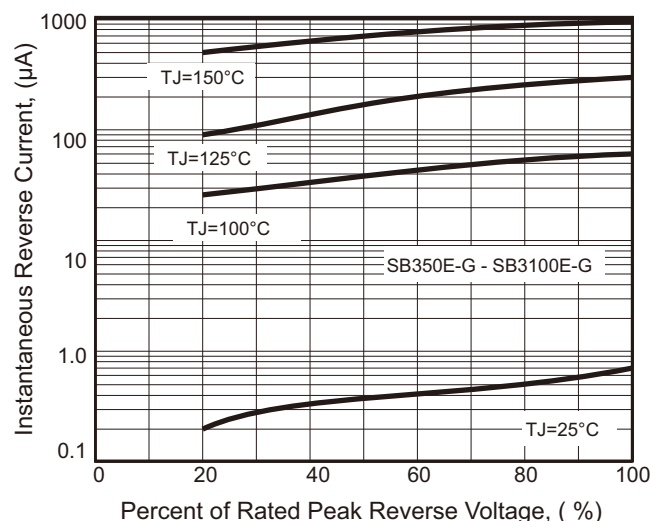


Fig. 4B- Typical Reverse Characteristic

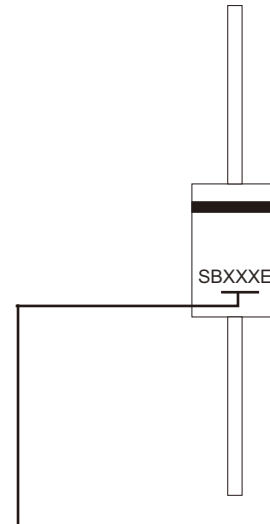


Company reserves the right to improve product design, functions and reliability without notice.

REV:B

Marking Code

Part Number	Marking Code	Packaging
SB320ET-G	SB320E	REEL
SB340ET-G	SB340E	REEL
SB345ET-G	SB345E	REEL
SB350ET-G	SB350E	REEL
SB360ET-G	SB360E	REEL
SB380ET-G	SB380E	REEL
SB3100ET-G	SB3100E	REEL
SB320EA-G	SB320E	AMMO
SB340EA-G	SB340E	AMMO
SB345EA-G	SB345E	AMMO
SB350EA-G	SB350E	AMMO
SB360EA-G	SB360E	AMMO
SB380EA-G	SB380E	AMMO
SB3100EA-G	SB3100E	AMMO
SB320EB-G	SB320E	BULK
SB340EB-G	SB340E	BULK
SB345EB-G	SB345E	BULK
SB350EB-G	SB350E	BULK
SB360EB-G	SB360E	BULK
SB380EB-G	SB380E	BULK
SB3100EB-G	SB3100E	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-201AD	1,200	13

Case Type	BULK PACK	
	BOX (pcs)	
DO-201AD	500	

Case Type	AMMO PACK	
	BOX (pcs)	
DO-201AD	1,200	