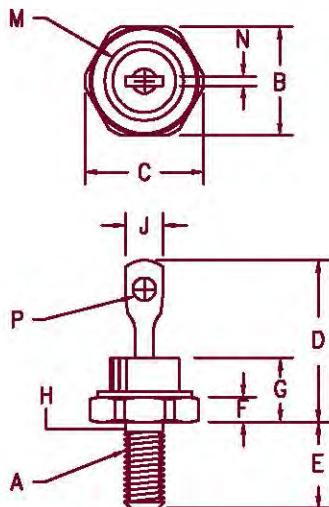


25 Amp Schottky Rectifiers

1N5829 — 1N5831



Notes:

1. 10-32 UNF3A threads
2. Full threads within 2 1/2 threads Standard Polarity: Stud is Cathode

| | Dim. Inches | | Millimeter | | |
|---|-------------|---------|------------|---------|-------|
| | Minimum | Maximum | Minimum | Maximum | Notes |
| A | --- | --- | --- | --- | 1 |
| B | .424 | .437 | 10.77 | 11.10 | |
| C | --- | .505 | --- | 12.82 | |
| D | .600 | .800 | 15.24 | 20.32 | |
| E | .422 | .453 | 10.72 | 11.50 | |
| F | .075 | .175 | 1.91 | 4.44 | |
| G | --- | .405 | --- | 10.29 | |
| H | .163 | .189 | 4.15 | 4.80 | 2 |
| J | --- | .250 | --- | 6.35 | |
| M | --- | .350 | --- | 8.89 | Dia. |
| N | .020 | .065 | .510 | 1.65 | |
| P | .060 | .100 | 1.53 | 2.54 | Dia. |

D0203AA (D04)

Microsemi
Catalog Number

Working Peak
Reverse Voltage

Repetitive Peak
Reverse Voltage

1N5829
1N5830
1N5831

20V
30V
40V

- Schottky Barrier Rectifier
- Guard ring protection
- Low forward voltage drop
- 25 Amperes
- 125°C Junction Temperature
- V_{RRM} 20 to 40 volts

Electrical Characteristics

| | 1N5829 | 1N5830 | 1N5831 | |
|------------------------------|--------------------|--------|--------|--------|
| Average forward current | I _{F(AV)} | 25A | 25A | 25A |
| Maximum surge current | I _{FSM} | 800A | 800A | 800A |
| Max peak forward voltage | V _{FM} | .360V | .370V | .380V |
| Max peak forward voltage | V _{FM} | .440V | .460V | .480V |
| Max peak forward voltage | V _{FM} | .720V | .770V | .820V |
| Max peak reverse current | I _{RM} | 150mA | 150mA | 150mA |
| Max peak reverse current | I _{RM} | 3.0mA | 3.0mA | 3.0mA |
| Typical junction capacitance | C _J | 1650pF | 1650pF | 1650pF |

T_C = 97°C, square wave, R_{θJC} = 1.75°C/W
8.3ms, half sine, T_J = 125°C

I_{FM} = 10A; T_J = 25°C*

I_{FM} = 25A; T_J = 25°C*

I_{FM} = 78.5A; T_J = 25°C*

V_{RRM,TJ} = 100°C

V_{RRM,TJ} = 25°C

T_J = 25°C, V_R = 5V, f = 1MHz

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

Thermal and Mechanical Characteristics

| | | |
|-------------------------------|------------------|------------------------------|
| Storage temperature range | T _{STG} | -65°C to 125°C |
| Operating junction temp range | T _J | -65°C to 125°C |
| Maximum thermal resistance | R _{θJC} | 1.75°C/W junction to case |
| Typical thermal resistance | R _{θJS} | 0.5°C/W junction to sink |
| Mounting torque | | 15 inch pounds maximum |
| Weight | | 6 grams (.02 ounces) typical |

