

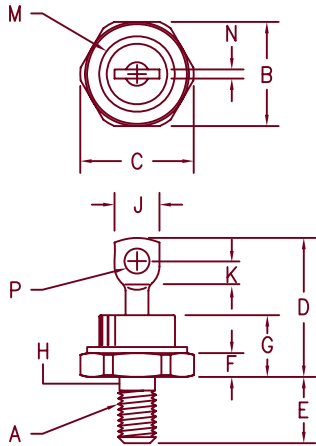


**THE DATASHEET OF**  
**S35160**



# Silicon Power Rectifier

## S/R35



- Notes:
- 1/4-28
  - Full threads within 2 1/2 threads
  - 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    |       |
| G    | ---     | .450    | ---        | 11.43   |       |
| H    | .220    | .249    | 5.59       | 6.32    | 2     |
| J    | .250    | .375    | 6.35       | 9.52    |       |
| K    | .156    | ---     | 3.97       | ---     |       |
| M    | ---     | .667    | ---        | 16.94   | Dia   |
| N    | ---     | .080    | ---        | 2.03    |       |
| P    | .140    | .175    | 3.56       | 4.44    | Dia   |

| Microsemi Catalog Number | JEDEC types                          | Peak Reverse Voltage |
|--------------------------|--------------------------------------|----------------------|
|                          | 1N2128,A 1N2458                      | 50V                  |
|                          | 1N2129,A 1N2459                      | 100V                 |
|                          | 1N2130,A 1N2460                      | 150V                 |
| S3520                    | 1N2131,A 1N2461 1N2788 1N3968 1N4136 | 200V                 |
|                          | 1N2132,A 1N2462                      | 250V                 |
|                          | 1N2133,A 1N2463                      | 300V                 |
|                          | 1N2134,A 1N2464                      | 350V                 |
| S3540                    | 1N2135,A 1N2465 1N2789 1N3969 1N4137 | 400V                 |
|                          | 1N2136,A                             | 450V                 |
|                          | 1N2137,A 1N2466                      | 500V                 |
| S3560                    | 1N2138,A 1N2467 1N3970 1N4138        | 600V                 |
|                          | 1N2468                               | 700V                 |
| S3580                    | 1N2469 1N3971                        | 800V                 |
| S35100                   |                                      | 1000V                |
| S35120                   |                                      | 1200V                |
| S35140                   |                                      | 1400V                |
| S35160                   |                                      | 1600V                |

For Reverse Polarity change S to R  
For JEDEC parts add R suffix for Reverse Polarity

### DO203AB (D05)

- Low Forward Voltage
- Glass to Metal Seal Construction
- Glass Passivated Die
- VRRM to 1600V
- 1050 Amps Surge Rating

### Electrical Characteristics

|                                     |  |   |
|-------------------------------------|--|---|
| Average forward current             | IF(AV) 70 Amps                         | TC = 152°C, Half Sine Wave, RθJC = 0.65°C/W |
| Maximum surge current               | IFSM 1050 Amps                         | 8.3ms, half sine, TJ = 200°C                |
| Max I <sup>2</sup> t for fusing     | I <sup>2</sup> t 4500 A <sup>2</sup> s |   |
| Max peak forward voltage            | VFM 1.25 Volts                         | IFM = 200A: TJ = 25°C*                      |
| Max peak reverse current            | IRM 25 μA                              | VRRM, TJ = 25°C                             |
| Max peak reverse current            | IRM 2.5 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 | 0.65°C/W Junction to Case    |
| Mounting torque               |      | 25-30 inch pounds            |
| Weight                        |      | .5 ounces (14 grams) typical |



