B320 - B360

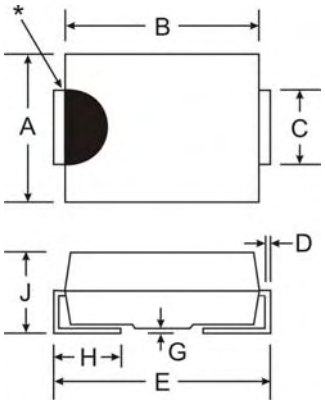
3.0A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Features

- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 125A 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: SMC
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208 e3
- Polarity: Cathode Band
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.21 grams (approximate)



SMC		
Dim	**Min**	**Max**
A	5.59	6.22
B	6.60	7.11
C	2.75	3.18
D	0.15	0.31
E	7.75	8.13
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

* 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	B330	B340	B350	B360	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 =100C°	I_O	3.0					A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	125					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	200					pF
Typical Thermal Resistance, Junction to Terminal	$R_{\theta JT}$	20					°C/W
Typical Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	90					°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 glass epoxy substrate with 2x3mm copper pad
2. Measured at 1.0MHz 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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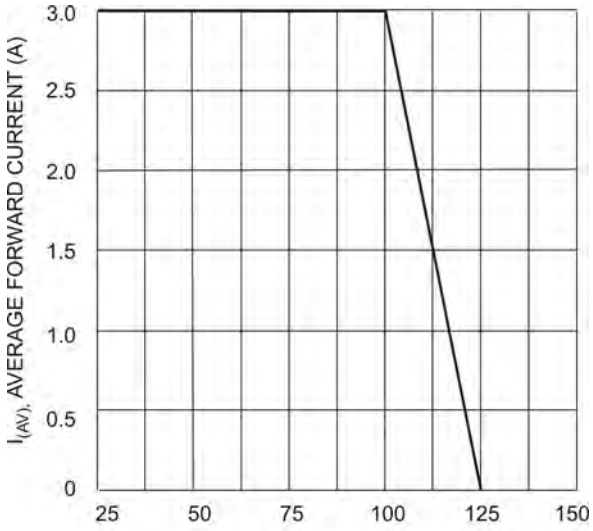

