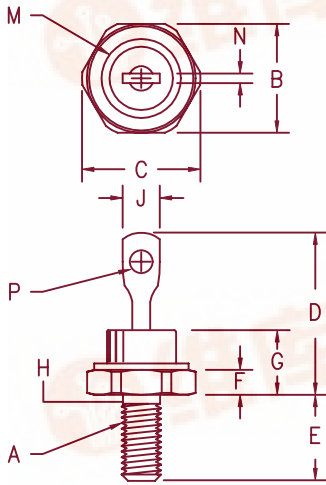


# 25 Amp Schottky Rectifier SBR2530 — SBR2545



## 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    | ---     | .310    | ---        | 7.87    |       |
| M    | ---     | .350    | ---        | 8.89    | Dia.  |
| N    | .020    | .065    | .510       | 1.65    |       |
| P    | .060    | .100    | 1.53       | 2.54    | Dia.  |

DO203AA (D04)

| Microsemi<br>Catalog Number | Working Peak<br>Reverse Voltage | Repetitive Peak<br>Reverse Voltage |
|-----------------------------|---------------------------------|------------------------------------|
| SBR2530*                    | 30V                             | 30V                                |
| SBR2535*                    | 35V                             | 35V                                |
| SBR2540*                    | 40V                             | 40V                                |
| SBR2545*                    | 45V                             | 45V                                |

\*Add the Suffix R for Reverse Polarity

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- $V_{RRM}$  - 30 to 45V
- 25 Amperes
- Reverse Energy Tested

## Electrical Characteristics

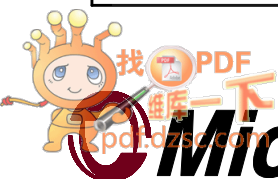
|                                     |                    |
|-------------------------------------|--------------------|
| Average forward current             | $I_F(AV)$ 25 Amps  |
| Maximum surge current               | $I_{FSM}$ 600 Amps |
| Max repetitive peak reverse current | $I_{R(0V)}$ 2 Amps |
| Max peak forward voltage            | $V_{FM}$ .53 Volts |
| Max peak forward voltage            | $V_{FM}$ .58 Volts |
| Max peak reverse current            | $I_{RM}$ 250 mA    |
| Max peak reverse current            | $I_{RM}$ 2 mA      |
| Typical junction capacitance        | $C_J$ 1200 pF      |

$T_C = 105^\circ C$ , Square wave,  $R_{\theta JC} = 1.6^\circ C/W$   
 8.3 ms, half sine  $T_J = 150^\circ C$   
 $f = 1$  KHz,  $25^\circ C$ , 1  $\mu sec$  Square wave  
 $I_{FM} = 25A: T_J = 150^\circ C^*$   
 $I_{FM} = 25A: T_J = 25^\circ C^*$   
 $V_{RRM}, T_J = 125^\circ C^*$   
 $V_{RRM}, T_J = 25^\circ C$   
 $V_R = 5.0V, T_J = 25^\circ C$

\*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 $150^\circ C$   |
| Max thermal resistance               | $R_{\theta JC}$ | $1.6^\circ C/W$ 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   |