3-7-00 Rev. 2



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www.microsemi.com

1N5829–1N5831

Figure 1
Typical Forward Characteristics

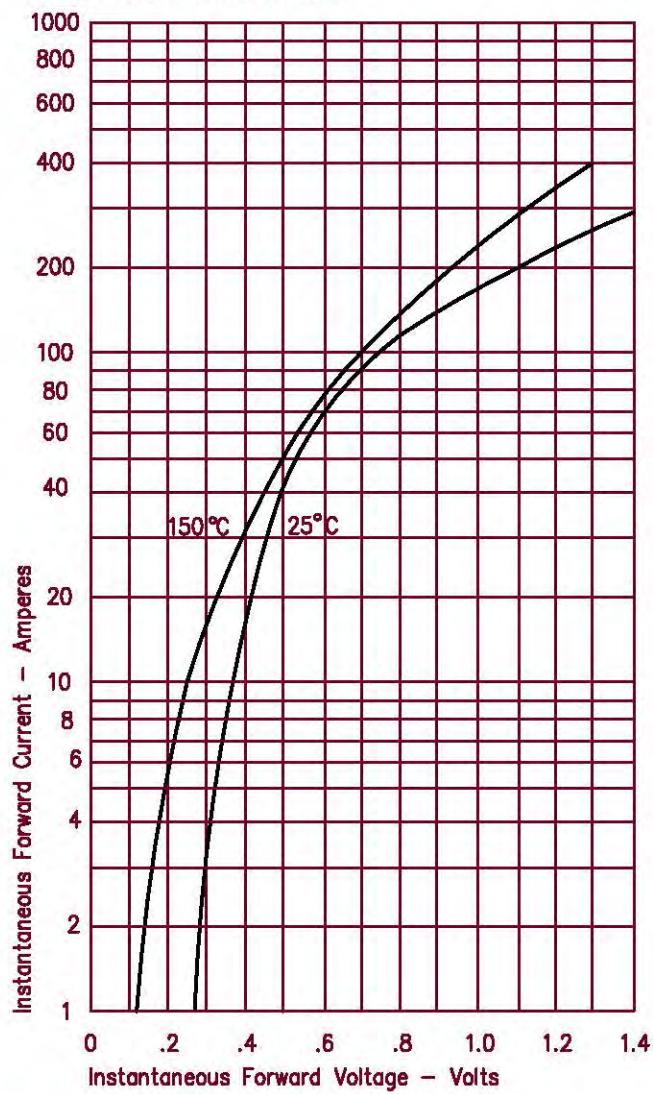


Figure 2
Typical Reverse Characteristics

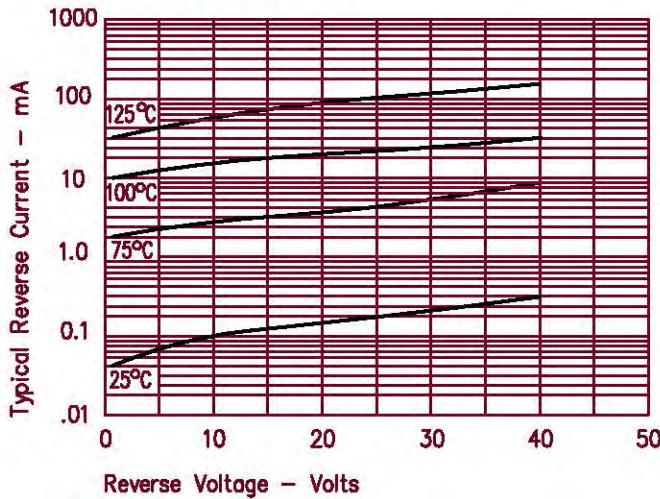


Figure 3
Typical Junction Capacitance

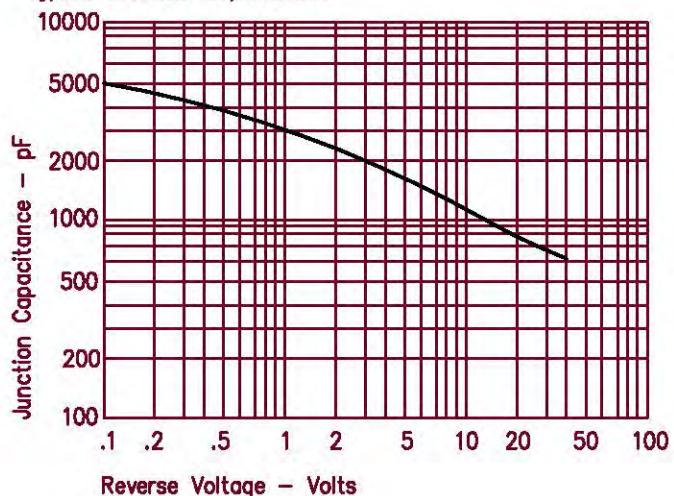


Figure 4
Maximum Forward Power Dissipation

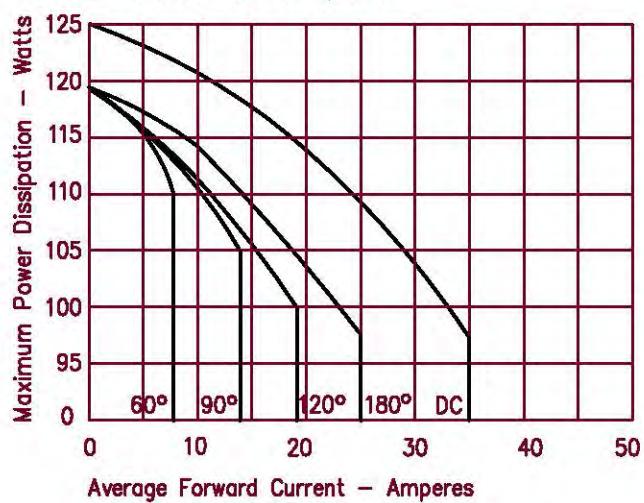


Figure 5
Maximum Forward Power Dissipation

