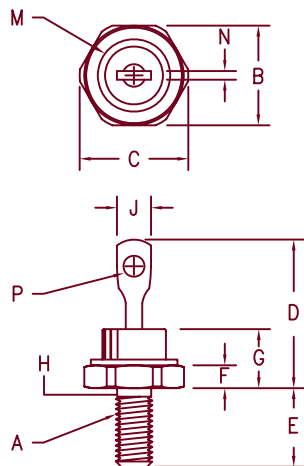


# 30 Amp Schottky Rectifier SBR3035 — SBR3050



## Notes:

- 10-32 UNF3A threads
- Full threads within 2 1/2 threads
- 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<br>30FQ035   | 35V                          | 35V                             |
| SBR3040*                 | 21FQ040<br>30FQ040   | 40V                          | 40V                             |
| SBR3045*                 | 21FQ045<br>30FQ045   | 45V                          | 45V                             |
| SBR3050*                 |                      | 50V                          | 50V                             |

\*Add Suffix R For Reverse Polarity

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- $V_{RRM}$  35 to 50V
- 30 Amperes
- Reverse Energy Tested

## Electrical Characteristics

|                                     |                    |                                                                  |
|-------------------------------------|--------------------|------------------------------------------------------------------|
| Average forward current             | $I_F(AV)$ 30 Amps  | $T_C = 145^\circ C$ Square wave, $R_{\theta JC} = 1.5^\circ C/W$ |
| Maximum surge current               | $I_{FSM}$ 600 Amps | 8.3 ms, half sine $T_J = 175^\circ C$                            |
| Max repetitive peak reverse current | $I_{R(OV)}$ 2 Amps | $f = 1$ KHz, $25^\circ C$ , 1 $\mu sec$ Square wave              |
| Max peak forward voltage            | $V_{FM}$ .49 Volts | $I_{FM} = 30A: T_J = 175^\circ C^*$                              |
| Max peak forward voltage            | $V_{FM}$ .63 Volts | $I_{FM} = 30A: T_J = 25^\circ C^*$                               |
| Max peak reverse current            | $I_{RM}$ 25 mA     | $V_{RRM}, T_J = 125^\circ C^*$                                   |
| Max peak reverse current            | $I_{RM}$ 1.5 mA    | $V_{RRM}, T_J = 25^\circ C$                                      |
| Typical junction capacitance        | $C_J$ 1800 pF      | $V_R = 5.0V, T_J = 25^\circ C$                                   |

\*Pulse test: Pulse width 300  $\mu sec$ , Duty cycle 2%

## Thermal and Mechanical Characteristics

|                                      |                 |                                  |
|--------------------------------------|-----------------|----------------------------------|
| Storage temp range                   | $T_{STG}$       | $-55^\circ C$ to $175^\circ C$   |
| Operating junction temp range        | $T_J$           | $-55^\circ C$ to $175^\circ C$   |
| Max thermal resistance               | $R_{\theta JC}$ | $1.5^\circ C/W$ Junction to case |
| Typical thermal resistance (greased) | $R_{\theta CS}$ | $0.5^\circ C/W$ Case to sink     |
| Mounting torque                      |                 | 12-15 inch pounds                |
| Weight                               |                 | 0.2 ounces (6.0 grams) typical   |



