B320/A/B - B360/A/B

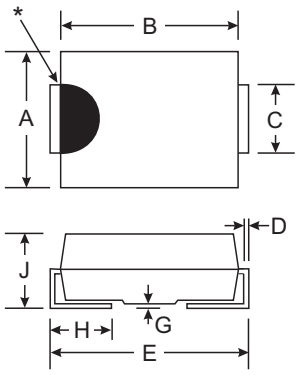
3.0A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Features

- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 100A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- **Lead Free Finish/RoHS Compliant (Note 4)**

Mechanical Data

- Case: SMA/SMB/SMC
- Case Material: Molded Plastic. UL Flammability Classification 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Type Number (See Page 3)
- Approximate Weight: SMA 0.064 grams
  SMB 0.093 grams
  SMC 0.21 grams



Dim	SMA		SMB		SMC	
	Min	Max	Min	Max	Min	Max
A	2.29	2.92	3.30	3.94	5.59	6.22
B	4.00	4.60	4.06	4.57	6.60	7.11
C	1.27	1.63	1.96	2.21	2.75	3.18
D	0.15	0.31	0.15	0.31	0.15	0.31
E	4.80	5.59	5.00	5.59	7.75	8.13
G	0.10	0.20	0.10	0.20	0.10	0.20
H	0.76	1.52	0.76	1.52	0.76	1.52
J	2.01	2.30	2.00	2.40	2.00	2.40
All Dimensions in mm						

"A" Suffix Designates SMA Package
"B" Suffix Designates SMB Package
No Suffix Designates SMC Package
*: Note: Device may have a semicircular indentation/ notch on one side of the device (as shown).

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	B320/A/B	B330/A/B	B340/A/B	B350/A/B	B360/A/B	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	50	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	35	42	V
Average Rectified Output Current @ T_T = 100°C	I_O	3.0					A
Non-Repetitive Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100					A
Forward Voltage (Note 3) @ I_F = 3.0A	V_{FM}	0.50			0.70		V
Peak Reverse Current @T_A = 25°C at Rated DC Blocking Voltage (Note 3) @T_A = 100°C	I_{RM}	0.5 20					mA
Typical Capacitance (Note 2)	C_T	250					pF
Typical Thermal Resistance, Junction to Terminal	$R_{\theta JT}$	10					°C/W
Typical Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	50					°C/W
Operating Temperature Range	T_j	-55 to +125					°C
Storage Temperature Range	T_{STG}	-55 to +150					°C

Notes:
1. Thermal Resistance: Junction to terminal, unit mounted on PC board with 5.0 mm^2, 0.013 mm thick, copper pad as heat sink.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
3. Short duration test pulse used to minimize self-heating effect.
4. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7.*

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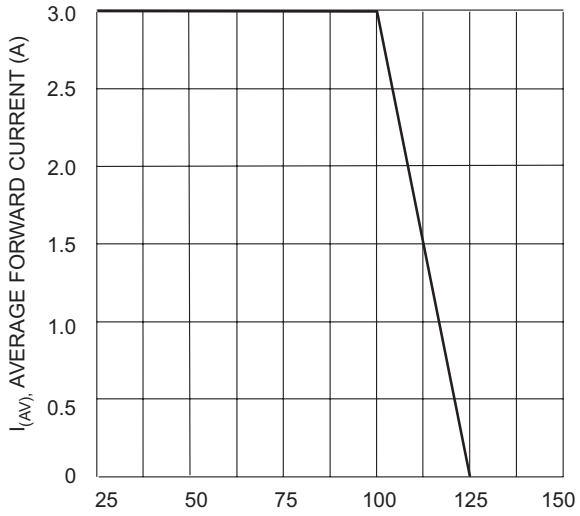


