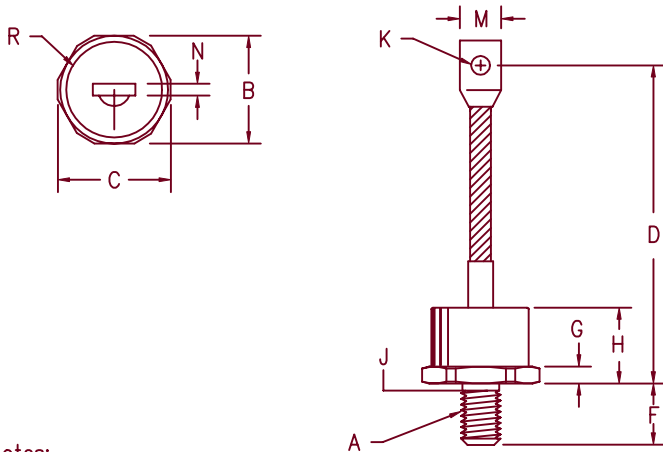


Silicon Power Rectifier

1N3161 — 1N3177



Notes:

1. Full threads within 2 1/2 threads.
2. Standard Polarity: Stud is Cathode
Reverse Polarity: Stud is Anode

| Dim. | Inches | | Millimeter | | Notes |
|------|------------|---------|------------|---------|-------|
| | Minimum | Maximum | Minimum | Maximum | |
| A | 3/4-16 UNF | | --- | --- | 1 |
| B | 1.218 | 1.250 | 30.93 | 31.75 | |
| C | 1.350 | 1.375 | 34.29 | 34.93 | |
| D | 5.30 | 5.90 | 134.62 | 149.86 | |
| F | .793 | .828 | 20.14 | 21.03 | |
| G | .300 | .325 | 7.62 | 8.25 | |
| H | --- | .900 | --- | 22.86 | |
| J | .660 | .745 | 16.76 | 19.02 | 2 |
| K | .338 | .348 | 8.58 | 8.84 | Dia. |
| M | .665 | .755 | 16.89 | 19.17 | |
| N | .125 | .172 | 3.18 | 4.37 | |
| R | --- | 1.10 | --- | 27.94 | Dia. |

D0205AB (D09)

| Microsemi Catalog Number | Peak Reverse Voltage |
|--------------------------|----------------------|
| 1N3161 | 50V |
| 1N3162 | 100V |
| 1N3163 | 150V |
| 1N3164 | 200V |
| 1N3165 | 250V |
| 1N3166 | 300V |
| 1N3167 | 350V |
| 1N3168 | 400V |
| 1N3169 | 500V |
| 1N3170 | 600V |
| 1N3171,A | 700V |
| 1N3172,A | 800V |
| 1N3173,A | 900V |
| 1N3174,A | 1000V |
| 1N3175 | 1200V |
| 1N3176 | 1400V |
| 1N3177 | 1600V |

Add R suffix for reverse polarity

- Glass to metal seal construction
- High surge current capability
- Glass Passivated Die
- Rugged construction
- V_{RRM} 50-1600 Volts

Electrical Characteristics

| | | |
|-------------------------------------|------------------------------|--|
| Max average forward current | $I_{F(AV)}$ 240 Amps | $T_C = 149^\circ\text{C}$, Half sine wave, $R_{\theta JC} = 0.20^\circ\text{C/W}$ 8.3ms, half sine, $T_J = 200^\circ\text{C}$ less than 8.33ms $I_F = 240\text{A}$: $T_C = 25^\circ\text{C}$ V_{RRM} , $T_C = 150^\circ\text{C}$ V_{RRM} , $T_C = 25^\circ\text{C}$ |
| Max surge current | I_{FSM} 3000 Amps | |
| Max. I^2t capability for fusing | I^2t 37,480 ² S | |
| Max peak forward voltage | V_{FM} 1.25 Volts | |
| Max peak reverse current | I_{RRM} 10mA | |
| Max peak reverse current | I_{RRM} 75 μA | |
| Max recommended operating frequency | 7.5 kHz | |

Thermal and Mechanical Characteristics

| | | |
|--------------------------------------|-----------------|--------------------------------|
| Operating junction temp range | T_J | -65°C to 200°C |
| Storage temperature range | T_{STG} | -65°C to 200°C |
| Maximum thermal resistance | $R_{\theta JC}$ | 0.20°C/W Junction to case |
| Typical thermal resistance (greased) | $R_{\theta CS}$ | .08°C/W Case to sink |
| Max mounting torque | | 300-325 inch pounds |
| Weight | | 8.5 ounces (240 grams) typical |

