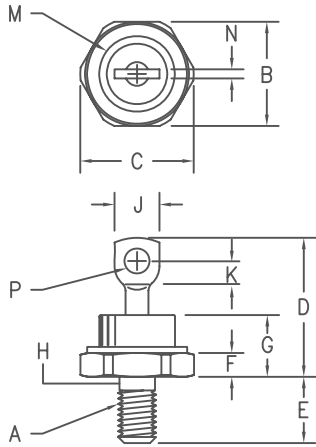




THE DATASHEET OF
S306100



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 | |
| 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 |

D0203AB (D05)

| Microsemi Catalog Number | Standard Reverse | Peak Reverse 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 I ² t for fusing | I ² t 5900 A ² 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 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

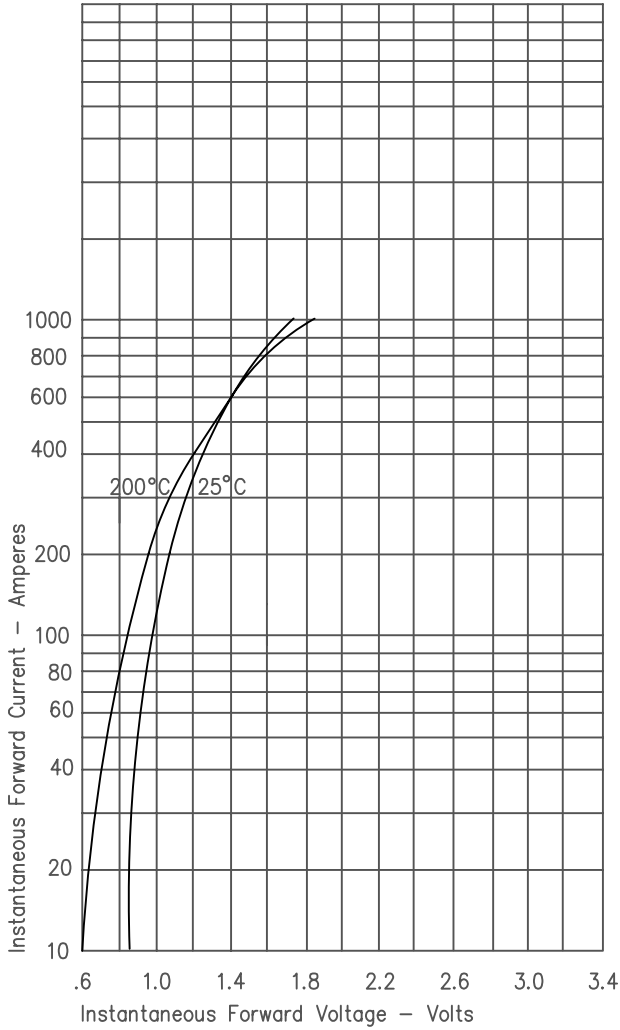


Figure 3
Forward Current Derating

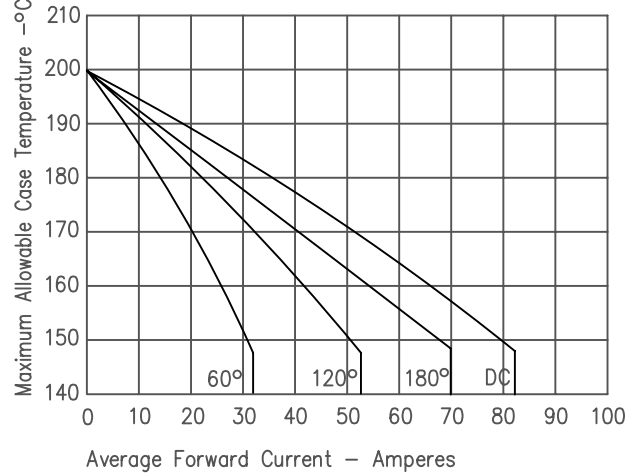


Figure 4
Maximum Forward Power Dissipation

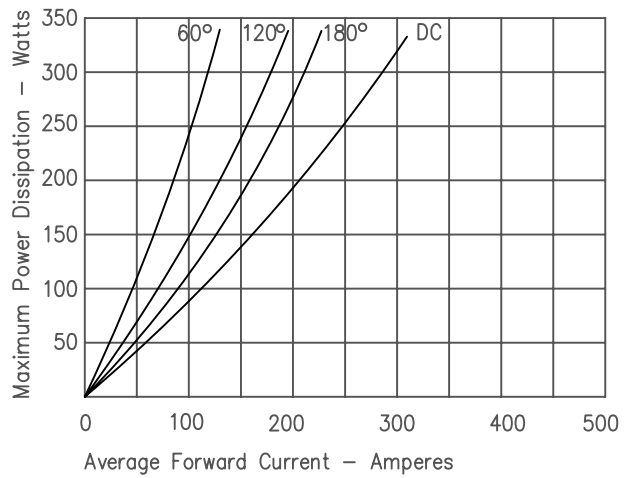


Figure 2
Typical Reverse Characteristics

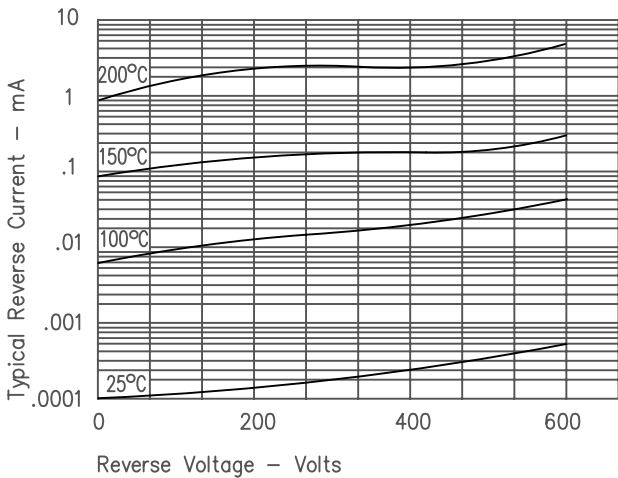
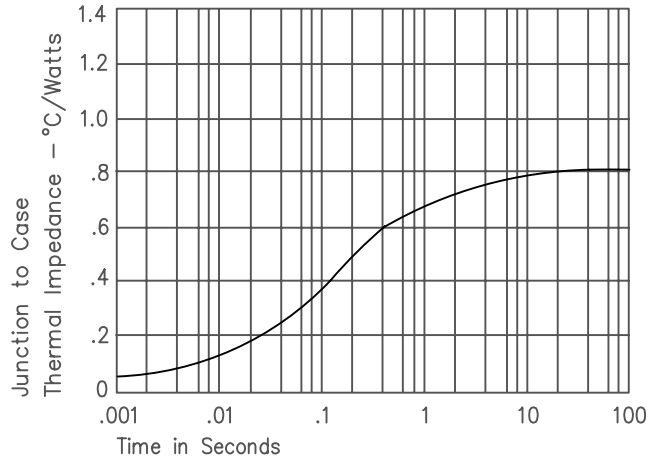




Figure 5
Transient Thermal Impedance



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