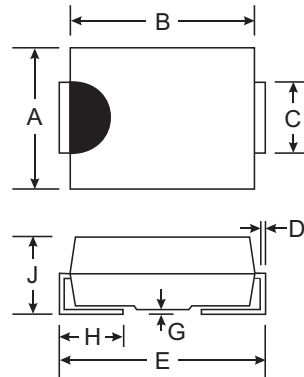


Features

- Low Leakage Current
- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 45A Peak
- Lead Free/RoHS Compliant (Note 3)**

Mechanical Data

- Case: SMB
- 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)
- Marking Information: See page 3
- Ordering Information: See page 3
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.093 grams (approximate)



SMB		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.57
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

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	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	40	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage @ I _R = 0.1mA	V _R		
RMS Reverse Voltage	V _{R(RMS)}	28	V
Average Rectified Output Current @ T _T = 115 C	I _O	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load	I _{FSM}	45	A
Non-Repetitive Peak Forward Surge Current 5 s Single half sine-wave	I _{FSM}	430	A
Forward Voltage @ I _F = 1.0A, @ T _j = 25 C @ I _F = 2.0A, @ T _j = 25 C @ I _F = 1.0A, @ T _j = 125 C @ I _F = 2.0A, @ T _j = 125 C	V _{FM}	0.53 0.70 0.49 0.64	V
Peak Reverse Current @ T _A = 25 C at Rated DC Blocking Voltage @ T _A = 125 C	I _{RM}	0.1 4.0	mA
Typical Total Capacitance (Note 2)	C _T	80	pF
Typical Thermal Resistance Junction to Terminal (Note 1)	R _{JT}	36	C/W
Operating and Storage Temperature Range	T _j , T _{STG}	-55 to +150	C

- Notes:
- Thermal Resistance: Junction to terminal, unit mounted on PC board with 5.0 mm² (0.013 mm thick) copper pads as heat sink.
 - Measured at 1.0MHz and applied reverse voltage of 5.0V DC.
 - RoHS revision 13.2.2003. High Temperature Solder Exemption Applied, see EU Directive Annex Note 7.

