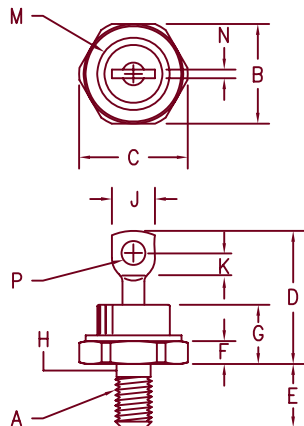


60 Amp Schottky Rectifier

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 MBR6035 | 35V | 35V |
| SBR6040* | 50HQ040, 51HQ040 MBR6040 | 40V | 40V |
| SBR6045* | 50HQ045, 51HQ045 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
- V_{RRM} -35 to 45 Volts

Electrical Characteristics

| | | |
|-------------------------------------|---------------------|--|
| Average forward current per leg | $I_F(AV)$ 60 Amps | $T_C = 102^\circ C$, Square wave, $R_{\theta JC} = 1.0^\circ C/W$ |
| Maximum surge current per leg | I_{FSM} 1000 Amps | 8.3ms, half sine, $T_J = 125^\circ C$ |
| Max repetitive peak reverse current | $I_R(OV)$ 2 Amp | $f = 1$ KHz, $25^\circ C$, 1 μ sec Square wave |
| Max peak forward voltage | V_{FM} .58 Volts | $I_{FM} = 60A: 125^\circ C *$ |
| Max peak forward voltage | V_{FM} .60 Volts | $I_{FM} = 60A: 25^\circ C *$ |
| Max peak reverse current | I_{RM} 600 mA | $V_{RRM}, T_J = 125^\circ C *$ |
| Max peak reverse current | I_{RM} 2.0 mA | $V_{RRM}, T_J = 25^\circ C$ |
| Typical junction capacitance | C_J 2700 pF | $VR = 5.0V, T_J = 25^\circ C$ |

*Pulse test: Pulse width 300 μ sec, Duty cycle 2%

Thermal and Mechanical Characteristics

| | | |
|--------------------------------------|-----------------|----------------------------------|
| Storage temp range | T_{STG} | $-65^\circ C$ to $175^\circ C$ |
| Operating junction temp range | T_J | $-65^\circ C$ to $150^\circ C$ |
| Max thermal resistance | $R_{\theta JC}$ | $1.0^\circ C/W$ Junction to Case |
| Typical thermal resistance (greased) | $R_{\theta CS}$ | $0.5^\circ C/W$ Case to sink |
| Mounting torque | | 25-30 inch pounds |
| Weight | | .54 ounces (15.3 grams) typical |



