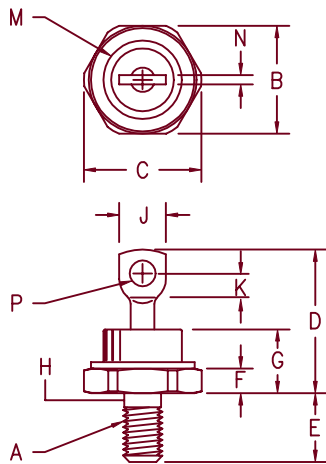


60 Amp Schottky Rectifier SBR6090 — SBR60100



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 |
|--------------------------|----------------------|------------------------------|----------------------|
| SBR6090* | 60HQ080 MBR6080 | 90V | 90V |
| SBR60100* | 60HQ100 MBR60100 | 100V | 100V |

*Add Suffix R For Reverse Polarity

- Schottky barrier rectifier
- Hermetic packaging
- Guard ring protected
- Reverse Energy Tested
- 175°C junction temperature
- V_{RRM} - 90 to 100 Volts

| Electrical Characteristics | | |
|-------------------------------------|----------------------------|---|
| Average forward current | I _{F(AV)} 60 Amps | T _C = 130°C, square wave, R _{θJC} = 1.0 @/W |
| Maximum surge current | I _{FSM} 1000 Amps | 8.3ms, half sine, T _J = 175°C |
| Max repetitive peak reverse current | I _{R(OV)} 2 Amp | f = 1 KHz, 25°C, 1 μsec square wave |
| Max peak forward voltage | V _{FM} .89 Volts | I _{FM} = 60A: 25°C * |
| Max peak forward voltage | V _{FM} .70 Volts | I _{FM} = 60A: 125°C * |
| Max peak reverse current | I _{RM} 50 mA | V _{RRM, T_J} = 125°C * |
| Max peak reverse current | I _{RM} 1.0 mA | V _{RRM, T_J} = 25°C |
| Typical junction capacitance | C _J 1250 pF | V _R = 5.0V, T _J = 25°C |

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

| Thermal and Mechanical Characteristics | | |
|--|------------------|---------------------------------|
| Storage temp range | T _{STG} | -65°C to 175°C |
| Operating junction temp range | T _J | -65°C to 175°C |
| Maximum thermal resistance | R _{θJC} | 1.0°C/W Junction to case |
| Typical thermal resistance (greased) | R _{θCS} | 0.5°C/W Case to sink |
| Mounting torque | | 25-30 inch pounds |
| Weight | | .54 ounces (15.3 grams) typical |

