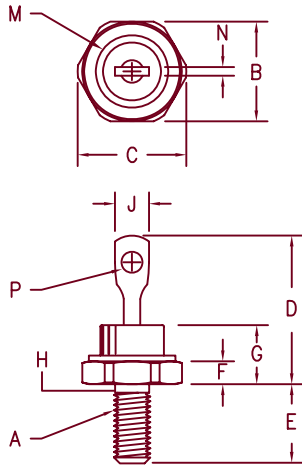


30 Amp Schottky Rectifier

SBR3035 — SBR3050



- Notes:
1. 10-32 UNF3A threads
 2. Full threads within 2 1/2 threads
 3. Standard Polarity:
Stud is Cathode. Reverse Polarity Stud is Anode

| Dim. | Inches | | Millimeter | | Notes |
|------|---------|---------|------------|---------|-------|
| | Minimum | Maximum | Minimum | Maximum | |
| A | --- | --- | --- | --- | 1 |
| B | .424 | .437 | 10.77 | 11.10 | |
| C | --- | .505 | --- | 12.82 | |
| D | .600 | .800 | 15.24 | 20.32 | |
| E | .422 | .453 | 10.72 | 11.50 | |
| F | .075 | .175 | 1.91 | 4.44 | |
| G | --- | .405 | --- | 10.29 | |
| H | .163 | .189 | 4.15 | 4.80 | 2 |
| J | --- | .250 | 2.54 | 3.56 | |
| M | --- | .350 | --- | 8.89 | Dia. |
| N | .020 | .065 | .510 | 1.65 | |
| P | .070 | .100 | 1.78 | 2.54 | Dia. |

D0203AA (D04)

| Microsemi Catalog Number | Industry Part Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|--------------------------|----------------------|------------------------------|---------------------------------|
| SBR3035* | 21FQ035 30FQ035 | 35V | 35V |
| SBR3040* | 21FQ040 30FQ040 | 40V | 40V |
| SBR3045* | 21FQ045 30FQ045 | 45V | 45V |
| SBR3050* | | 50V | 50V |

*Add Suffix R For Reverse Polarity

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- VRRM 35 to 50V
- 30 Amperes
- Reverse Energy Tested

Electrical Characteristics

| | | |
|-------------------------------------|----------------------------|--|
| Average forward current | I _{F(AV)} 30 Amps | T _C = 145°C Square wave, R _{θJC} = 1.5°C/W |
| Maximum surge current | I _{FSM} 600 Amps | 8.3 ms, half sine T _J = 175°C |
| Max repetitive peak reverse current | I _{R(OV)} 2 Amps | f = 1 KHz, 25°C, 1 μsec Square wave |
| Max peak forward voltage | V _{FM} .49 Volts | I _{FM} = 30A: T _J = 175°C* |
| Max peak forward voltage | V _{FM} .63 Volts | I _{FM} = 30A: T _J = 25°C* |
| Max peak reverse current | I _{RM} 25 mA | V _{RRM} , T _J = 125°C* |
| Max peak reverse current | I _{RM} 1.5 mA | V _{RRM} , T _J = 25°C |
| Typical junction capacitance | C _J 1800 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} | -55°C to 175°C |
| Operating junction temp range | T _J | -55°C to 175°C |
| Max thermal resistance | R _{θJC} | 1.5°C/W Junction to case |
| Typical thermal resistance (greased) | R _{θCS} | 0.5°C/W Case to sink |
| Mounting torque | | 12-15 inch pounds |
| Weight | | 0.2 ounces (6.0 grams) typical |



