



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

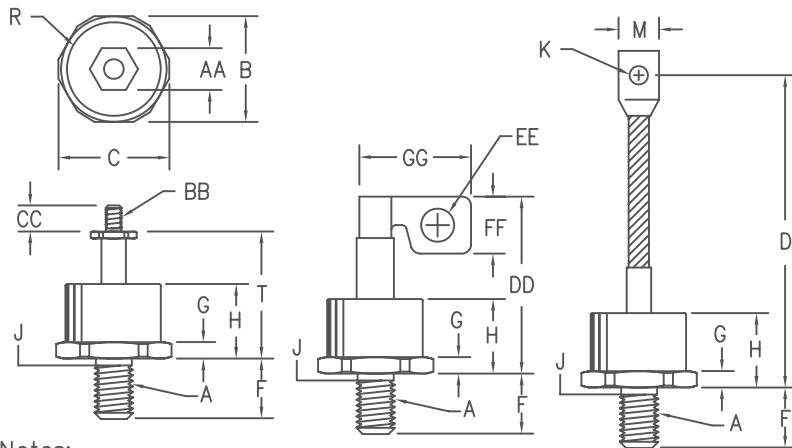
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# Silicon Power Rectifier S/R42 Series



## Notes:

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

| Dim. | Inches  |         | Millimeter |         | Notes |
|------|---------|---------|------------|---------|-------|
|      | Minimum | Maximum | Minimum    | Maximum |       |
| A    | ---     | ---     | ---        | ---     | 1     |
| B    | 1.040   | 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    | .670    | 11.81      | 17.78   |       |
| R    | ---     | .850    | ---        | 21.59   | Dia   |
| T    | 1.426   | ---     | 36.22      | ---     |       |
| AA   | .422    | .453    | 10.84      | 11.09   |       |
| BB   | ---     | ---     | ---        | ---     | 3     |
| CC   | .407    | ---     | 10.33      | ---     |       |
| DD   | ---     | 1.75    | ---        | 44.45   |       |
| EE   | .215    | .225    | 5.46       | 5.72    | Dia   |
| FF   | .360    | .390    | 9.14       | 9.91    |       |
| GG   | .740    | .750    | 18.80      | 19.05   |       |

## Microsemi Catalog Number

\*S4210  
\*S4220  
\*S4230  
\*S4240  
\*S4250  
\*S4260  
\*S4280  
\*S42100  
\*S42120  
\*S42140  
\*S42160

## Peak Reverse Voltage

100V  
200V  
300V  
400V  
500V  
600V  
800V  
1000V  
1200V  
1400V  
1600V

\*Change S to R in part number for Reverse Polarity  
Add the suffix TS for Top Stud; F for flag

## DO205AA (DO8)

- Soft recovery
- Glass Passivated Die
- 2000 Amps Surge Rating
- Glass to metal seal construction
- VRRM to 1600V

## Electrical Characteristics

|                                     |                                         |                                             |
|-------------------------------------|-----------------------------------------|---------------------------------------------|
| Average forward current             | IF(AV) 125 Amps                         | TC = 146°C, Half Sine Wave, RθJC = 0.40°C/W |
| Maximum surge current               | IFSM 2000 Amps                          | 8.3ms, half sine, TJ = 200°C                |
| Max I <sup>2</sup> t for fusing     | I <sup>2</sup> t 16600 A <sup>2</sup> s |                                             |
| Max peak forward voltage            | VFM 1.2 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 | 0.40°C/W Junction to Case      |
| Mounting torque               |      | 80-100 inch pounds             |
| Weight                        |      | 2.75 ounces (78 grams) typical |

