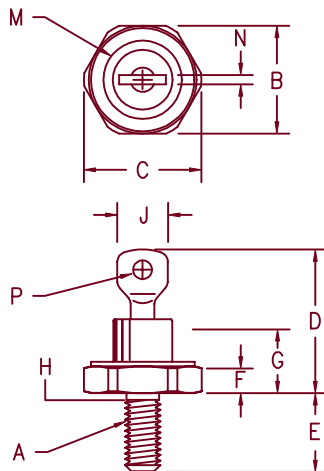


Silicon Power Rectifier S/R21 Series



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 | JEDEC Numbers | Peak Reverse Voltage |
|-----------------------------|------------------|-------------------------|
| 1N2246,A | 1N2598 | 50V |
| 1N2248,A | | 100V |
| | | 150V |
| *S2120 | 1N2250,A | 200V |
| | 1N2252,A | 300V |
| *S2140 | 1N2254,A | 400V |
| | 1N2256,A | 500V |
| *S2160 | 1N2258,A | 600V |
| | | 700V |
| | 1N3670,A | 800V |
| *S2180 | 1N2260,A | 900V |
| | 1N3671,A | 1000V |
| | 1N3672,A | 1200V |
| *S21100 | 1N2262,A | 1400V |
| *S21120 | 1N2264,A | 1600V |
| *S21140 | | |
| *S21160 | 1N5331 | |

*Change S to R in part number for Reverse Polarity
For 1N types, use an R suffix for Reverse Polarity

- Glass Passivated Die
- Low Forward Voltage
- 250A Surge Rating
- Glass to metal seal construction
- V_{RRM} to 1600V

Electrical Characteristics

| | | |
|-------------------------------------|---------------------|---|
| Average forward current | $I_F(AV)$ 22 Amps | $T_C = 134^\circ C$, half sine wave, $R_{\theta JC} = 2.5^\circ C/W$ |
| Maximum surge current | I_{FSM} 250 Amps | 8.3ms, half sine, $T_J = 200^\circ C$ |
| Max $I^2 t$ for fusing | $I^2 t$ 260 $A^2 s$ | |
| Max peak forward voltage | V_{FM} 1.2 Volts | $I_{FM} = 30A$; $T_J = 25^\circ C$ * |
| Max peak reverse current | I_{RM} 10 μA | V_{RRM} , $T_J = 25^\circ C$ |
| Max peak reverse current | I_{RM} 1.0 mA | V_{RRM} , $T_J = 150^\circ C$ |
| Max Recommended Operating Frequency | 10kHz | |

*Pulse test: Pulse width 300 μsec . 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/R21