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05-02-07 Rev. 3

# S/R35

Figure 1  
Typical Forward Characteristics

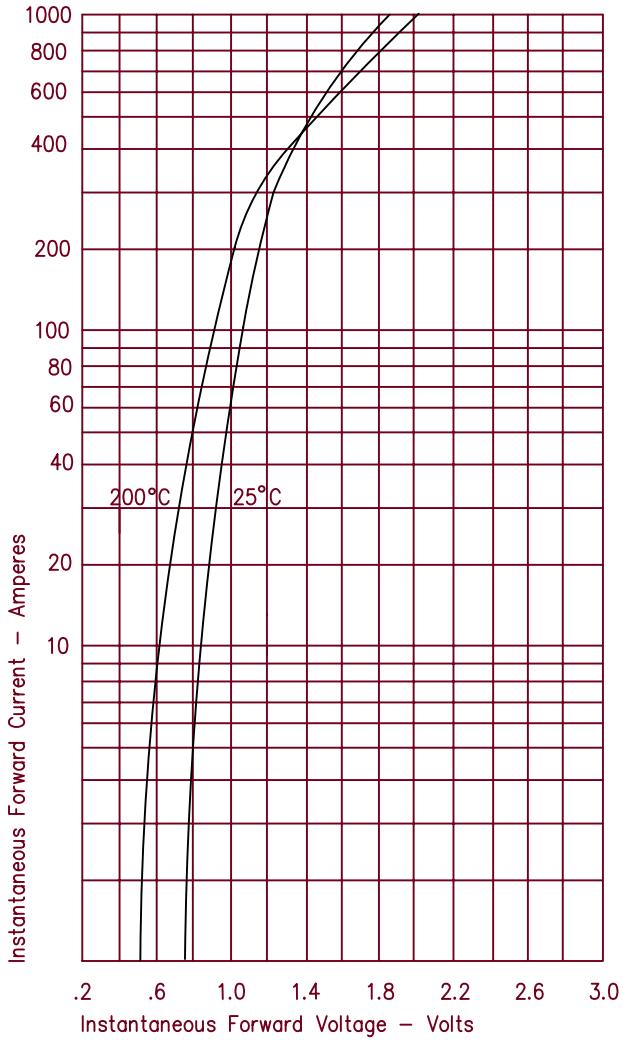


Figure 3  
Forward Current Derating

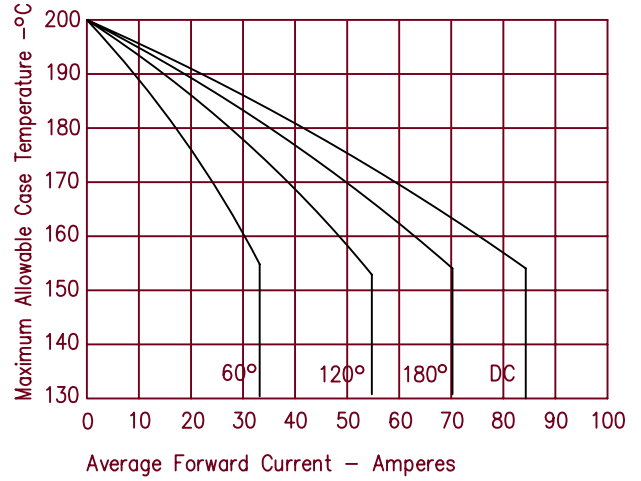


Figure 4  
Maximum Forward Power Dissipation

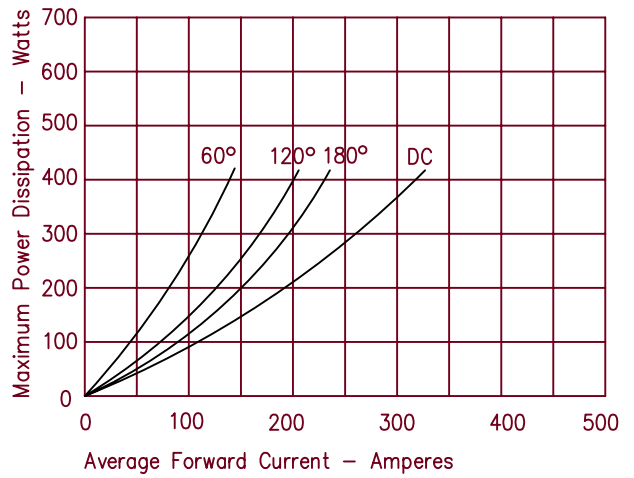


Figure 2  
Typical Reverse Characteristics

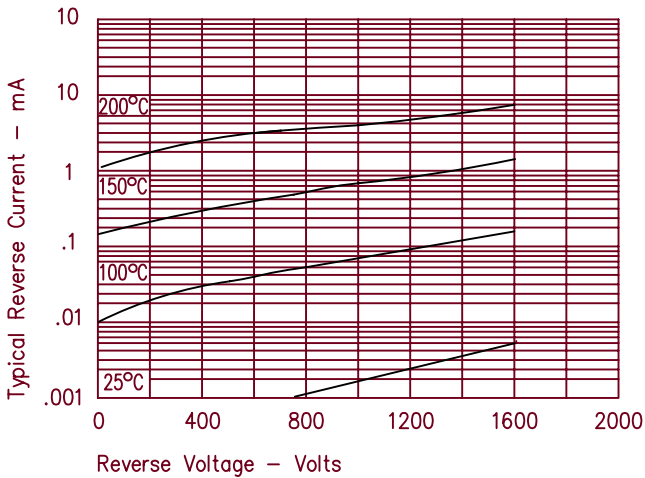
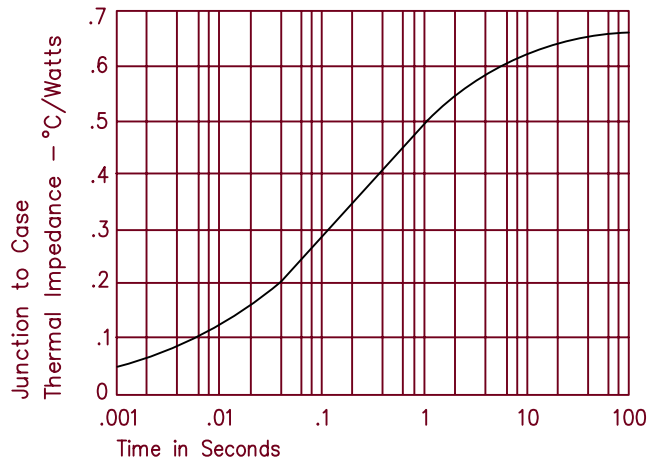


Figure 5  
Transient Thermal Impedance



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