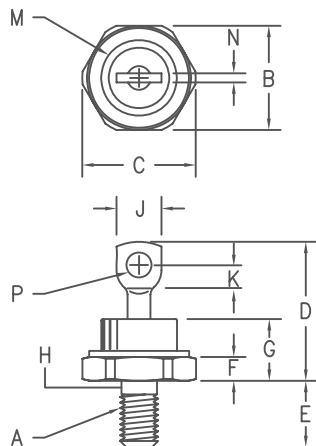


# Silicon Power Rectifier S/R306 Series



## Notes:

1. 1/4-28
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    | .667    | .687    | 16.95      | 17.44   |       |
| C    | ---     | .793    | ---        | 20.14   |       |
| D    | ---     | 1.00    | ---        | 25.40   |       |
| E    | .422    | .453    | 10.72      | 11.50   |       |
| F    | .115    | .200    | 2.93       | 5.08    | 2     |
| G    | ---     | .450    | ---        | 11.43   |       |
| H    | .220    | .249    | 5.59       | 6.32    |       |
| J    | .250    | .375    | 6.35       | 9.52    |       |
| K    | .156    | ---     | 3.97       | ---     |       |
| M    | ---     | .667    | ---        | 16.94   | Dia   |
| N    | ---     | .080    | ---        | 2.03    | Dia   |
| P    | .140    | .175    | 3.56       | 4.44    |       |

D0203AB (D05)

| Microsemi<br>Catalog Number | Standard | Reverse | Peak Reverse<br>Voltage |
|-----------------------------|----------|---------|-------------------------|
| S30620                      | R30620   |         | 200V                    |
| S30640                      | R30640   |         | 400V                    |
| S30660                      | R30660   |         | 600V                    |
| S30680                      | R30680   |         | 800V                    |
| S306100                     | R306100  |         | 1000V                   |
| S306120                     | R306120  |         | 1200V                   |

- Glass Passivated Die
- 1200 Amps Surge Rating
- Glass to metal seal construction
- VRRM to 1200V
- Low cost Non-RoHS package

## Electrical Characteristics

|                                     |                |                                            |
|-------------------------------------|----------------|--------------------------------------------|
| Average forward current             | IF(AV) 70 Amps | TC = 146°C, Half Sine Wave, RθJC = 0.8°C/W |
| Maximum surge current               | IFSM 1200 Amps | 8.3ms, half sine, TJ = 200°C               |
| Max I² t for fusing                 | I² t 5900 A²s  |                                            |
| Max peak forward voltage            | VF 1.25 Volts  | IFM = 200A: TJ = 25°C*                     |
| Max peak reverse current            | IRM 25 µA      | VRRM, TJ = 25°C                            |
| Max peak reverse current            | IRM 4.0 mA     | VRRM, TJ = 150°C                           |
| Max Recommended Operating Frequency | 10kHz          |                                            |

\*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 | 0.8°C/W Junction to Case     |
| Mounting torque               |      | 25-30 inch pounds            |
| Weight                        |      | .6 ounces (17 grams) typical |