Figure 1
Maximum Forward Characteristics

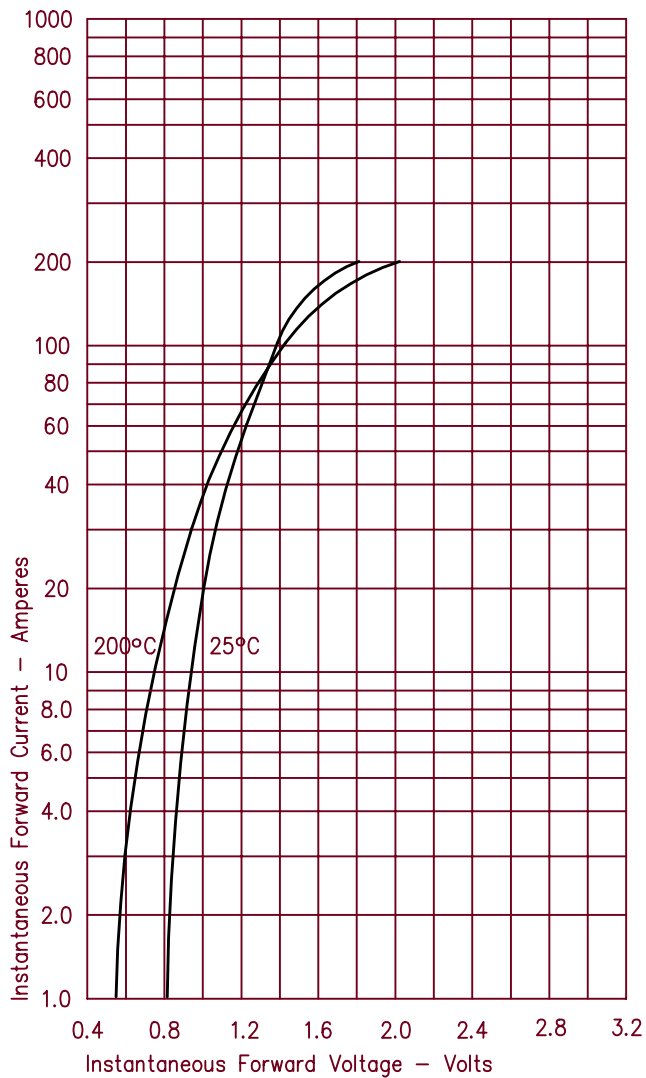


Figure 3
Forward Current Derating

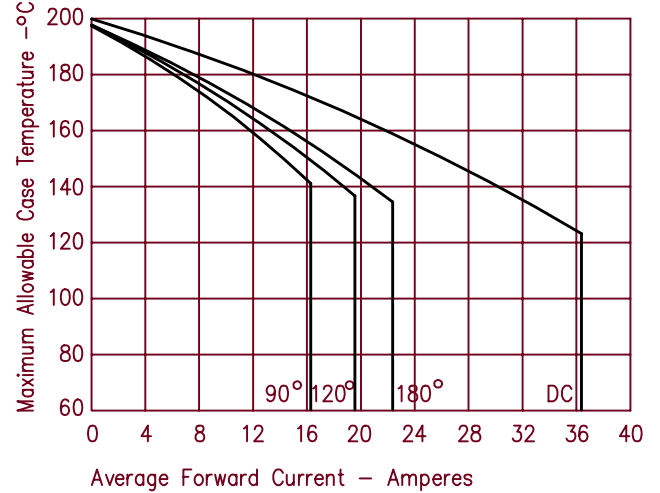


Figure 4
Maximum Forward Power Dissipation

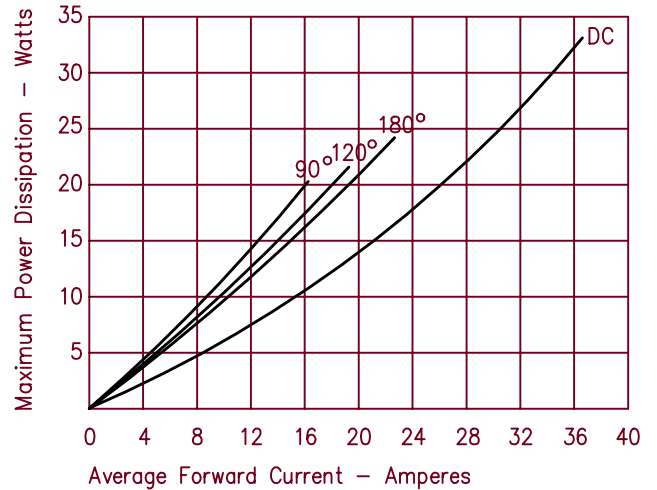


Figure 2
Typical Reverse Characteristics

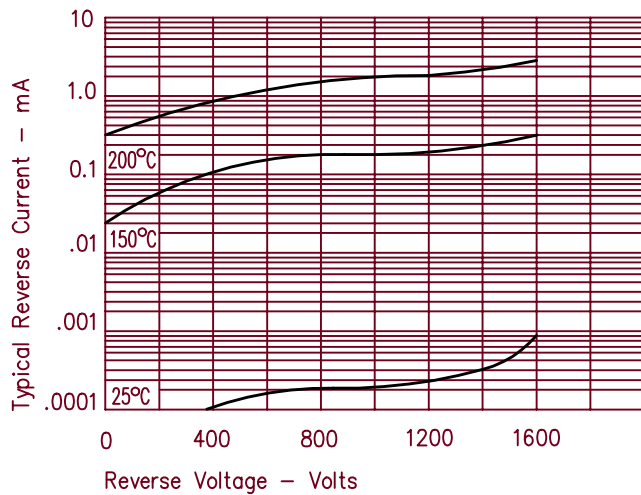


Figure 5
Transient Thermal Impedance