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05-25-07 Rev. 3

SBR3035 — SBR3050

Figure 1
Typical Forward Characteristics

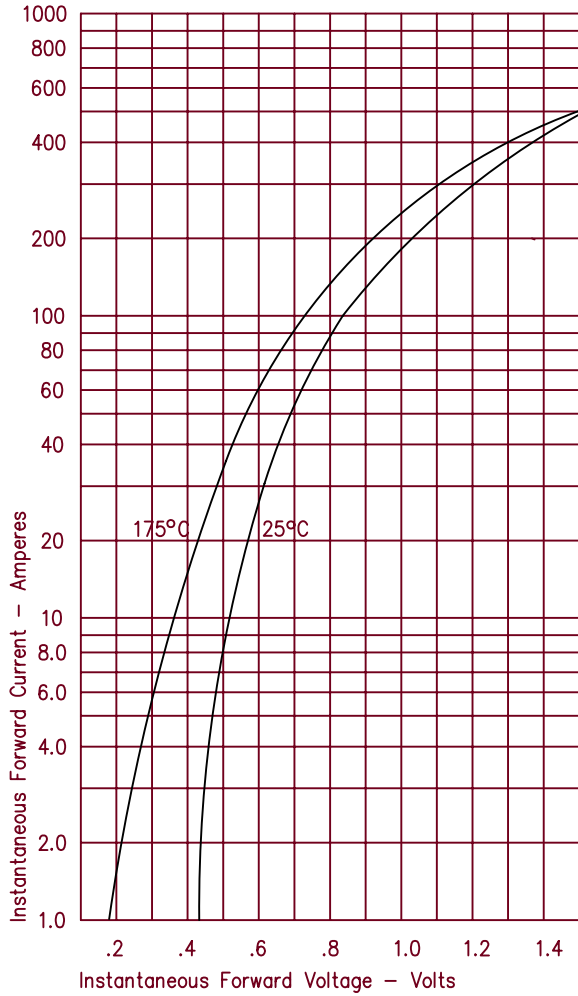


Figure 3
Typical Junction Capacitance

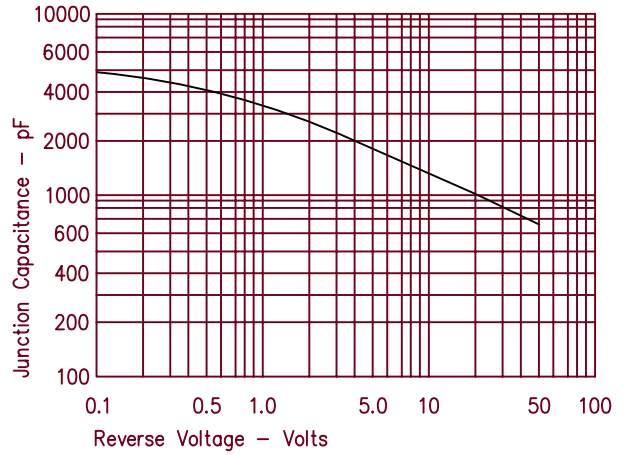


Figure 4
Forward Current Derating

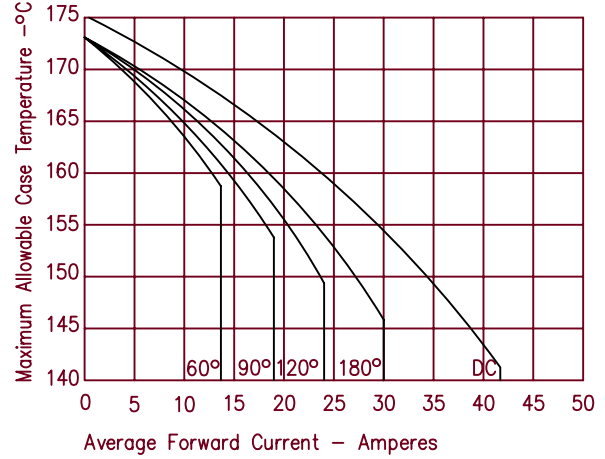


Figure 2
Typical Reverse Characteristics

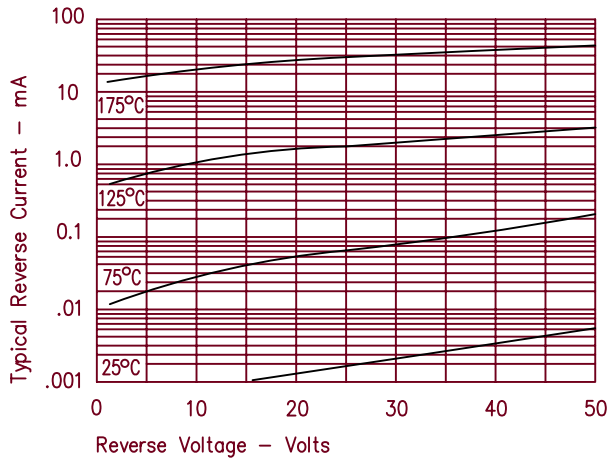


Figure 5
Maximum Forward Power Dissipation

