

# Silicon Power Rectifier S/R204 Series



**Notes:**

1. 10-32 UNF3A
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    | .070    | .100    | 1.78       | 2.54    | Dia   |

## D0203AA (D04)

| Microsemi Catalog Number Standard | JEDEC Numbers                      | Peak Reverse Voltage |
|-----------------------------------|------------------------------------|----------------------|
| *S20410                           | 1N1199, 1N1199A, 1N1199B           | 50V                  |
|                                   | 1N1200, 1N1200A, 1N1200B           | 100V                 |
|                                   | 1N1201, 1N1201A, 1N1201B           | 150V                 |
| *S20420                           | 1N1124,A, 1N1202, 1N1202A, 1N1202B | 200V                 |
|                                   | 1N1125,A, 1N1203, 1N1203A, 1N1203B | 300V                 |
| *S20440                           | 1N1126,A, 1N1204, 1N1204A, 1N1204B | 400V                 |
|                                   | 1N1127,A, 1N1205, 1N1205A, 1N1205B | 500V                 |
| *S20460                           | 1N1128,A, 1N1206, 1N1206A, 1N1206B | 600V                 |
| *S20480                           |                                    | 800V                 |
| *S204100                          |                                    | 1000V                |
| *S204120                          |                                    | 1200V                |

\*Change S to R in part number for Reverse Polarity  
For JEDEC numbers add R to part number for Reverse Polarity  
NOTE: The Reverse Polarity For the A & B versions may be listed as RA or RB instead of AR or BR

- Glass Passivated Die
- Low Forward Voltage
- 250A Surge Rating
- Glass to metal seal construction
- $V_{RRM}$  to 1200V
- Low cost Non-RoHS package

### Electrical Characteristics

|                                     |                     |                                                                                                                |
|-------------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------|
| Average forward current             | $I_F(AV)$ 12 Amps   | $T_C = 170^\circ C$ , half sine wave, $R_{\theta JC} = 2.5^\circ C/W$<br>8.3ms, half sine, $T_J = 200^\circ C$ |
| Maximum surge current               | $I_{FSM}$ 250 Amps  |                                                                                                                |
| Max $I^2 t$ for fusing              | $I^2 t$ 260 $A^2 s$ | $I_{FM} = 30A; T_J = 25^\circ C$ *<br>$V_{RRM}, T_J = 25^\circ C$<br>$V_{RRM}, T_J = 150^\circ C$ *            |
| Max peak forward voltage            | $V_{FM}$ 1.2 Volts  |                                                                                                                |
| Max peak reverse current            | $I_{RM}$ 10 $\mu A$ |                                                                                                                |
| Max peak reverse current            | $I_{RM}$ 1.0 mA     |                                                                                                                |
| Max Recommended Operating Frequency | 10kHz               |                                                                                                                |

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

### Thermal and Mechanical Characteristics

|                               |                 |                                   |
|-------------------------------|-----------------|-----------------------------------|
| Storage temperature range     | $T_{STG}$       | $-65^\circ C$ to $200^\circ C$    |
| Operating junction temp range | $T_J$           | $-65^\circ C$ to $200^\circ C$    |
| Maximum thermal resistance    | $R_{\theta JC}$ | 2.5 $^\circ C/W$ Junction to Case |
| Mounting torque               |                 | 25-30 inch pounds                 |
| Weight                        |                 | .16 ounces (5.0 grams) typical    |

# S/R204

Figure 1  
Typical Forward Characteristics



Figure 3  
Forward Current Derating



Figure 4  
Maximum Forward Power Dissipation



Figure 2  
Typical Reverse Characteristics



Figure 5  
Transient Thermal Impedance