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05-25-07 Rev. 4

SBR6035 — SBR6045

Figure 1
Typical Forward Characteristics

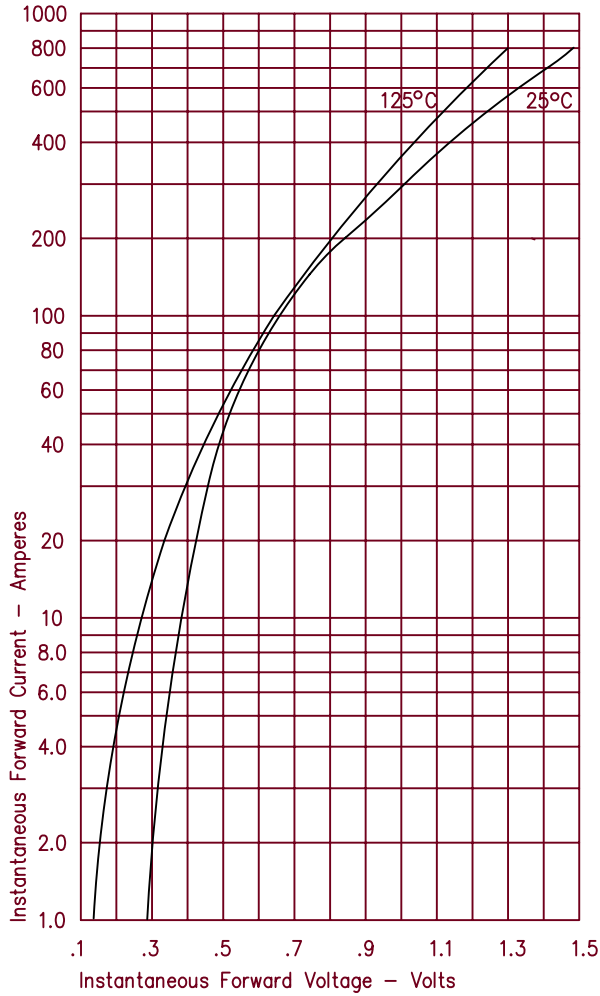


Figure 3
Typical Junction Capacitance

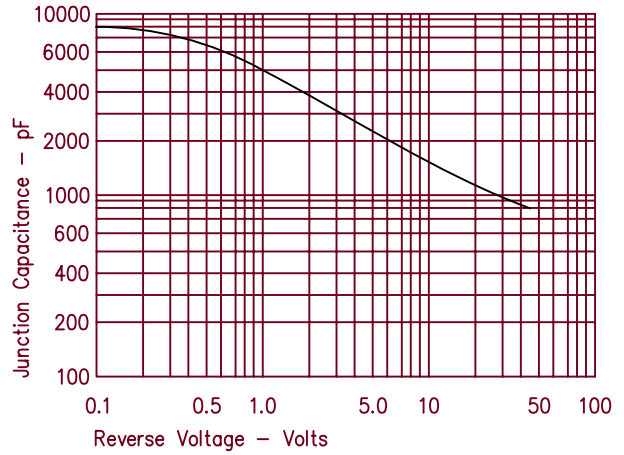


Figure 4
Forward Current Derating

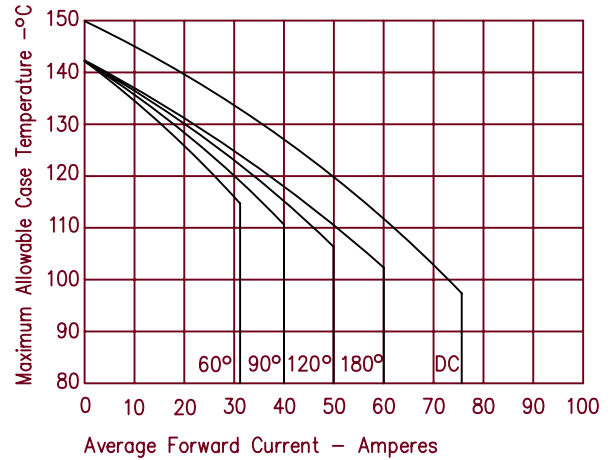


Figure 2
Typical Reverse Characteristics

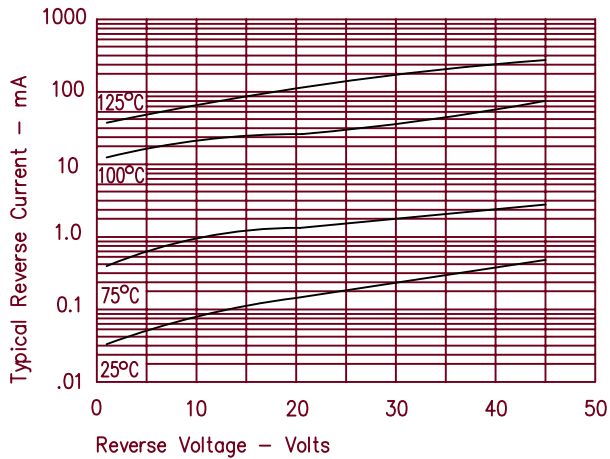


Figure 5
Maximum Forward Power Dissipation

