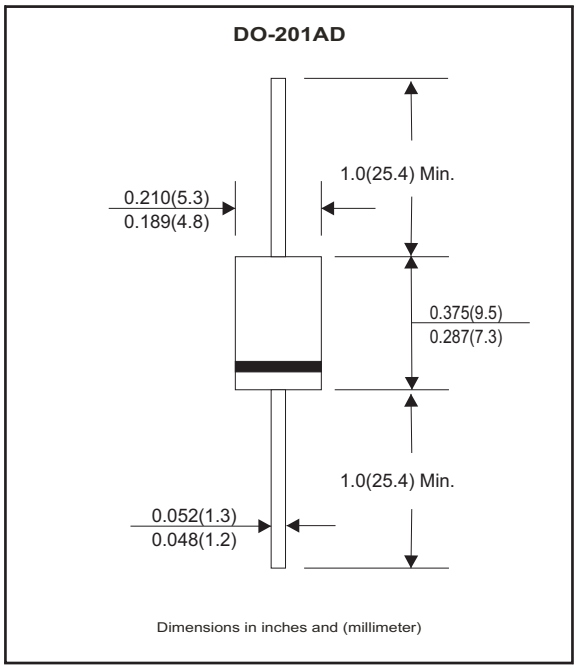
SB320E-G Thru. SB3100E-G

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



Features

-Low drop down voltage.
-3.0A operation at TA=75°C with no thermal runaway.
-For use in low voltage, high frequency invertors 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

Electrical Characteristics (at TA=25°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		I_{FSM}	80							A
Maximum forward voltage at 3.0A (Note 1)		V_F	0.50			0.70		0.85		V
Maximum DC reverse current At rated DC blocking voltage	TA= 25°C	I_R	0.5							mA
	TA=100°C		30			20				
Typical junction capacitance (Note 2)		C_J	250							pF
Typical thermal resistance (Note 3)		$R_{\theta JA}$	40.0							°C/W
		$R_{\theta JL}$	20.0							
Operating junction temperature range		T_J	-65 to +125			-65 to +150				°C
Storage temperature range		T_{STG}	-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 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

