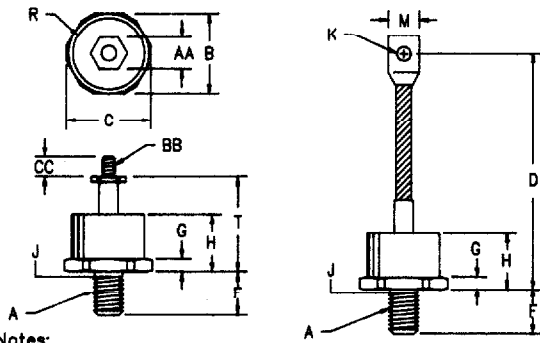


# Silicon Power Rectifier S/R43 Series



**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    | 1.420   | ---     | 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 |
|--------------------------|-----------------|----------------------|
| *S4310                   | 1N412B, 1N3288A | 100V                 |
| *S4320                   | 1N3289A         | 200V                 |
| *S4330                   | 1N3290A         | 300V                 |
| *S4340                   | 1N3291A         | 400V                 |
| *S4350                   | 1N3292A         | 500V                 |
| *S4360                   | 1N3293A         | 600V                 |
| *S4380                   | 1N3294A         | 800V                 |
| *S43100                  | 1N3295A         | 1000V                |
| *S43120                  | 1N3296A         | 1200V                |
| *S43140                  | 1N3297A         | 1400V                |
| *S43160                  | 1N3298A         | 1600V                |

\*Change S to R in part number for Reverse Polarity  
Add the suffix TS to the end of the part number if a Top Stud is desired

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

| 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               | IFSM 2500 Amps                 | 8.3ms, half sine, $T_J = 200^\circ C$                                  |
| Max $I^2 t$ for fusing              | $I^2 t$ 26000 A <sup>2</sup> s |  |
| Max peak forward voltage            | $V_{FM}$ 1.1 Volts             | $I_{FM} = 200A; T_J = 25^\circ C^*$                                    |
| Max peak reverse current            | $I_{RM}$ 200 $\mu A$           | $V_{RRM, T_J} = 25^\circ C$  |
| 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 |
| Typical thermal resistance             | $R_{\theta JC}$ | 0.28 $^\circ C/W$ Junction to Case |
| Mounting torque                        |                 | 100 inch pounds maximum            |
| Weight                                 |                 | 2.75 ounces (78 grams) typical     |



PH: 303-469-2161  
FAX: 303-466-3775

# S/R43

Figure 1  
Typical Forward Characteristics

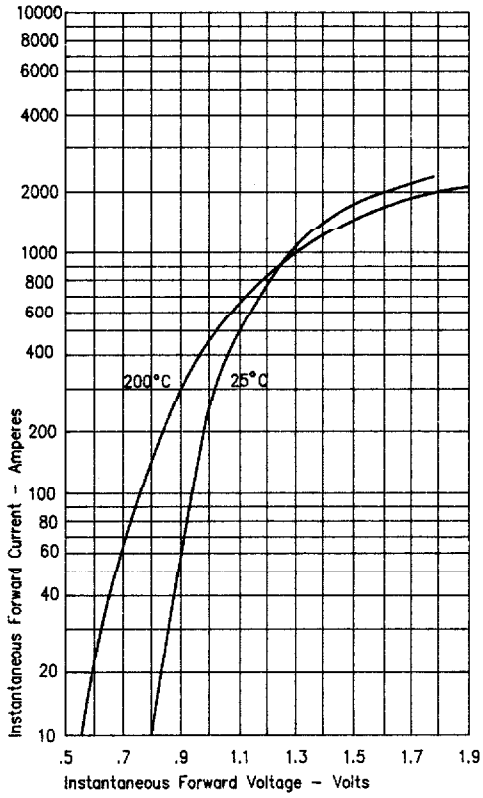


Figure 3  
Forward Current Derating

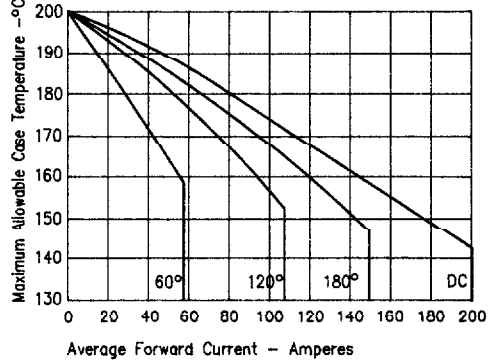


Figure 4  
Maximum Forward Power Dissipation

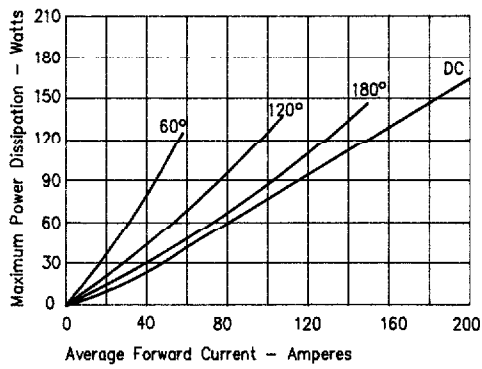


Figure 2  
Typical Reverse Characteristics

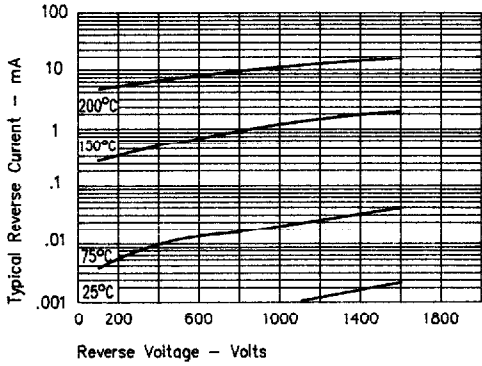
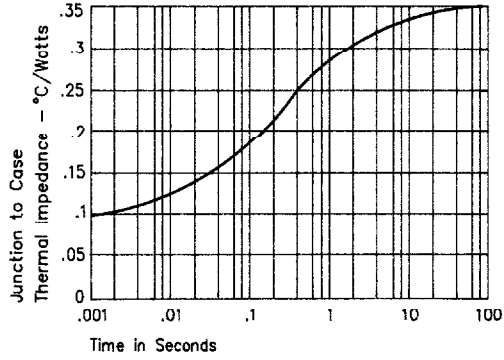
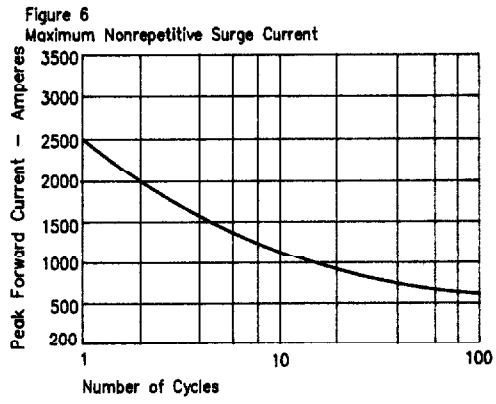


Figure 5  
Transient Thermal Impedance



# S/R43

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