6 Lake Street  
Lawrence, MA 01841  
PH: (978) 620-2600  
FAX: (978) 689-0803  
www.microsemi.com

05-25-07 Rev. 3

# SBR3035 — SBR3050

Figure 1  
Typical Forward Characteristics

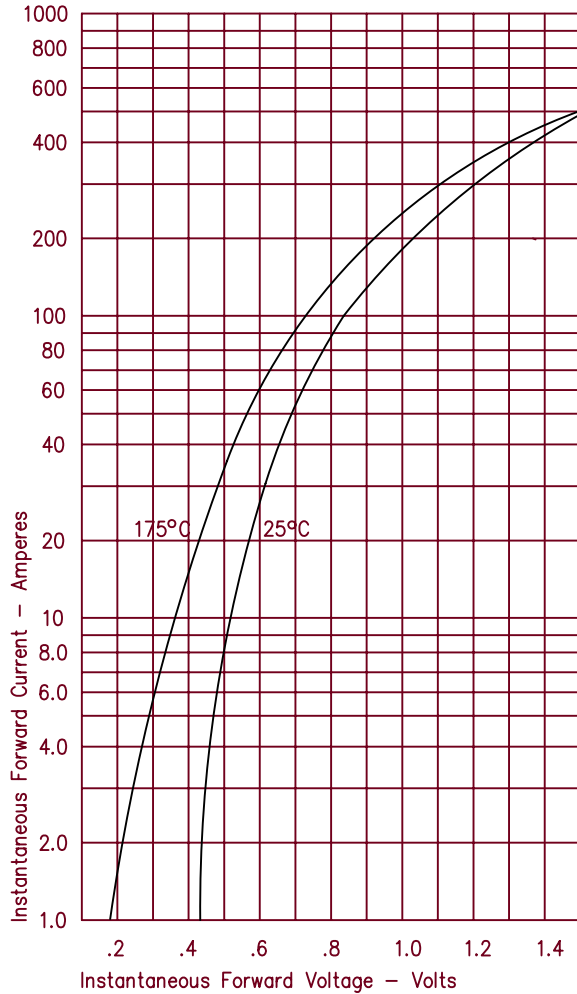


Figure 3  
Typical Junction Capacitance

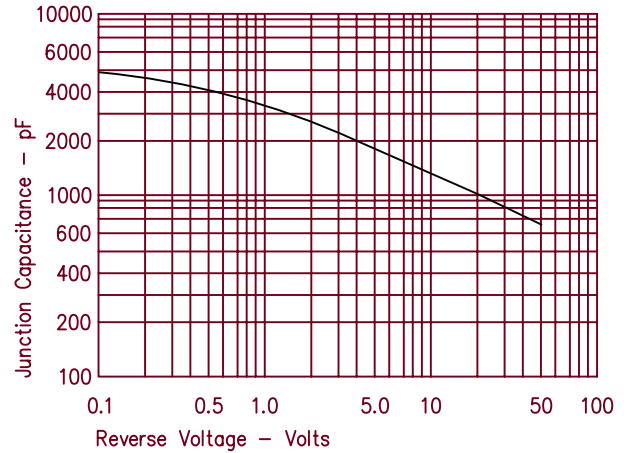


Figure 4  
Forward Current Derating

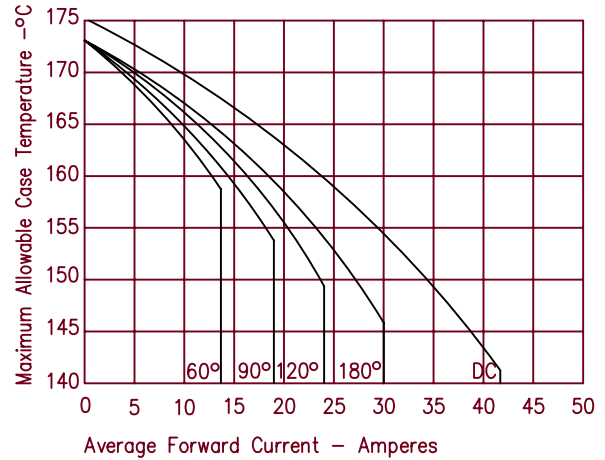


Figure 2  
Typical Reverse Characteristics

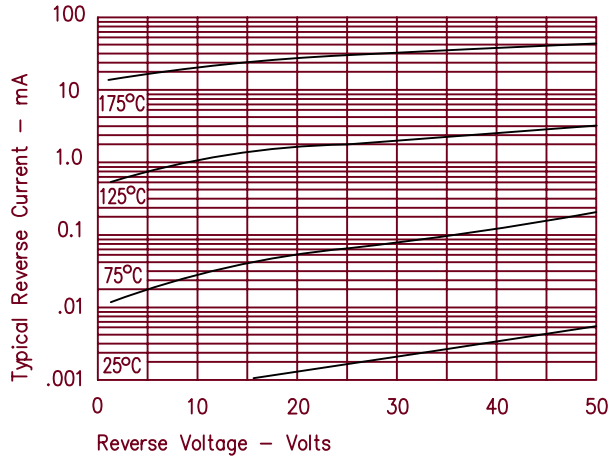


Figure 5  
Maximum Forward Power Dissipation

