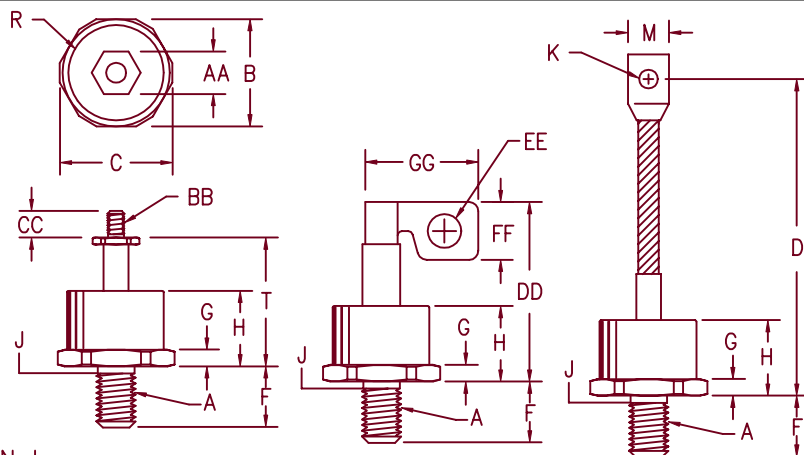


# Silicon Power Rectifier S/R43 Series



## Notes:

1. 3/8-24 UNF-3A
2. Full threads within 2 1/2 threads
3. Accepts 1/4-28 UNF-2B Nut
4. Reverse polarity: Stud is Anode

| Microsemi<br>Catalog Number | JEDEC<br>Numbers | Peak Reverse<br>Voltage |
|-----------------------------|------------------|-------------------------|
|                             | 1N2436           | 50V                     |
| *S4310                      | 1N2437           | 100V                    |
|                             | 1N2438           | 150V                    |
| *S4320                      | 1N2439           | 200V                    |
|                             | 1N2440           | 250V                    |
| *S4330                      | 1N2441           | 300V                    |
|                             | 1N2442           | 350V                    |
| *S4340                      | 1N2443           | 400V                    |
| *S4350                      | 1N2444           | 500V                    |
| *S4360                      | 1N2445           | 600V                    |
| *S4380                      | 1N3294A          | 800V                    |
| *S43100                     | 1N3295A          | 1000V                   |
| *S43120                     | 1N3296A          | 1200V                   |
| *S43140                     | 1N3297A          | 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; F for Flag

| Dim. Inches |         | Millimeter |         | Notes  |     |
|-------------|---------|------------|---------|--------|-----|
| Minimum     | Maximum | Minimum    | Maximum |        |     |
| A           | ---     | ---        | ---     | 1      |     |
| B           | 1.050   | 1.060      | 26.67   |        |     |
| C           | ---     | 1.166      | ---     |        |     |
| 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  | 2   |
| J           | .344    | .373       | 8.74    | 9.47   |     |
| K           | .276    | .286       | 7.01    | 7.26   |     |
| M           | .465    | .670       | 11.81   | 17.78  | Dia |
| R           | ---     | .850       | ---     | 21.59  |     |
| T           | 1.426   | ---        | 36.22   | ---    |     |
| AA          | .427    | .437       | 10.84   | 11.09  | 3   |
| BB          | ---     | ---        | ---     | ---    |     |
| CC          | .407    | ---        | 10.33   | ---    |     |
| DD          | ---     | 1.75       | ---     | 44.45  | Dia |
| EE          | .215    | .225       | 5.46    | 5.72   |     |
| FF          | .360    | .390       | 9.14    | 9.91   |     |
| GG          | .740    | .750       | 18.80   | 19.05  |     |

