

# SBD MODULE 80A/200V

# P2H80QH20

## FEATURES

- \* Compatible with Isolated Base SOT227
- \* Dual Separated Diodes
- \* Extremely Low Forward Voltage Drop
- \* Low Power Loss, High Efficiency
- \* High Surge Capability

## OUTLINE DRAWING

See the Next Page

## TYPICAL APPLICATIONS

- \* High Frequency Rectification

## Maximum Ratings

Approx Net Weight:35g

| Parameter                              | Symbol           | Type / Grade |   | Unit |
|--|------------------|--------------|---|------|
|  |                  | P2H80QH20    | - |      |
| Repetitive Peak Reverse Voltage *1     | V <sub>RRM</sub> | 200          | - | V    |
| Non Repetitive Peak Reverse Voltage *1 | V <sub>RSM</sub> | -            | - |      |

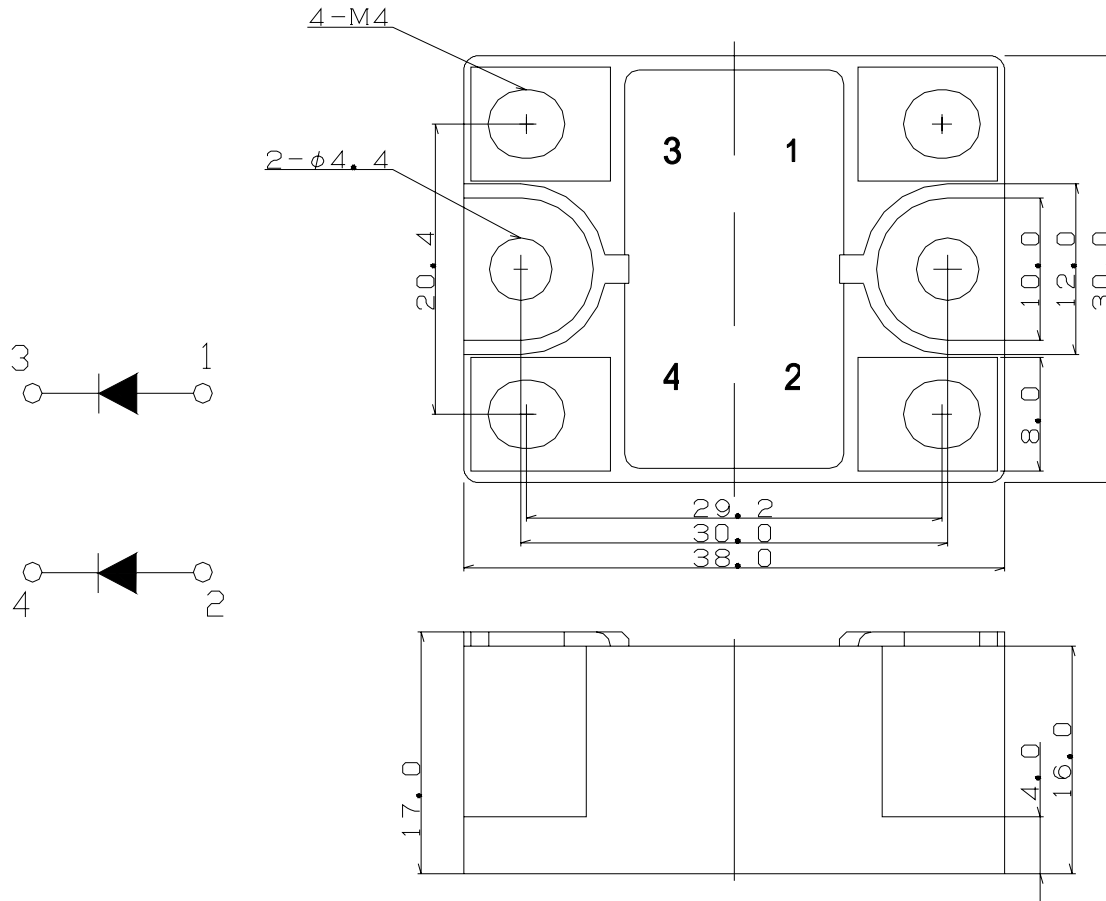
| Parameter                            |                    | Conditions  | Max Rated Value | Unit |
|--------------------------------------|--------------------|---|-----------------|------|
| Average Rectified Output Current *1  | I <sub>O(AV)</sub> | 50Hz Half Sine Wave condition<br>T <sub>c</sub> =96°C | 80              | A    |
| Surge Forward Current *1             | I <sub>FSM</sub>   | 50 Hz Half Sine Wave, 1Pulse<br>Non-repetitive        | 800             | A    |
| Operating Junction Temperature Range | T <sub>jw</sub>    |   | -40 to +150     | °C   |
| Storage Temperature Range            | T <sub>stg</sub>   |   | -40 to +125     | °C   |
| Isolation Voltage                    | V <sub>iso</sub>   | Base Plate to Terminals, AC1min                       | 2500            | V    |
| Mounting torque                      | Terminals          | M4Screw   | 1.5(1.4)        | N.m  |
|                                      | Case mounting      | M4Screw<br>with Thermal Compound                      | 1.5(1.4)        |      |

