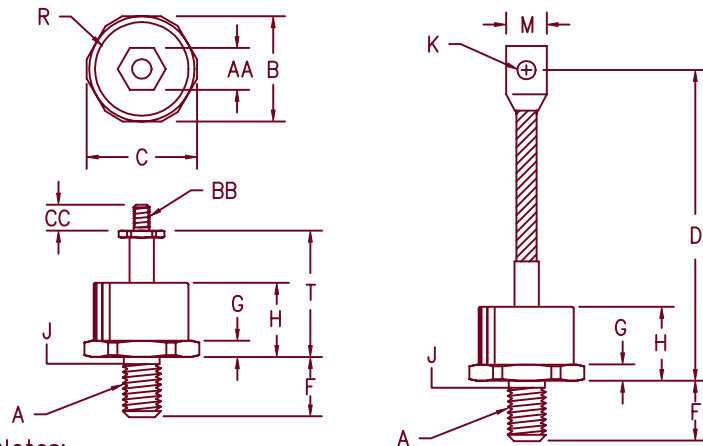


# Silicon Power Rectifier S/R43 Series



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 Catalog Number | JEDEC Numbers         | Peak Reverse 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             | $I_F(AV)$ 150 Amps    | $T_C = 148^\circ C$ , Half Sine Wave, $R_{\theta JC} = 0.35^\circ C/W$ |
| Maximum surge current               | $I_{FSM}$ 2500 Amps   | 8.3ms, half sine, $T_J = 200^\circ C$                                  |
| Max $I^2 t$ for fusing              | $I^2 t$ 26000 $A^2 s$ |                                                                        |
| Max peak forward voltage            | $V_{FM}$ 1.1 Volts    | $I_{FM} = 200A; T_J = 25^\circ C^*$                                    |
| Max peak reverse current            | $I_{RM}$ 50 $\mu A$   | $V_{RRM}, T_J = 25^\circ C$                                            |
| Max peak reverse current            | $I_{RM}$ 5.0 mA       | $V_{RRM}, T_J = 150^\circ C$                                           |
| Max Recommended Operating Frequency | 7.5kHz                |                                                                        |

\*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    | $R_{\theta JC}$ | 0.35 $^\circ C/W$ 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

