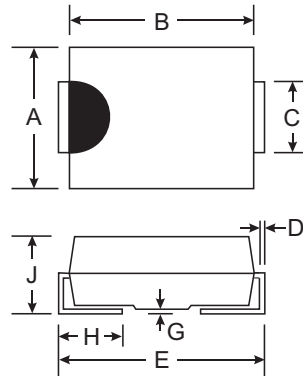


Features

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



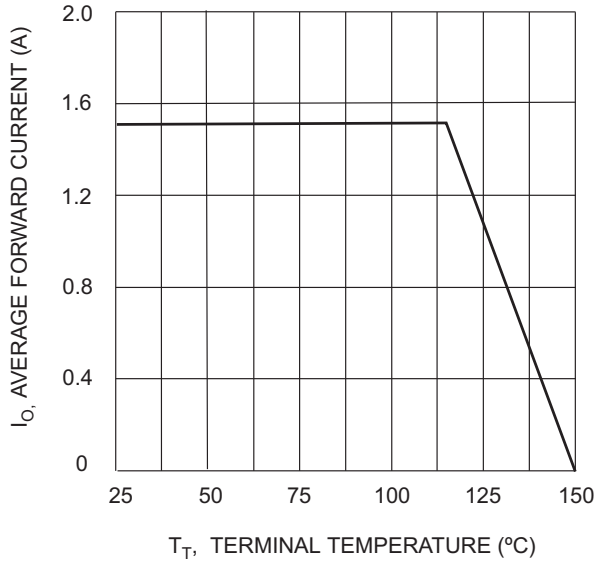
SMB		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.57
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

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

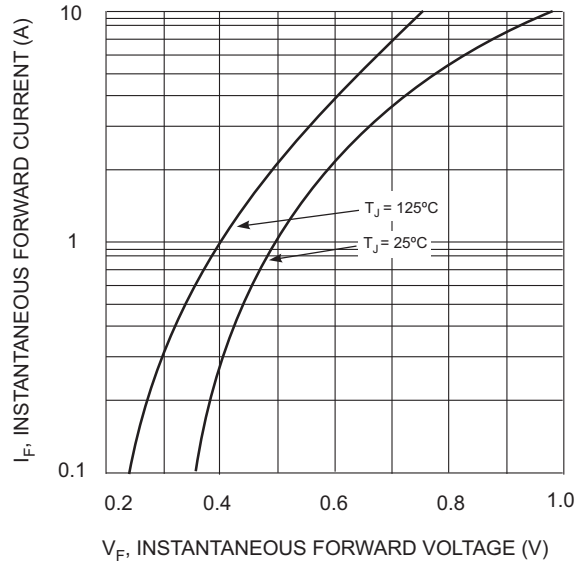
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage @ I _R = 0.1mA	V _{RRM} V _{RWM} V _R	40	V
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

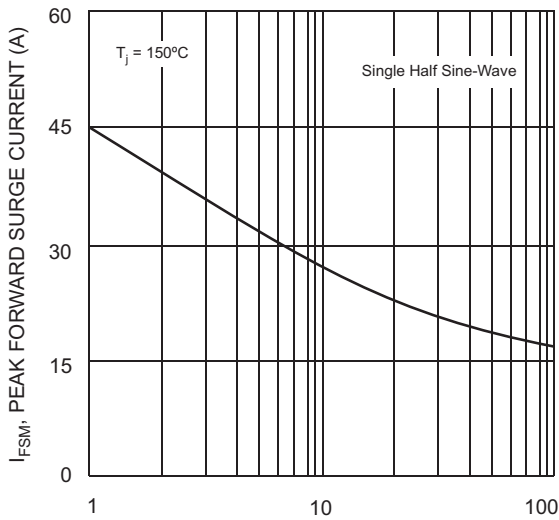
- Notes: 1. Thermal Resistance: Junction to terminal, unit mounted on PC board with 5.0 mm² (0.013 mm thick) copper pads as heat sink.
2. Measured at 1.0MHz and applied reverse voltage of 5.0V DC.
3. RoHS revision 13.2.2003. High Temperature Solder Exemption Applied, see EU Directive Annex Note 7.



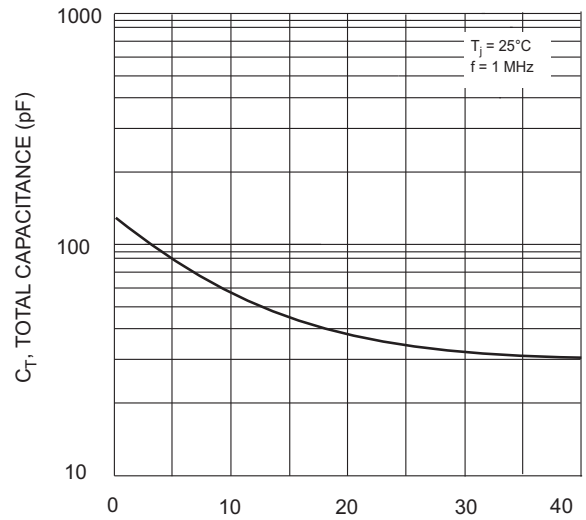
T_T , TERMINAL TEMPERATURE (°C)
Fig. 1 Forward Current Derating Curve



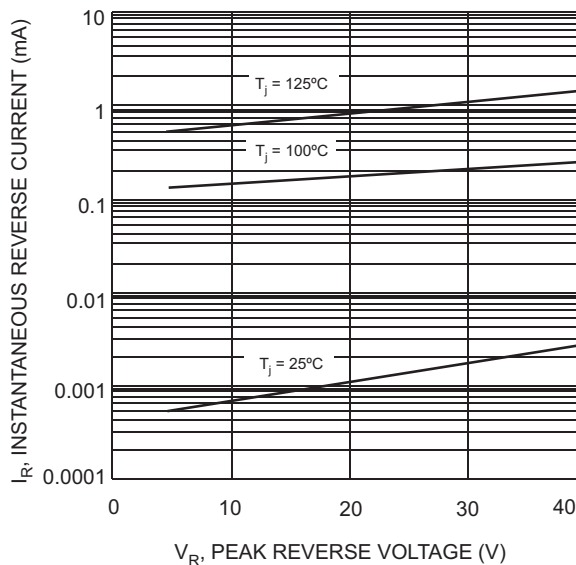
V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typ. Forward Characteristics



NUMBER OF CYCLES AT 60 Hz
Fig. 3 Max Non-Repetitive Peak Forward Surge Current



V_R , REVERSE VOLTAGE (V)
Fig. 4 Typical Total Capacitance



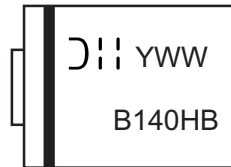
V_R , PEAK REVERSE VOLTAGE (V)
Fig. 5 Typical Reverse Characteristics

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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