## Electrical • Thermal Characteristics

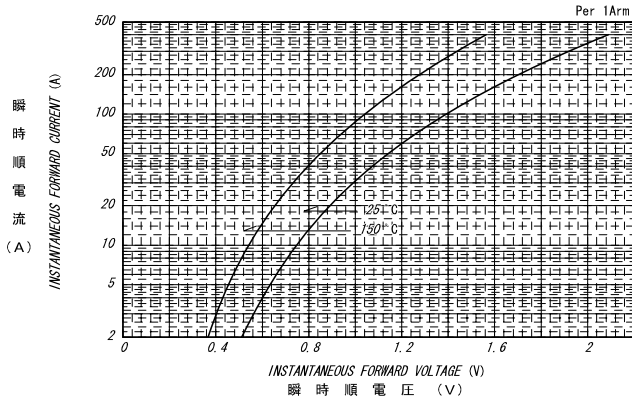
| Characteristics         | Symbol               | Test Conditions  | Max. | Unit |
|-------------------------|----------------------|--|------|------|
| Peak Reverse Current *1 | I <sub>RM</sub>      | V <sub>RM</sub> = V <sub>RRM</sub> , T <sub>j</sub> = 25°C | 50   | μA   |
| Peak Forward Voltage *1 | V <sub>FM</sub>      | I <sub>FM</sub> = 80A, T <sub>j</sub> =25°C                | 1.05 | V    |
| Thermal Resistance *1   | R <sub>th(j-c)</sub> | Junction to Case   | 0.48 | °C/W |
|                         | R <sub>th(c-f)</sub> | Base Plate to Heat Sink with Thermal Compound              | 0.3  |      |

\*1: Value Per 1Arm

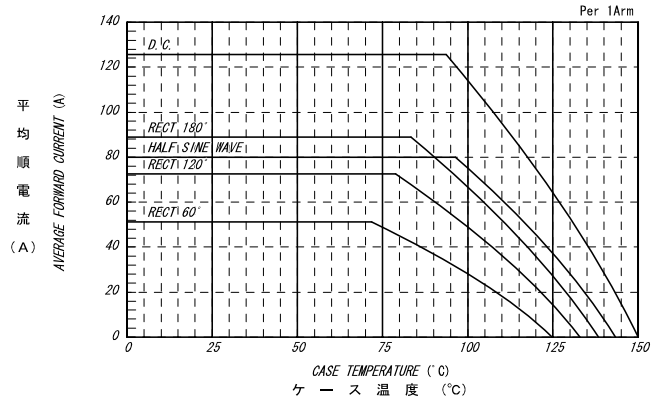
P2H80QH20 OUTLINE DRAWING (Dimensions in mm)



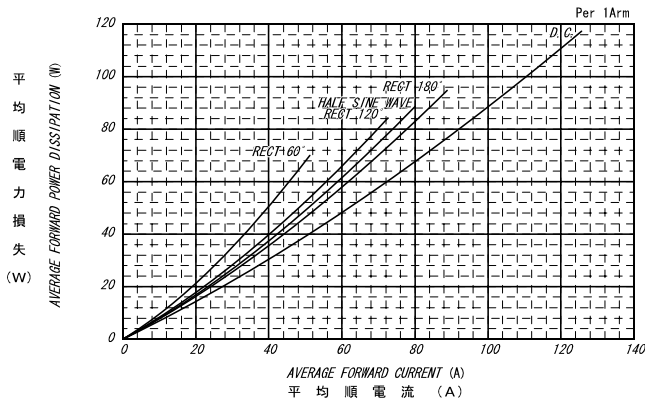
順電圧特性  
FORWARD CURRENT VS. VOLTAGE



平均順電流 - ケース温度定格  
AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE

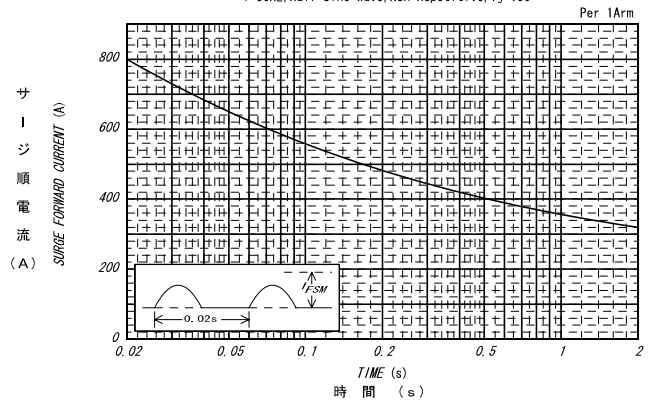


平均順電力損失特性  
AVERAGE FORWARD POWER DISSIPATION



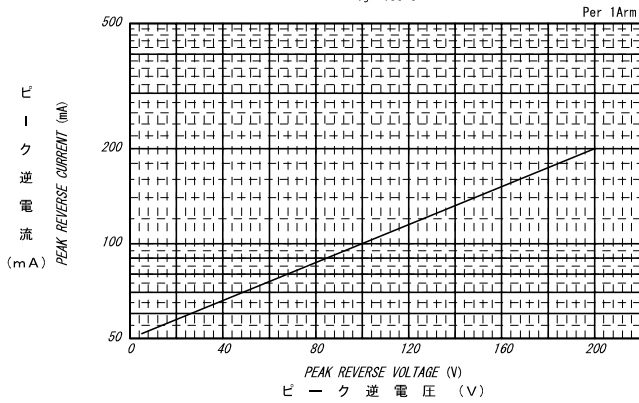
サージ順電流定格  
SURGE CURRENT RATINGS

f=50Hz, Half Sine Wave, Non-Repetitive, Tj=150



ピーク逆電流 - ピーク逆電圧特性  
PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

Tj = 150°C



平均逆電力損失  
AVERAGE REVERSE POWER DISSIPATION