Fig. 1 Forward Current Derating Curve

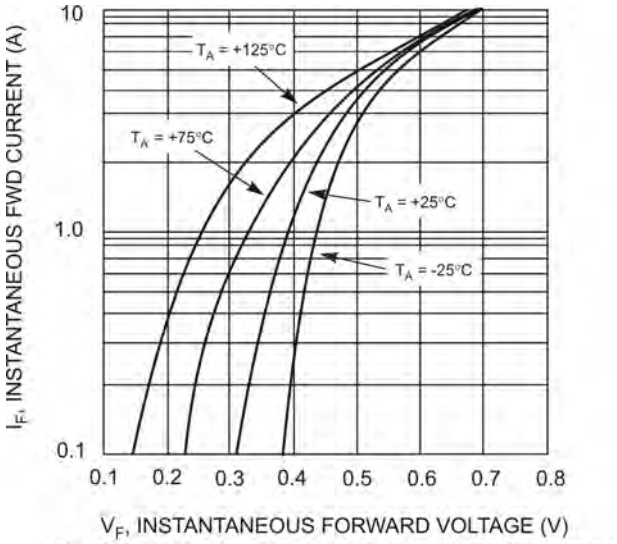

Fig. 2 Typical Forward Characteristics - B320B thru B340B

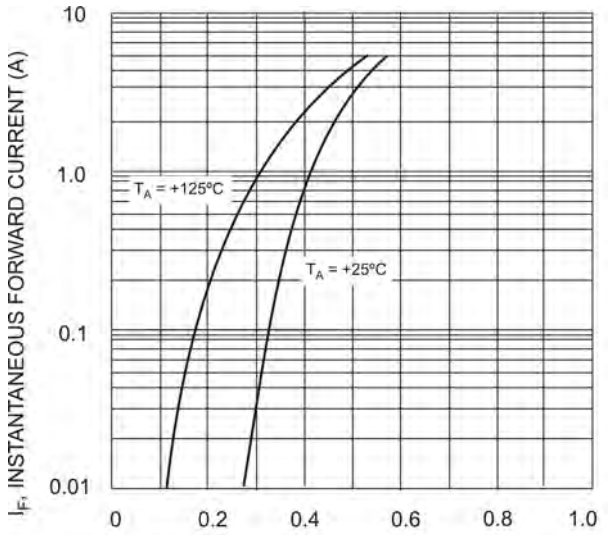

Fig. 3 Typ. Forward Characteristics - B350B thru B360B

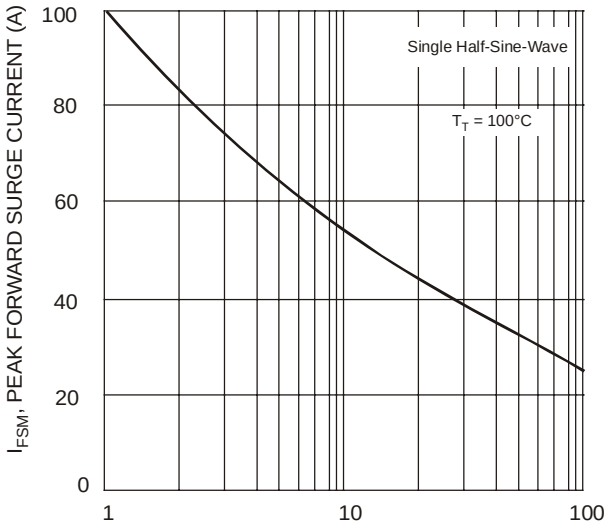

Fig. 4 Max Non-Repetitive Peak Forward Surge Current

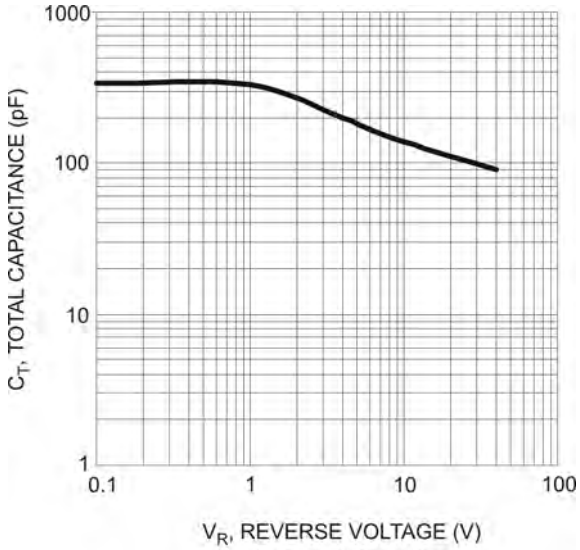

Fig. 5 Typical Capacitance

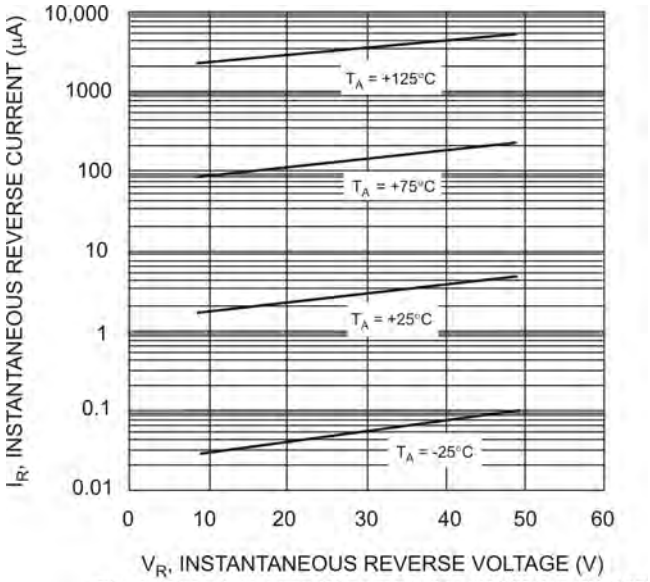

Fig. 6 Typical Reverse Characteristics, B320B thru B340B

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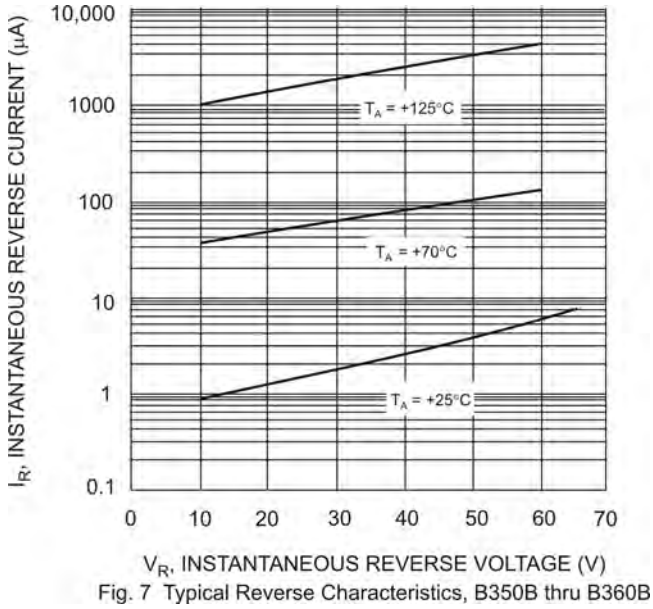


Fig. 7 Typical Reverse Characteristics, B350B thru B360B

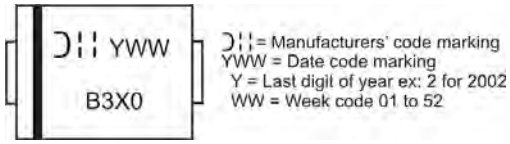
Ordering Information (Note 5)

Device*	Packaging	Shipping
B3x0-13-F	SMC	3000/Tape & Reel

* x = Device type, e.g. B320-13-F (SMC package).

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

Marking Information (Note 6)



Notes: 6. Device has a cathode band (as shown above) and may also have a cathode notch (as shown on Page 1).

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