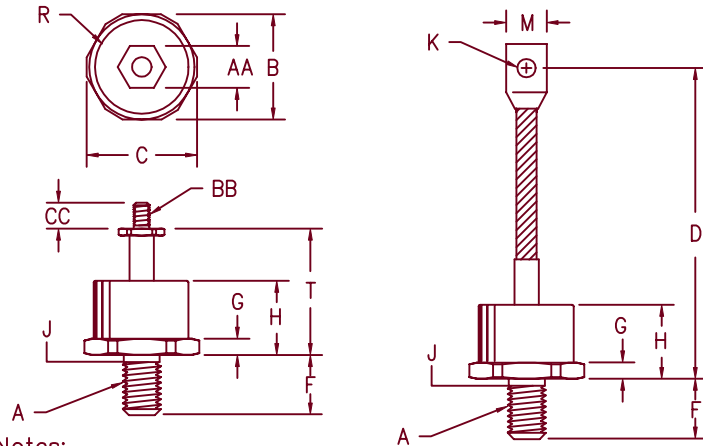


# Silicon Power Rectifier S/R43 Series



Notes:

1. 3/8-24 UNF-3A
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    | 1.050   | 1.060   | 26.67      | 26.92   |       |
| C    | ---     | 1.166   | ---        | 29.61   |       |
| D    | 4.30    | 4.70    | 109.22     | 119.38  |       |
| F    | .610    | .640    | 15.49      | 16.25   |       |
| G    | .213    | .233    | 5.41       | 5.66    |       |
| H    | ---     | .745    | ---        | 18.92   |       |
| J    | .344    | .373    | 8.74       | 9.47    | 2     |
| K    | .276    | .286    | 7.01       | 7.26    |       |
| M    | .465    | .515    | 11.81      | 13.08   |       |
| R    | ---     | .850    | ---        | 21.59   | Dia   |
| T    | 1.426   | ---     | 36.22      | ---     |       |
| AA   | .427    | .437    | 10.84      | 11.09   |       |
| BB   | ---     | ---     | ---        | ---     | 3     |
| CC   | .407    | ---     | 10.33      | ---     |       |

D0205AA (D08)

| Microsemi<br>Catalog Number | JEDEC<br>Numbers |                | Peak Reverse<br>Voltage |
|-----------------------------|------------------|----------------|-------------------------|
|                             | 1N2436           |                | 50V                     |
| *S4310                      | 1N2437           | 1N3288A 1N4587 | 100V                    |
|                             | 1N2438           |                | 150V                    |
| *S4320                      | 1N2439           | 1N3289A 1N4588 | 200V                    |
|                             | 1N2440           |                | 250V                    |
| *S4330                      | 1N2441           | 1N3290A 1N4589 | 300V                    |
|                             | 1N2442           |                | 350V                    |
| *S4340                      | 1N2443           | 1N3291A 1N4590 | 400V                    |
| *S4350                      | 1N2444           | 1N3292A 1N4591 | 500V                    |
| *S4360                      | 1N2445           | 1N3293A 1N4592 | 600V                    |
| *S4380                      |                  | 1N3294A 1N4593 | 800V                    |
| *S43100                     |                  | 1N3295A 1N4594 | 1000V                   |
| *S43120                     |                  | 1N3296A 1N4595 | 1200V                   |
| *S43140                     |                  | 1N3297A 1N4596 | 1400V                   |
| *S43160                     |                  |                | 1600V                   |

\*For Reverse Polarity, change S to R  
For 1N types, add R suffix for Reverse Polarity  
Add the suffix TS to the part number if Top Stud is desired.

- Soft recovery
- Glass Passivated Die
- 2500 Amps Surge Rating
- Glass to metal seal construction
- VRRM to 1600V

## Electrical Characteristics

|                                     |                                         |                                             |
|-------------------------------------|-----------------------------------------|---------------------------------------------|
| Average forward current             | IF(AV) 150 Amps                         | TC = 148°C, Half Sine Wave, RθJC = 0.35°C/W |
| Maximum surge current               | IFSM 2500 Amps                          | 8.3ms, half sine, TJ = 200°C                |
| Max I <sup>2</sup> t for fusing     | I <sup>2</sup> t 26000 A <sup>2</sup> s |                                             |
| Max peak forward voltage            | VFM 1.1 Volts                           | IFM = 200A: TJ = 25°C*                      |
| Max peak reverse current            | IRM 50 μA                               | VRRM, TJ = 25°C                             |
| Max peak reverse current            | IRM 5.0 mA                              | VRRM, TJ = 150°C                            |
| Max Recommended Operating Frequency | 7.5kHz                                  |                                             |

\*Pulse test: Pulse width 300 μsec. Duty cycle 2%

## Thermal and Mechanical Characteristics

|                               |      |                                |
|-------------------------------|------|--------------------------------|
| Storage temperature range     | TSTG | -65°C to 200°C                 |
| Operating junction temp range | TJ   | -65°C to 200°C                 |
| Maximum thermal resistance    | RθJC | 0.35°C/W Junction to Case      |
| Mounting torque               |      | 80-100 inch pounds             |
| Weight                        |      | 2.75 ounces (78 grams) typical |