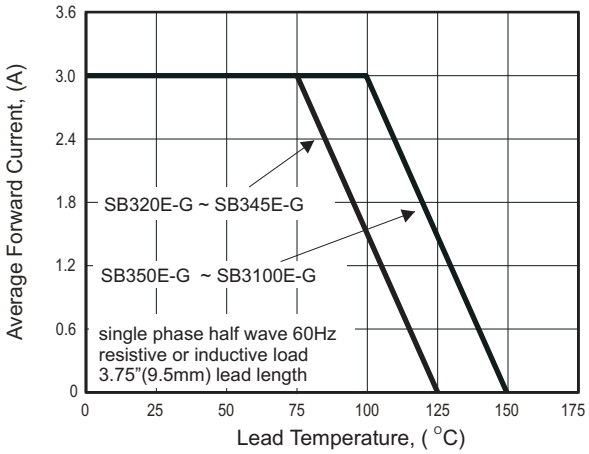


Fig.2- Maximum Non-repetitive Peak Forward Surge Current

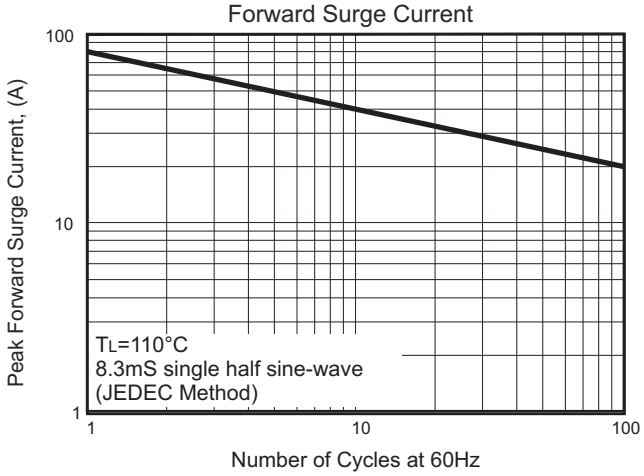


Fig.3- Typical Instantaneous Forward Characteristics

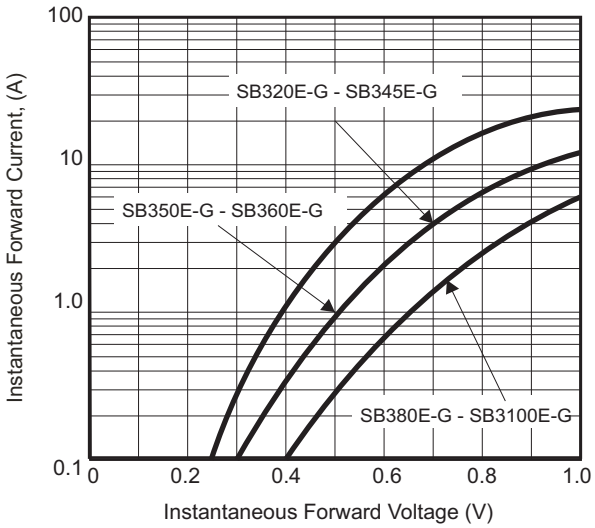


Fig.4A- Typical Reverse Characteristics

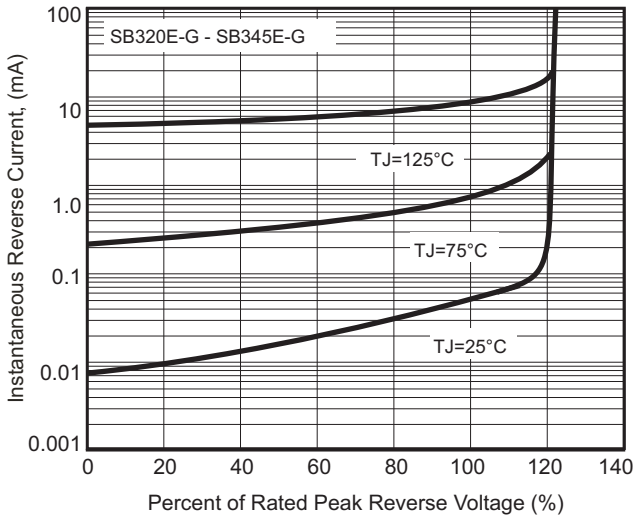


Fig.5- Typical Junction Capacitance

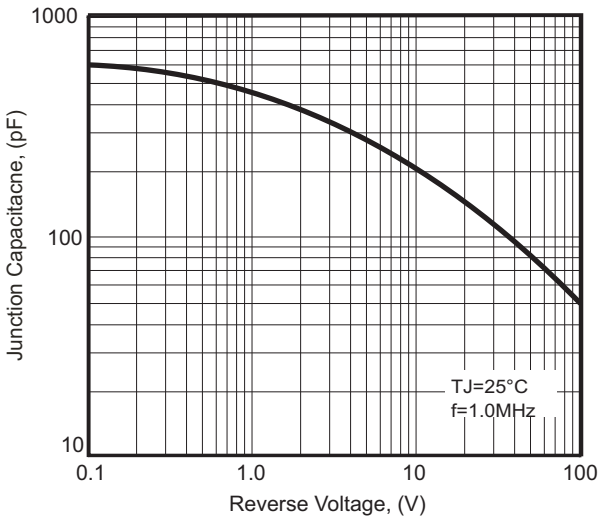
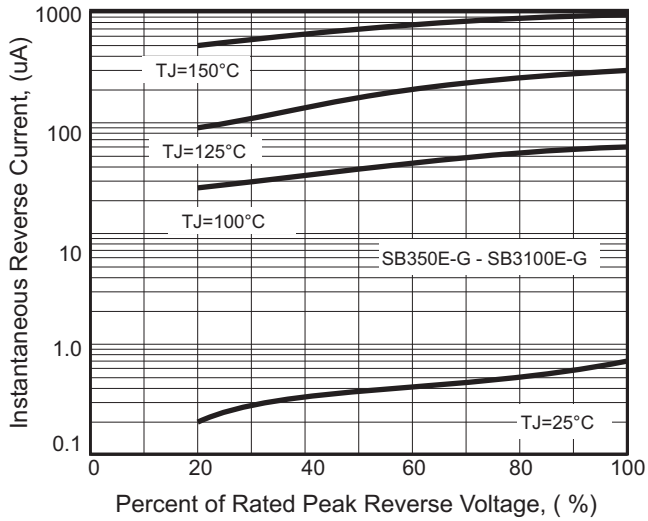
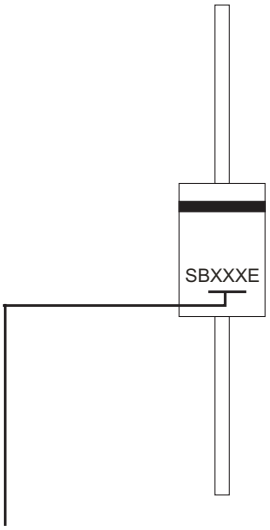


Fig. 4B- Typeical Reverse Characteristic



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	200

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