# S/R306

Figure 1  
Typical Forward Characteristics

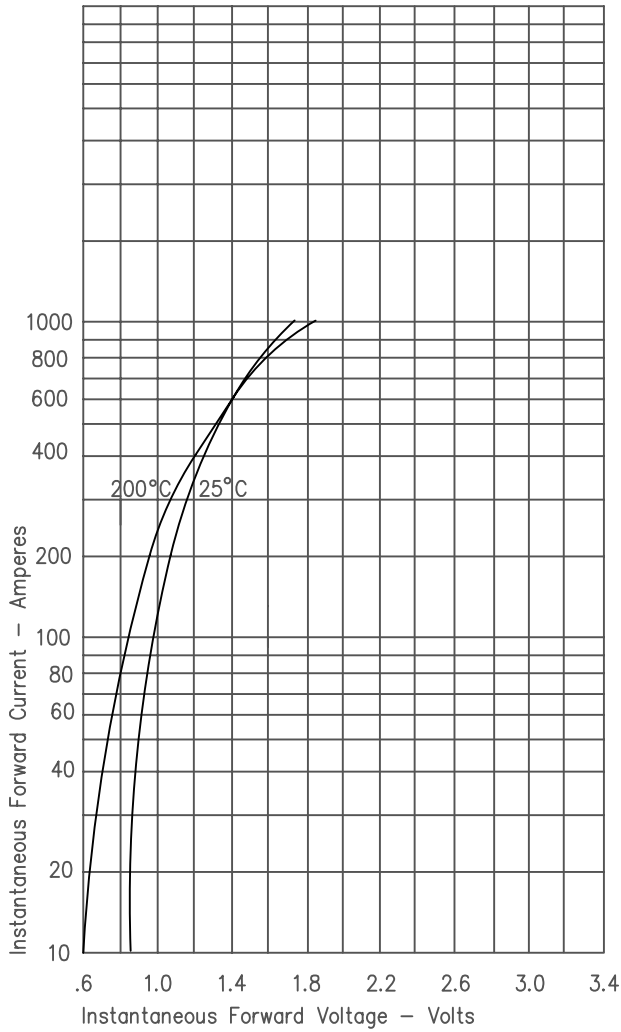


Figure 3  
Forward Current Derating

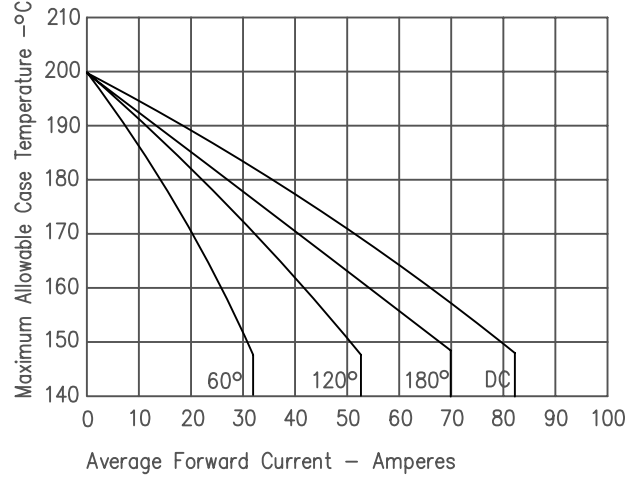


Figure 4  
Maximum Forward Power Dissipation

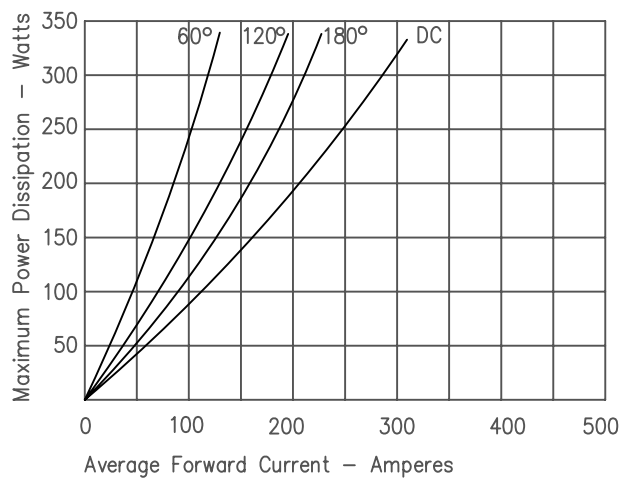


Figure 2  
Typical Reverse Characteristics

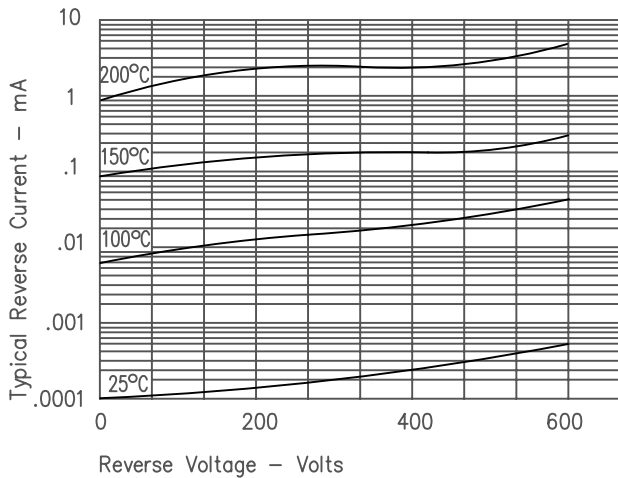


Figure 5  
Transient Thermal Impedance