SBR6090 — SBR60100

Figure 1
Typical Forward Characteristics

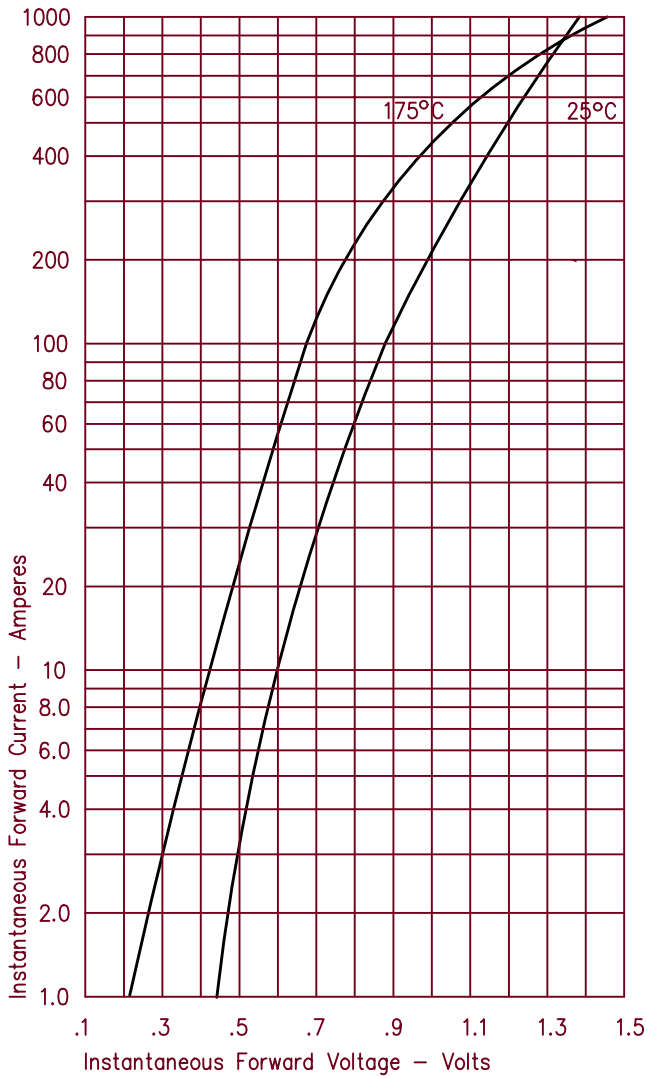


Figure 3
Typical Junction Capacitance

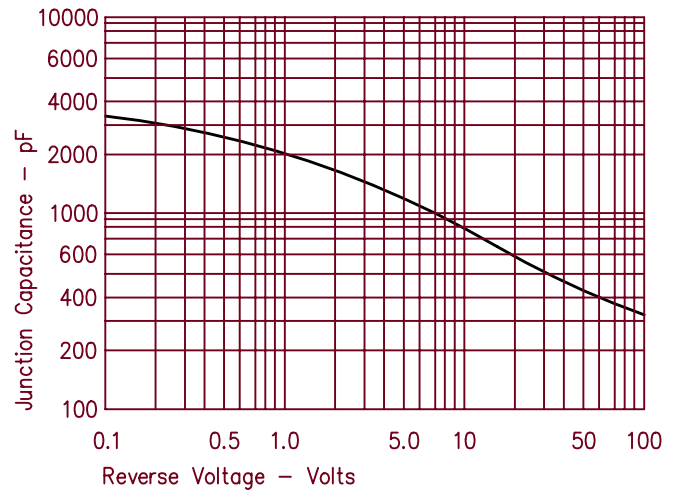


Figure 4
Forward Current Derating

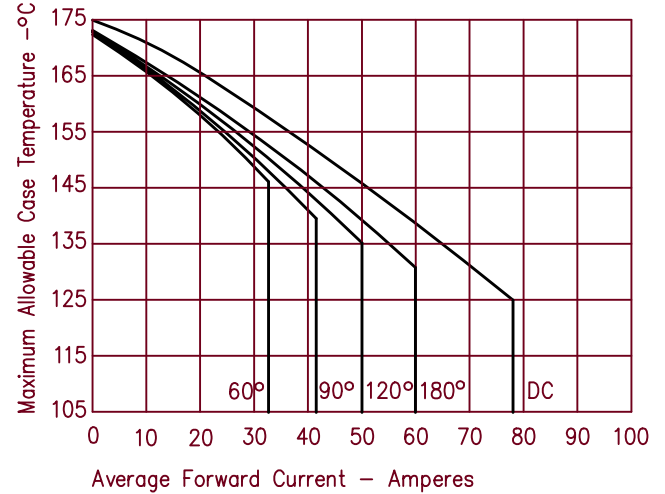


Figure 2
Typical Reverse Characteristics

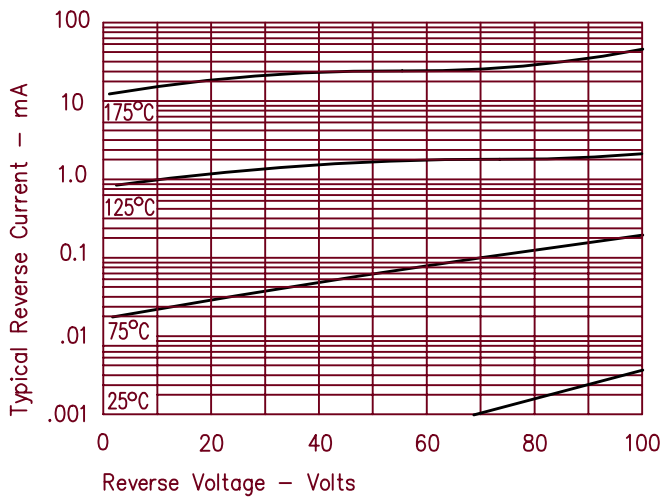


Figure 5
Maximum Forward Power Dissipation