## D0205AA (D08)

- 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 |

1-27-04 Rev. 4

# S/R43

Figure 1  
Typical Forward Characteristics

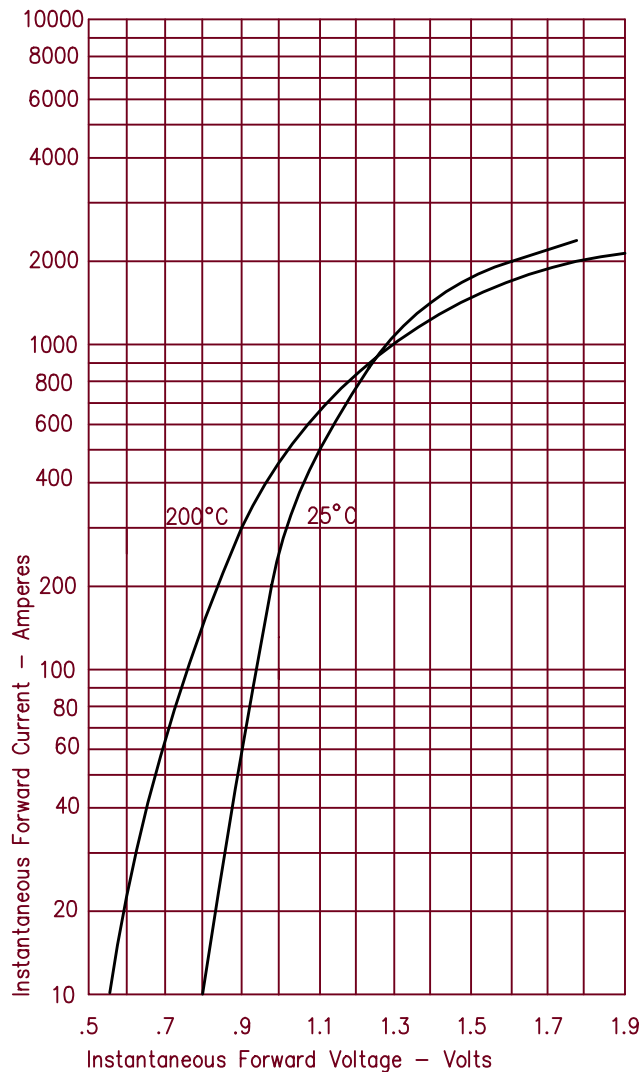


Figure 2  
Typical Reverse Characteristics

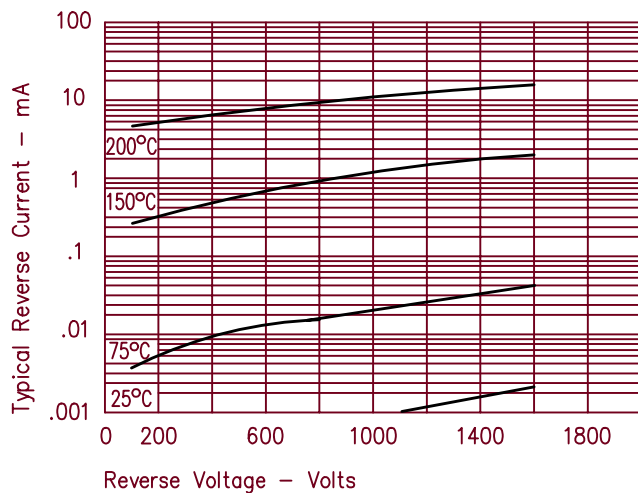


Figure 3  
Forward Current Derating

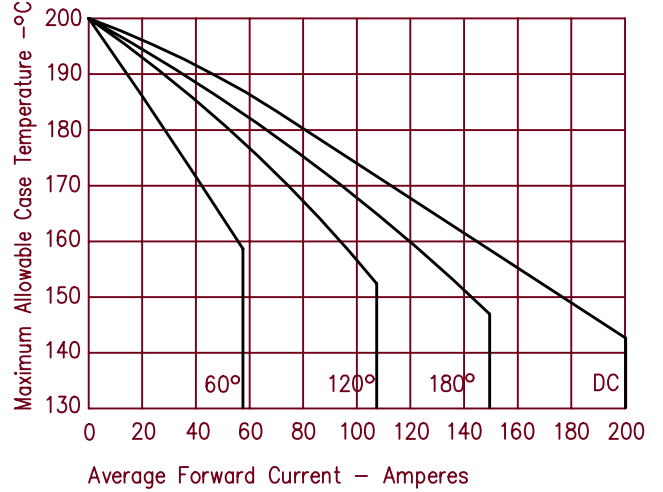


Figure 4  
Maximum Forward Power Dissipation

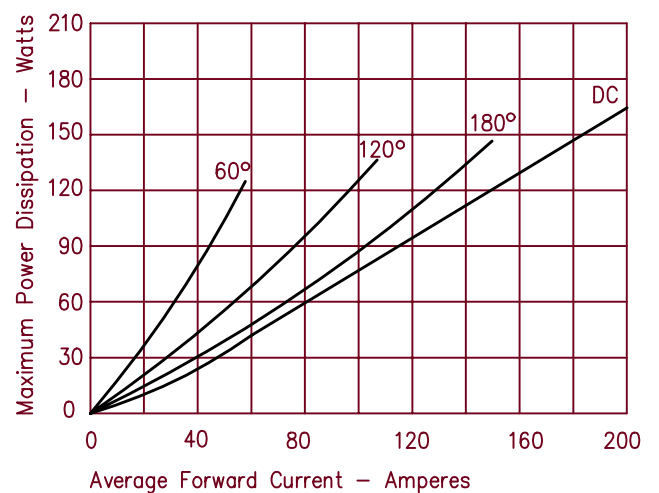


Figure 5  
Transient Thermal Impedance