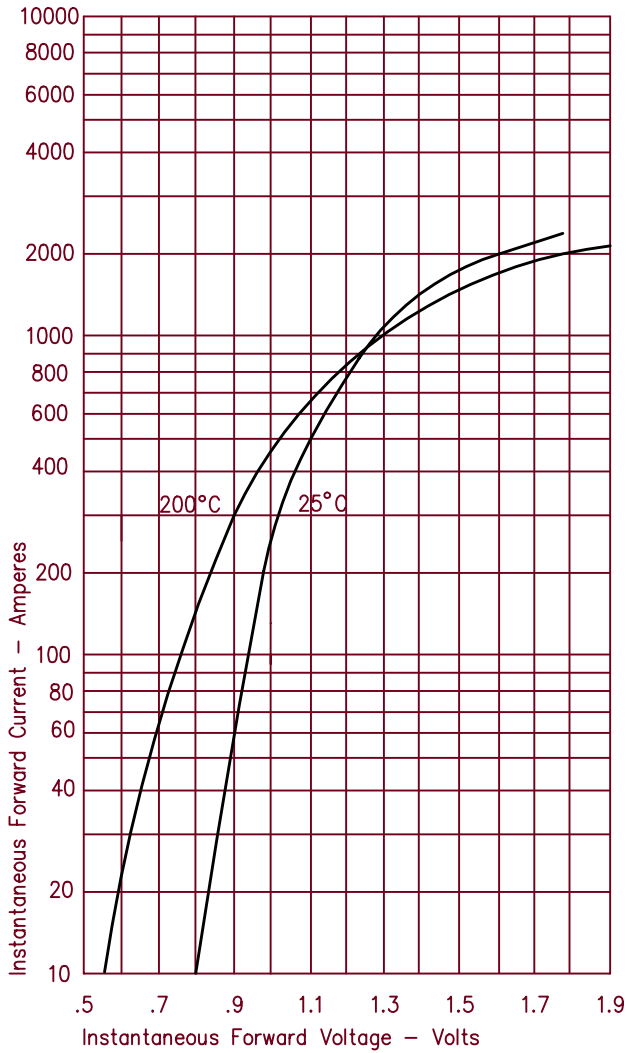


Figure 3  
Forward Current Derating

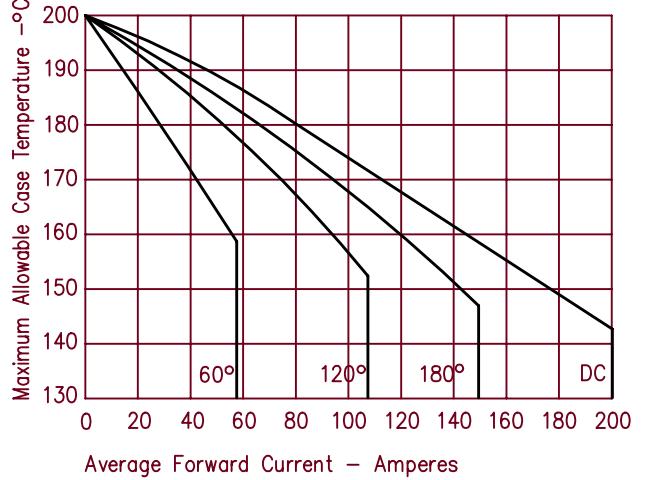


Figure 4  
Maximum Forward Power Dissipation

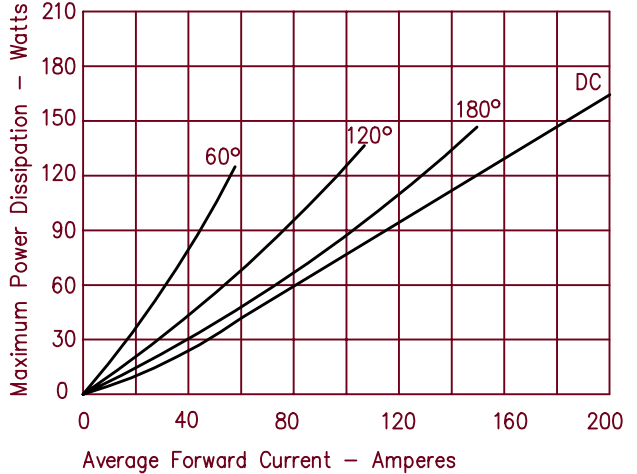


Figure 2  
Typical Reverse Characteristics

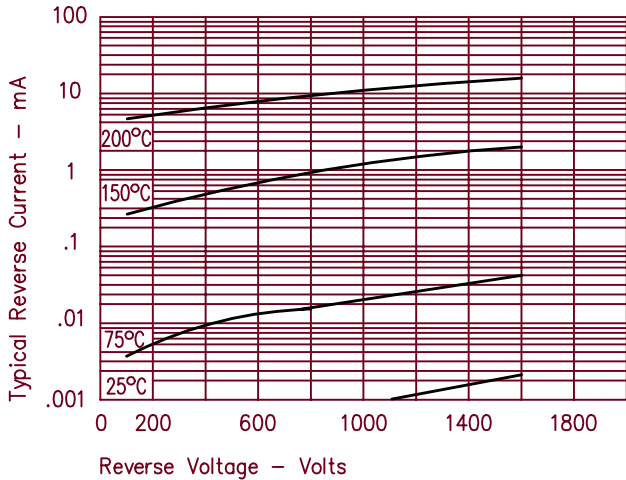


Figure 5  
Transient Thermal Impedance