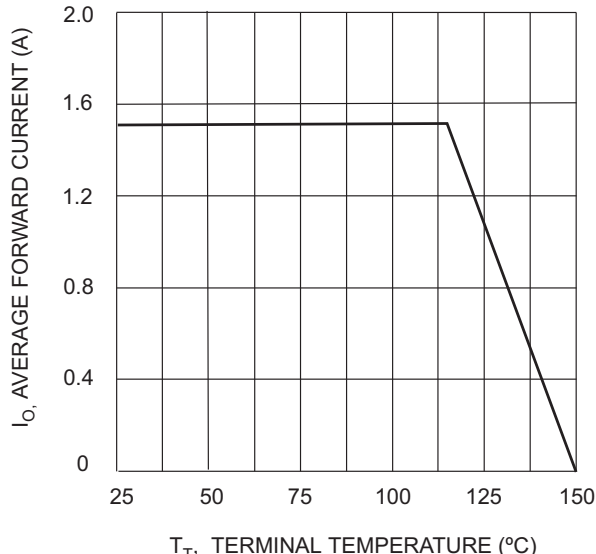


Fig. 1 Forward Current Derating Curve

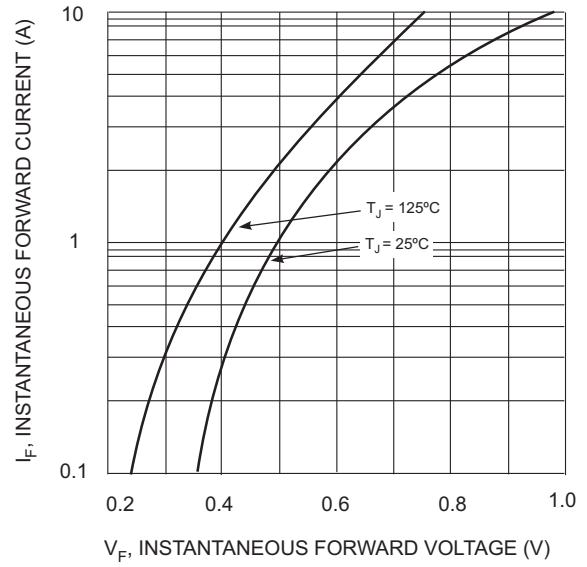


Fig. 2 Typ. Forward Characteristics

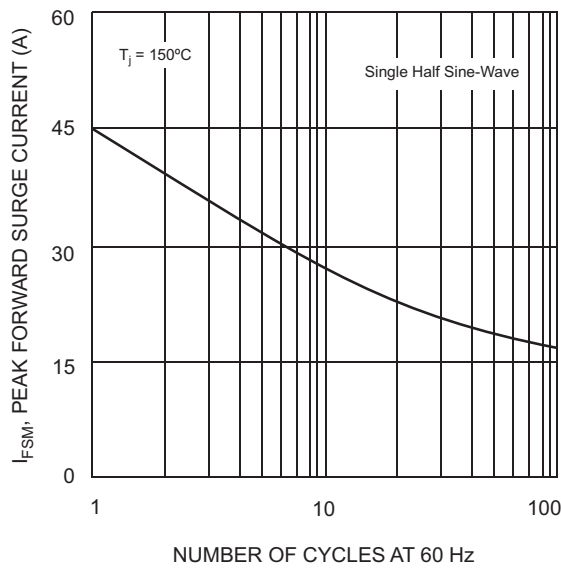


Fig. 3 Max Non-Repetitive Peak Forward Surge Current

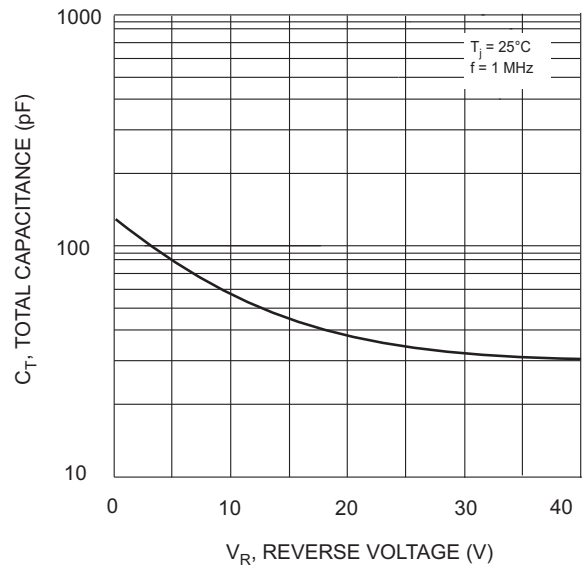


Fig. 4 Typical Total Capacitance

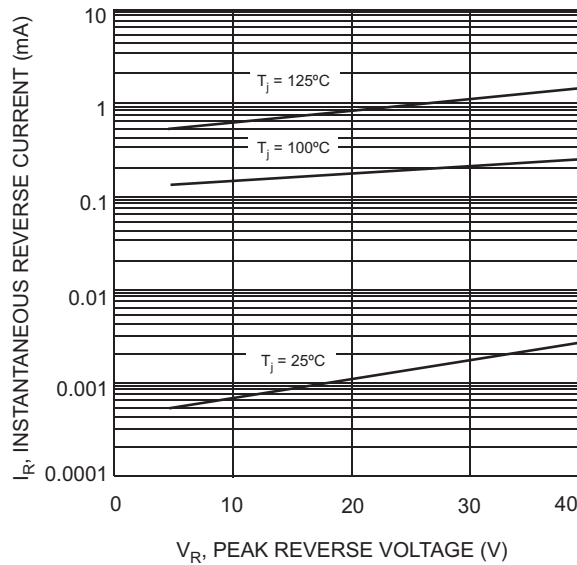
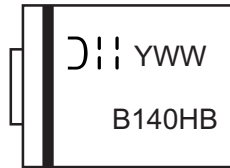


Fig. 5 Typical Reverse Characteristics

Ordering Information (Note 4)

Device	Packaging	Shipping
B140HB-13-F	SMB	3000/Tape & Reel

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information

B140HB = Product type marking code
D||| = Manufacturers' code marking
YWW = Date code marking
Y = Last digit of year ex: 2 for 2002
WW = Week code 01 to 52

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