Fig. 1 Forward Current Derating Curve

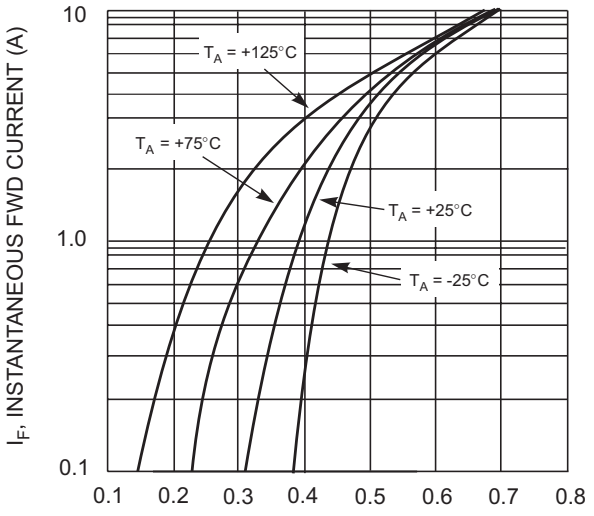


Fig. 2 Typical Forward Characteristics - B320/A/B thru B340/A/B

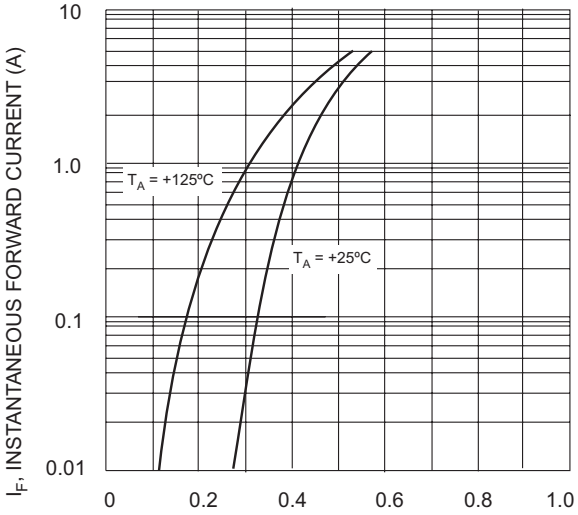


Fig. 3 Typ. Forward Characteristics - B350/A/B thru B360/A/B

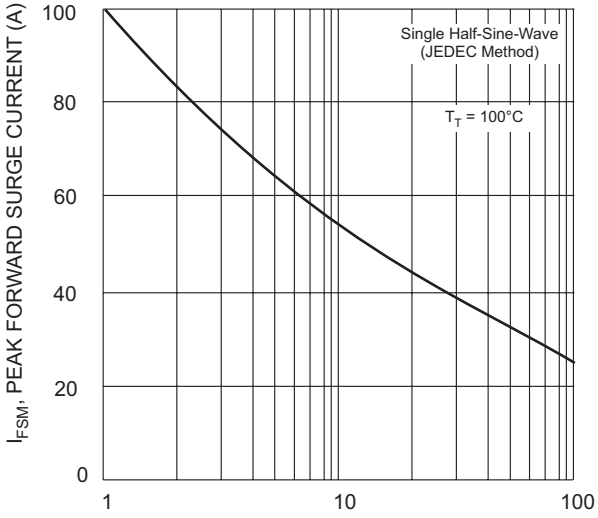


Fig. 4 Max Non-Repetitive Peak Fwd Surge Current

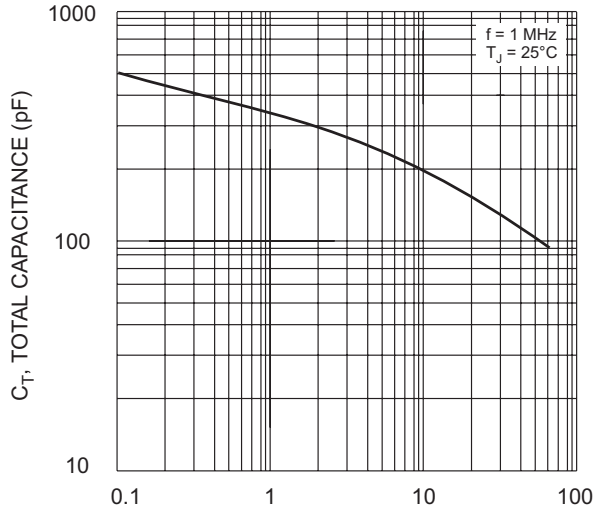


Fig. 5 Typical Capacitance

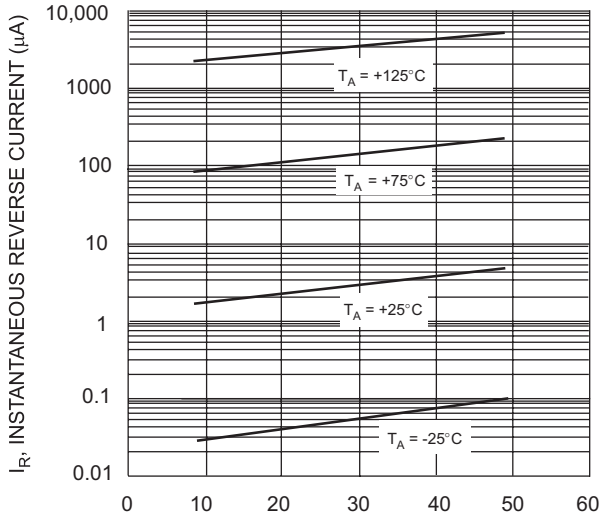


Fig. 6 Typical Reverse Characteristics, B320/A/B thru B340/A/B

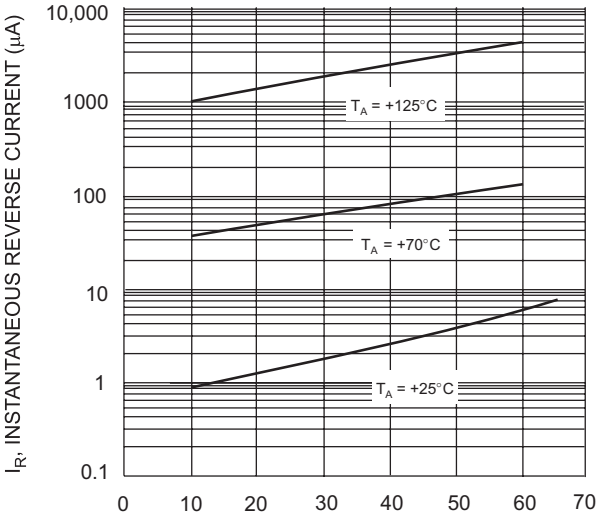


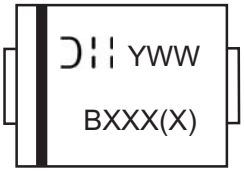
Fig. 7 Typical Reverse Characteristics, B350/A/B thru B360/A/B

Ordering Information (Note 5)

Device*	Packaging	Shipping
B3XXA-13	SMA	5000/Tape & Reel
B3XXB-13	SMB	3000/Tape & Reel
B3XX-13	SMC	3000/Tape & Reel

Notes: 5. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

* xx = Device type, e.g. B320A-13-F (SMA package); B320B-13-F (SMB package); B320-13-F (SMC Package).



BXXX = Product type marking code, ex: B320 (SMC package)
BXXXX = Product type marking code, ex: B320A (SMA package)
= Manufacturers' code marking
YWW = Date code marking
Y = Last digit of year ex: 2 for 2002
WW = Week code 01 to 52

Note: Device has a cathode band (as shown above) and may also have a cathode notch (as shown on Page 1).

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