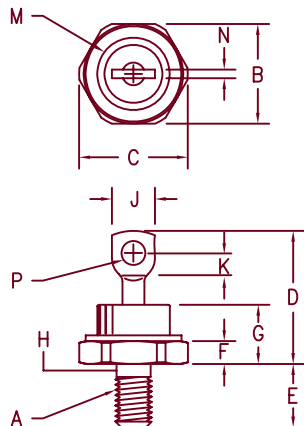


# 60 Amp Schottky Rectifier

## SBR6035 — SBR6045



**Notes:**

1. Full threads within 2 1/2 threads
2. Standard Polarity: Stud is Cathode  
Reverse Polarity: Stud is Anode

| Dim. | Inches  |         | Millimeter |         | Notes  |
|------|---------|---------|------------|---------|--------|
|      | Minimum | Maximum | Minimum    | Maximum |        |
| A    | ---     | ---     | ---        | ---     | 1/4-28 |
| B    | .669    | .688    | 17.00      | 17.47   |        |
| C    | ---     | .794    | ---        | 20.16   |        |
| D    | .750    | 1.00    | 19.05      | 25.40   |        |
| E    | .422    | .453    | 10.72      | 11.50   |        |
| F    | .115    | .200    | 2.93       | 5.08    |        |
| G    | ---     | .450    | ---        | 11.43   |        |
| H    | .220    | .249    | 5.59       | 6.32    | 1      |
| J    | ---     | .375    | ---        | 9.52    |        |
| K    | .156    | ---     | 3.97       | ---     |        |
| M    | ---     | .510    | ---        | 12.95   | Dia    |
| N    | ---     | .080    | ---        | 2.03    |        |
| P    | .140    | .175    | 3.56       | 4.44    | Dia    |

DO-203AB (DO-5)

| Microsemi Catalog Number | Industry Part Number        | Working Peak Reverse Voltage | Peak Reverse Voltage |
|--------------------------|-----------------------------|------------------------------|----------------------|
| SBR6035*                 | 50HQ035, 51HQ035<br>MBR6035 | 35V                          | 35V                  |
| SBR6040*                 | 50HQ040, 51HQ040<br>MBR6040 | 40V                          | 40V                  |
| SBR6045*                 | 50HQ045, 51HQ045<br>MBR6045 | 45V                          | 45V                  |

\*Add Suffix R For Reverse Polarity

- Schottky Barrier Rectifier
- Low forward voltage
- Guard Ring Protected
- Reverse Energy Tested
- 150°C Junction Temperature
- VRRM -35 to 45 Volts

### Electrical Characteristics

|                                     |                            |   |
|-------------------------------------|----------------------------|---|
| Average forward current per leg     | I <sub>F(AV)</sub> 60 Amps | T <sub>C</sub> = 102°C, Square wave, R <sub>θJC</sub> = 1.0°C/W |
| Maximum surge current per leg       | I <sub>FSM</sub> 1000 Amps | 8.3ms, half sine, T <sub>J</sub> = 125°C                        |
| Max repetitive peak reverse current | I <sub>R(OV)</sub> 2 Amp   | f = 1 KHz, 25°C, 1 μsec Square wave                             |
| Max peak forward voltage            | V <sub>FM</sub> .58 Volts  | I <sub>FM</sub> = 60A: 125°C *                                  |
| Max peak forward voltage            | V <sub>FM</sub> .60 Volts  | I <sub>FM</sub> = 60A: 25°C *                                   |
| Max peak reverse current            | I <sub>RM</sub> 600 mA     | V <sub>RRM</sub> , T <sub>J</sub> = 125°C *                     |
| Max peak reverse current            | I <sub>RM</sub> 2.0 mA     | V <sub>RRM</sub> , T <sub>J</sub> = 25°C                        |
| Typical junction capacitance        | C <sub>J</sub> 2700 pF     | VR = 5.0V, T <sub>J</sub> = 25°C                                |

\*Pulse test: Pulse width 300 μsec, Duty cycle 2%

### Thermal and Mechanical Characteristics

|                                      |                  |                                 |
|--------------------------------------|------------------|---------------------------------|
| Storage temp range                   | T <sub>STG</sub> | -65°C to 175°C                  |
| Operating junction temp range        | T <sub>J</sub>   | -65°C to 150°C                  |
| Max thermal resistance               | R <sub>θJC</sub> | 1.0°C/W Junction to Case        |
| Typical thermal resistance (greased) | R <sub>θCS</sub> | 0.5°C/W Case to sink            |
| Mounting torque                      |                  | 25-30 inch pounds               |
| Weight                               |                  | .54 ounces (15.3 grams) typical |



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Figure 1  
Typical Forward Characteristics