1-3-01 Rev. 1

# S/R43

Figure 1  
Typical Forward Characteristics

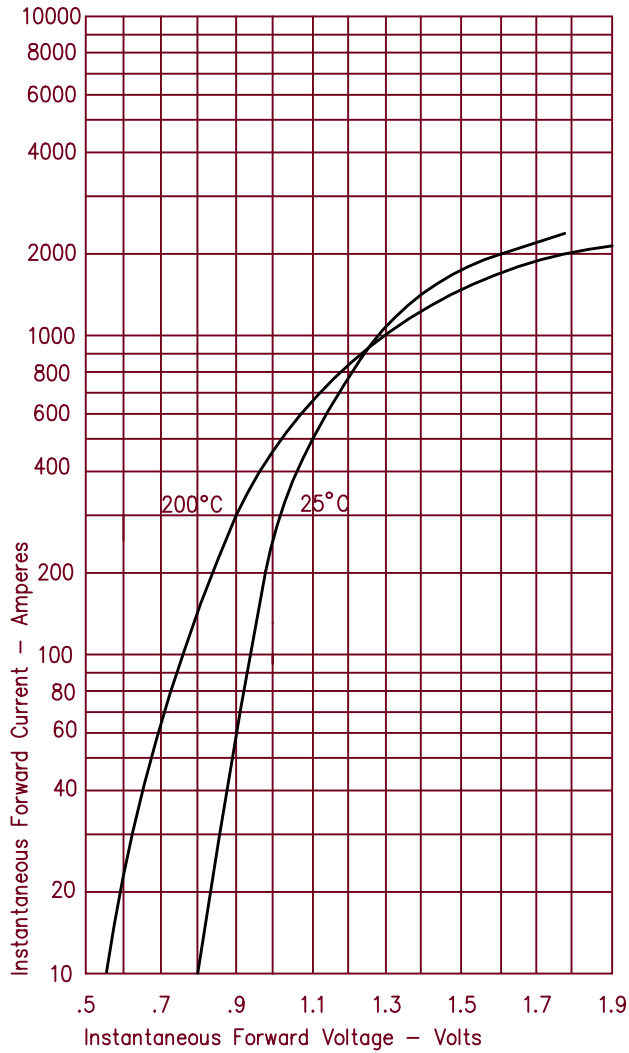


Figure 2  
Typical Reverse Characteristics

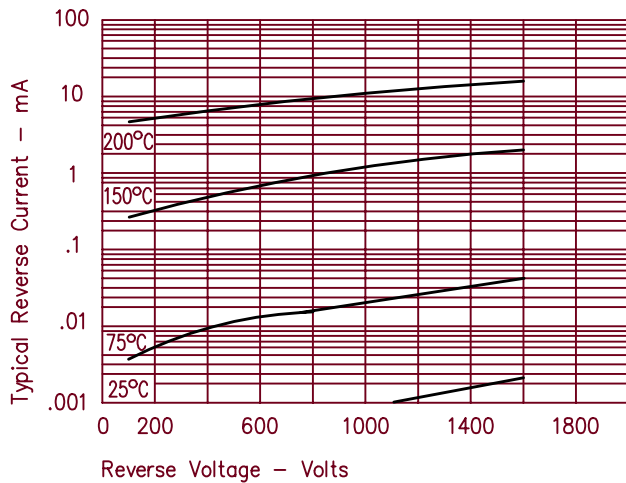


Figure 3  
Forward Current Derating

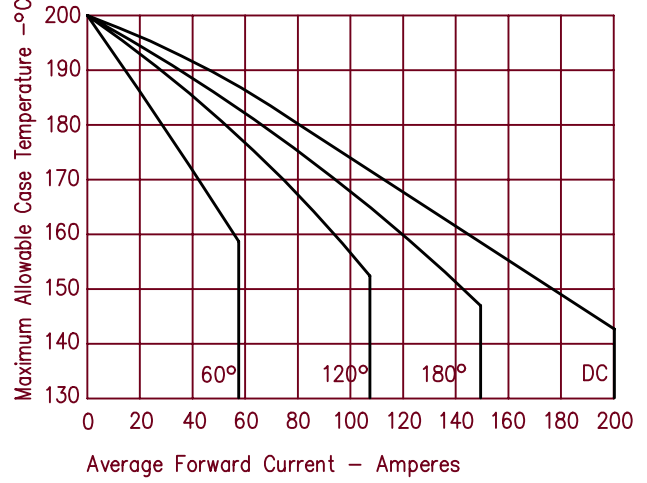


Figure 4  
Maximum Forward Power Dissipation

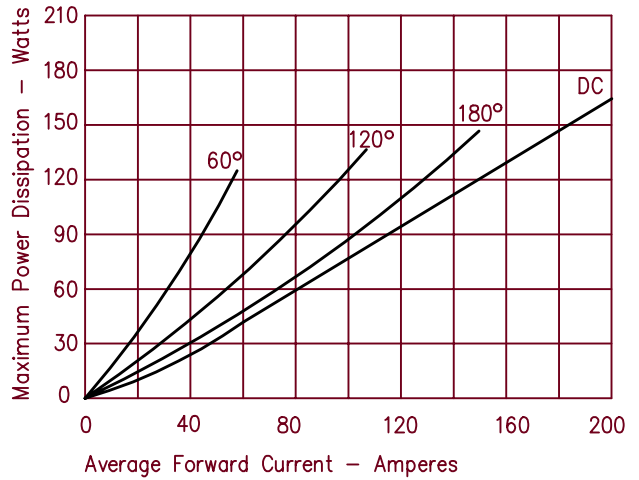


Figure 5  
Transient Thermal Impedance