8-27-03 Rev. 1

1N3161 — 1N3177

Figure 1
Typical Forward Characteristics

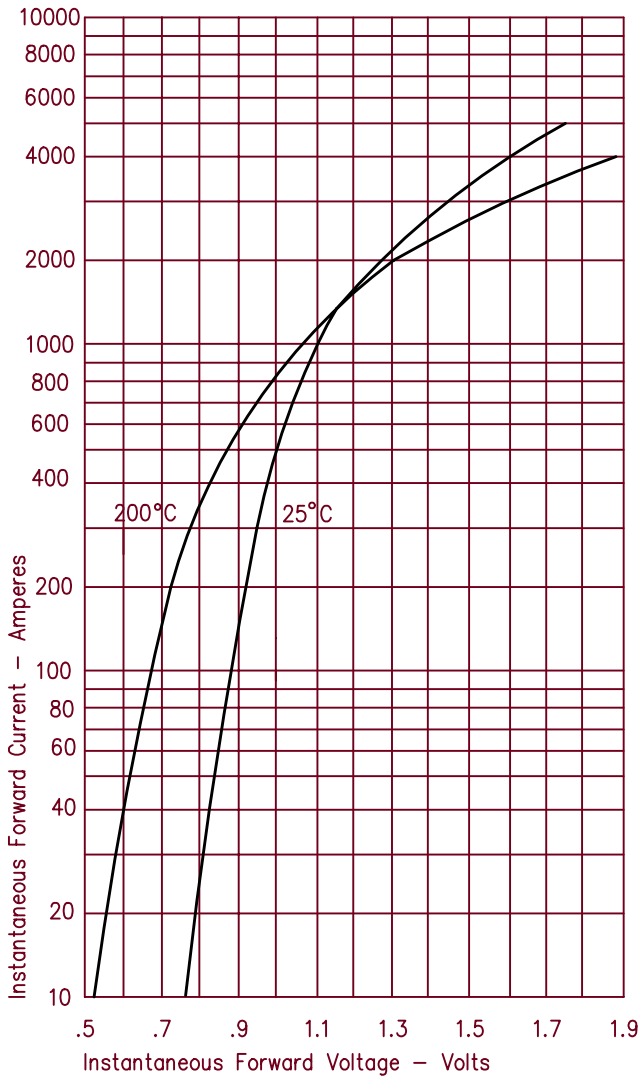


Figure 2
Typical Reverse Characteristics

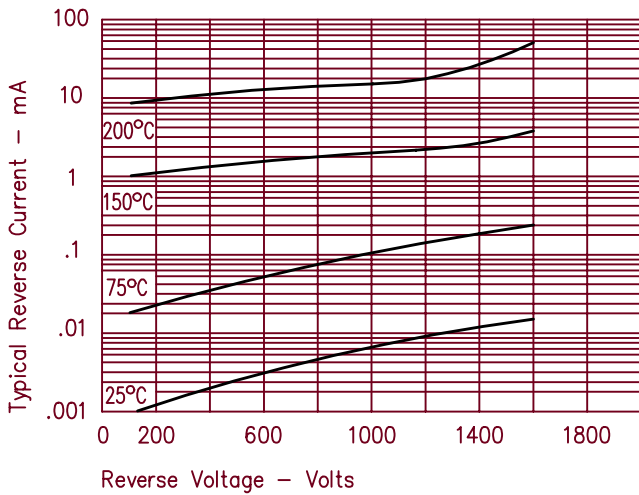


Figure 3
Forward Current Derating

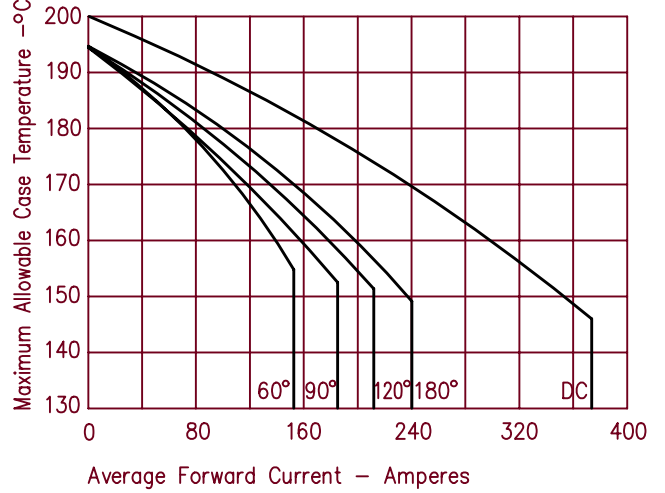


Figure 4
Maximum Forward Power Dissipation