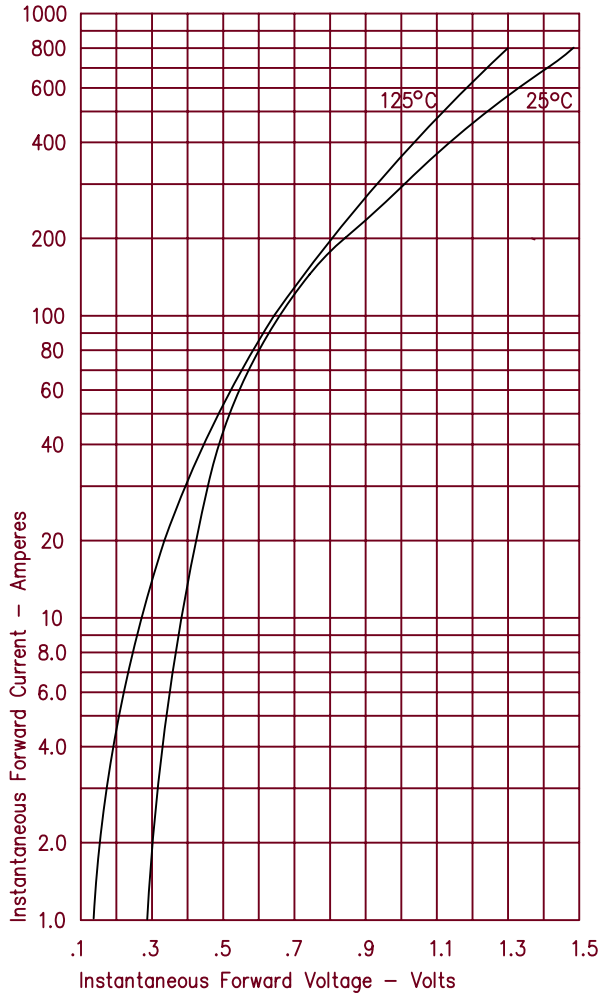


Figure 3  
Typical Junction Capacitance

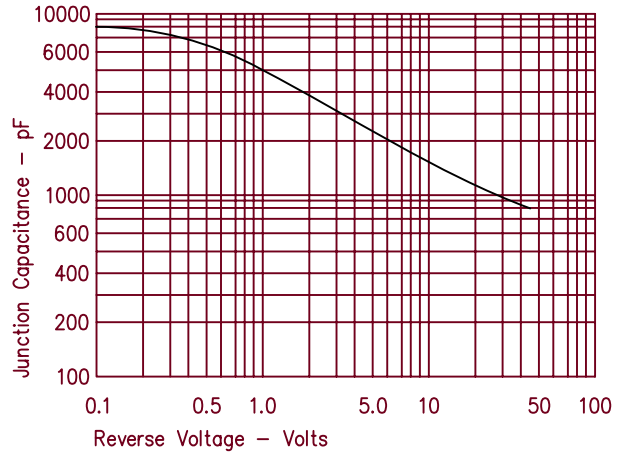


Figure 4  
Forward Current Derating

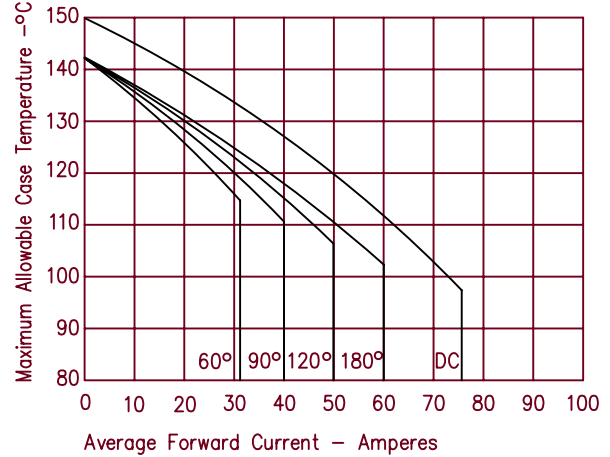


Figure 2  
Typical Reverse Characteristics

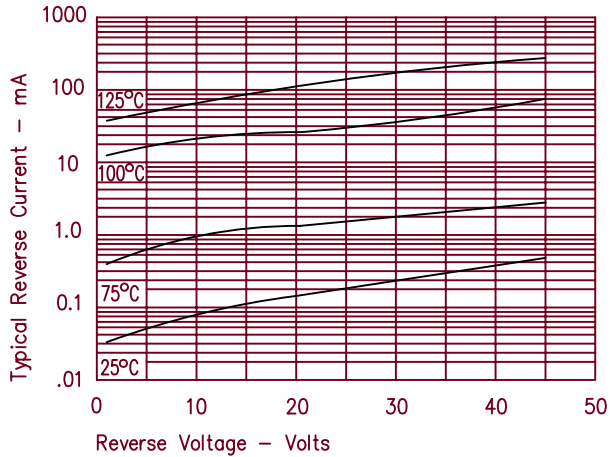


Figure 5  
Maximum Forward Power Dissipation

