

Silicon Power Rectifier

1N1183–1N1190, 1N3765–1N3768



- 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 | --- | --- | --- | --- | 1/4–28 |
| 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 | 2.92 | 5.08 | |
| G | --- | .450 | --- | 11.43 | |
| H | .220 | .249 | 5.59 | 6.32 | 1 |
| 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 (D0–5)

| JEDEC Numbers | Peak Reverse Voltage |
|-----------------|----------------------|
| 1N1183, 1N1183A | 50V |
| 1N1184, 1N1184A | 100V |
| 1N1185, 1N1185A | 150V |
| 1N1186, 1N1186A | 200V |
| 1N1187, 1N1187A | 300V |
| 1N1188, 1N1188A | 400V |
| 1N1189, 1N1189A | 500V |
| 1N1190, 1N1190A | 600V |
| 1N3765 | 700V |
| 1N3766 | 800V |
| 1N3767 | 900V |
| 1N3768 | 1000V |

For Reverse Polarity add R to Part Number

- Glass Passivated Die
- 800A surge rating
- Glass to metal construction
- V_{RRM} to 1000V
- Low cost Non–RoHS package

Electrical Characteristics

| | | |
|-------------------------------------|-------------------------------|---|
| Average forward current | $I_F(AV)$ 40 Amps | $T_C = 146^\circ C$, half sine wave, $R_{\theta JC} = 1.25^\circ C/W$ 8.3ms, half sine, $T_J = 200^\circ C$ |
| Maximum surge current | I_{FSM} 800 Amps | |
| Max $I^2 t$ for fusing | $I^2 t$ 2600 A ² s | |
| Max peak forward voltage | V_{FM} 1.19 Volts | $I_{FM} = 90A; T_J = 25^\circ C^*$ |
| Max peak reverse current | I_{RM} 10 μA | $V_{RRM}, T_J = 25^\circ C$ |
| Max peak reverse current | I_{RM} 2.0 mA | $V_{RRM}, T_J = 150^\circ C$ |
| Max Recommended Operating Frequency | 10kHz | |

*Pulse test: Pulse width 300 μsec . Duty cycle 2%

Thermal and Mechanical Characteristics

| | | |
|-------------------------------|-----------------|------------------------------------|
| Storage temperature range | T_{STG} | $-65^\circ C$ to $200^\circ C$ |
| Operating junction temp range | T_J | $-65^\circ C$ to $200^\circ C$ |
| Maximum thermal resistance | $R_{\theta JC}$ | 1.25 $^\circ C/W$ Junction to Case |
| Mounting torque | | 25–30 inch pounds |
| Weight | | .5 ounces (14 grams) typical |

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Figure 1
Typical Forward Characteristics



Figure 3
Forward Current Derating



Figure 4
Maximum Forward Power Dissipation

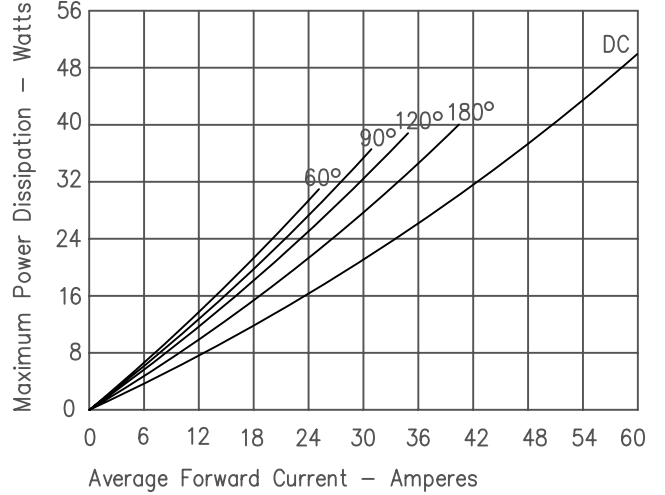


Figure 2
Typical Reverse Characteristics

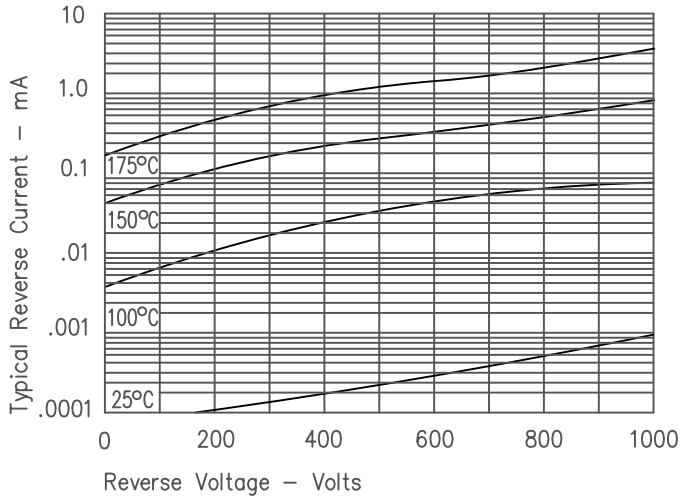


Figure 5
Transient Thermal Impedance