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4-20-00 Rev. 1

# SBR2530 — SBR2545

Figure 1  
Typical Forward Characteristics

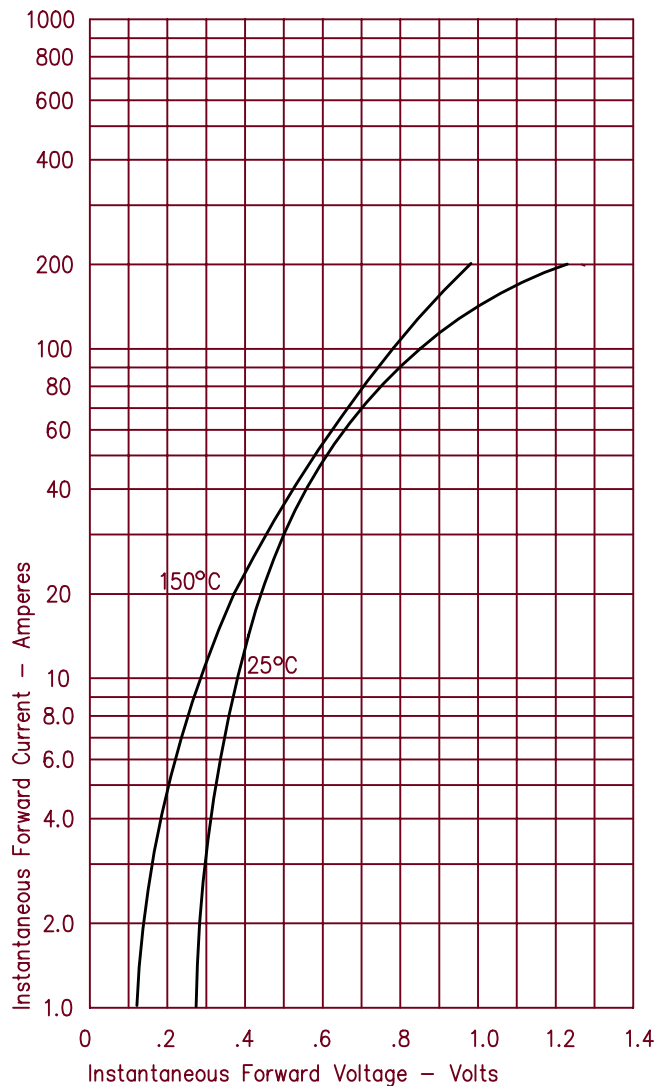


Figure 3  
Typical Junction Capacitance

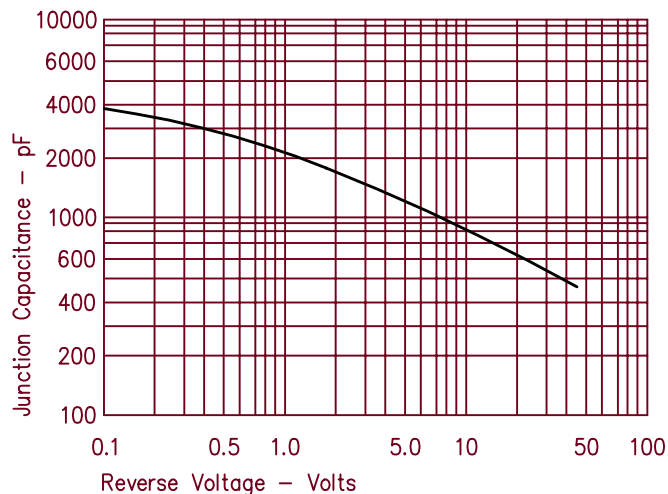


Figure 4  
Forward Current Derating

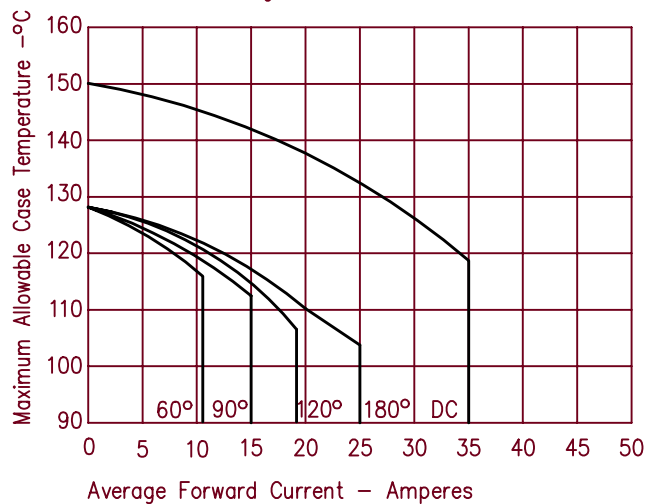


Figure 2  
Typical Reverse Characteristics

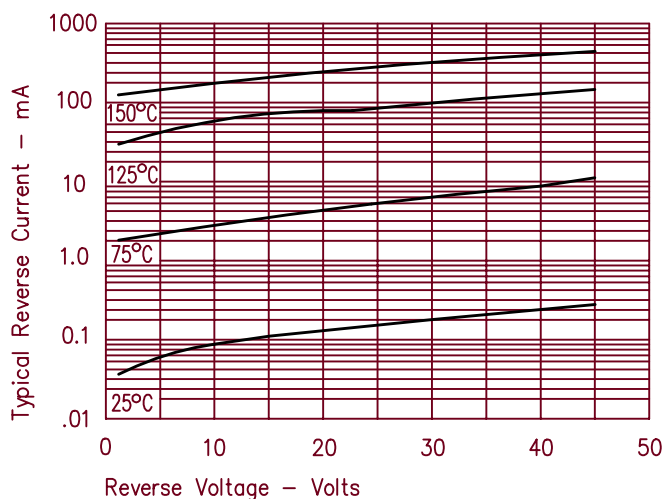


Figure 5  
Maximum Forward Power Dissipation