# S/R42

Figure 1  
Typical Forward Characteristics

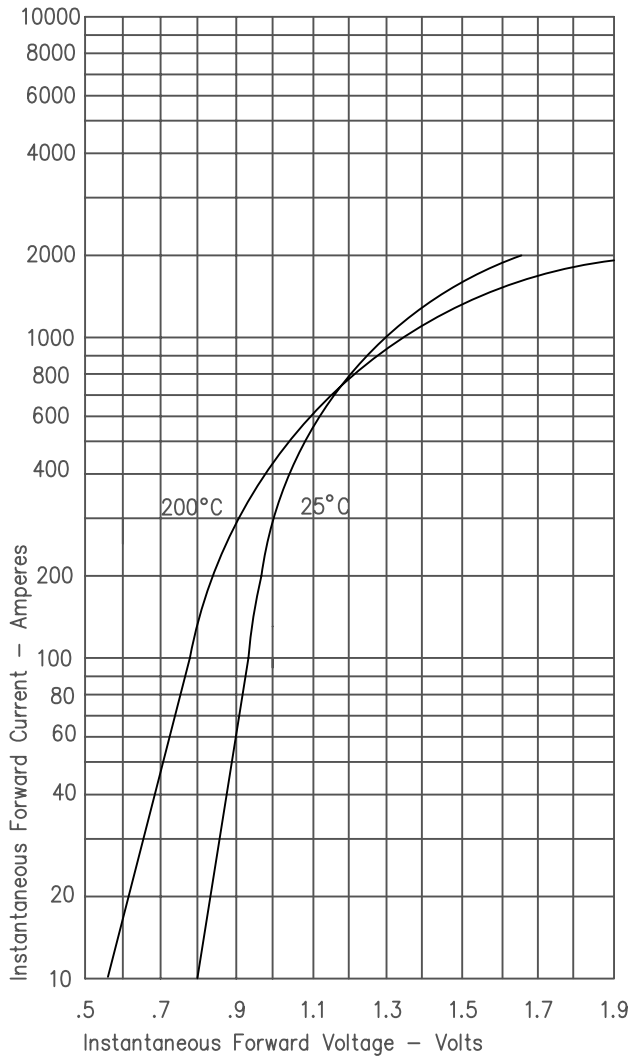


Figure 2  
Typical Reverse Characteristics

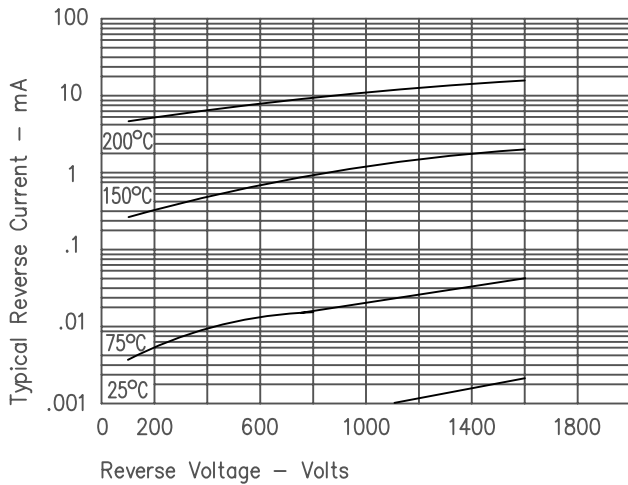


Figure 3  
Forward Current Derating

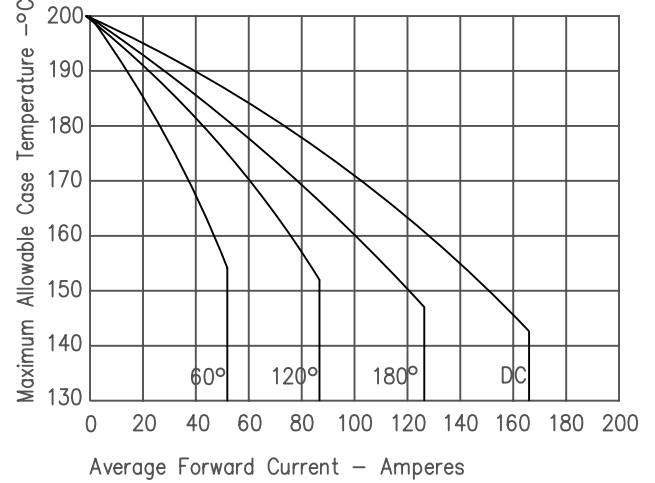


Figure 4  
Maximum Forward Power Dissipation

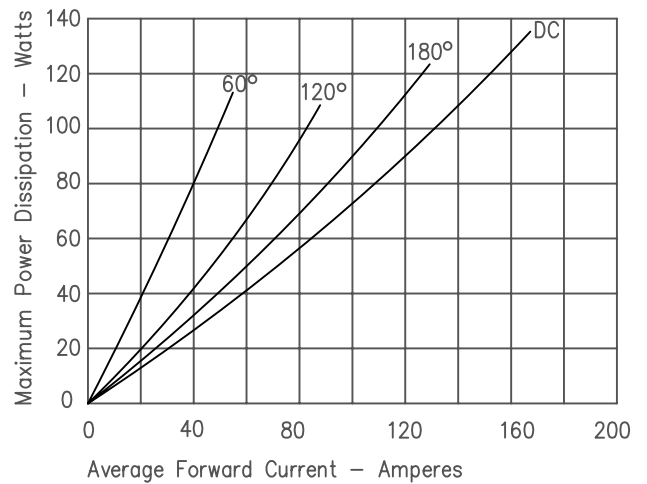


Figure 5  
Transient Thermal Impedance

