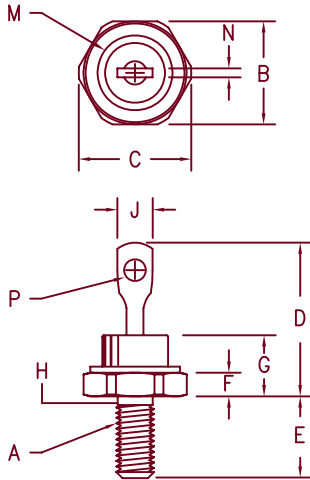


# 25 Amp Schottky Rectifiers 1N5829 – 1N5831



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

| Dim. | Inches  |         | Millimeter |         | Notes |
|------|---------|---------|------------|---------|-------|
|      | Minimum | Maximum | Minimum    | Maximum |       |
| 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                   | 20V                          | 20V                             |
| 1N5830                   | 30V                          | 30V                             |
| 1N5831                   | 40V                          | 40V                             |

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

| Electrical Characteristics   |                    |        |        |        |   |
|------------------------------|--------------------|--------|--------|--------|---|
|                              |                    | 1N5829 | 1N5830 | 1N5831 |   |
| Average forward current      | I <sub>F(AV)</sub> | 25A    | 25A    | 25A    | T <sub>C</sub> = 97°C, square wave, R <sub>θJC</sub> = 1.75°C/W<br>8.3ms, half sine, T <sub>J</sub> = 125°C<br>I <sub>FM</sub> = 10A: T <sub>J</sub> = 25°C*<br>I <sub>FM</sub> = 25A: T <sub>J</sub> = 25°C*<br>I <sub>FM</sub> = 78.5A: T <sub>J</sub> = 25°C*<br>V <sub>RRM, T<sub>J</sub></sub> = 100°C<br>V <sub>RRM, T<sub>J</sub></sub> = 25°C<br>T <sub>J</sub> = 25°C, V <sub>R</sub> = 5V, f = 1MHz |
| Maximum surge current        | I <sub>FSM</sub>   | 800A   | 800A   | 800A   |   |
| Max peak forward voltage     | V <sub>FM</sub>    | .360V  | .370V  | .380V  |   |
| Max peak forward voltage     | V <sub>FM</sub>    | .440V  | .460V  | .480V  |   |
| Max peak forward voltage     | V <sub>FM</sub>    | .720V  | .770V  | .820V  |   |
| Max peak reverse current     | I <sub>RM</sub>    | 150mA  | 150mA  | 150mA  |   |
| Max peak reverse current     | I <sub>RM</sub>    | 3.0mA  | 3.0mA  | 3.0mA  |   |
| Typical junction capacitance | C <sub>J</sub>     | 1650pF | 1650pF | 1650pF |   |

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

| Thermal and Mechanical Characteristics |                  |                              |
|--|------------------|------------------------------|
| Storage temperature range              | T <sub>STG</sub> | -65°C to 125°C               |
| Operating junction temp range          | T <sub>J</sub>   | -65°C to 125°C               |
| Maximum thermal resistance             | R <sub>θJC</sub> | 1.75°C/W junction to case    |
| Typical thermal resistance             | R <sub>θJS</sub> | 0.5°C/W junction to sink     |
| Mounting torque                        |                  | 15 inch pounds maximum       |
| Weight                                 |                  | 6 grams (.02 ounces) typical |



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# 1N5829-1N5831

Figure 1  
Typical Forward Characteristics

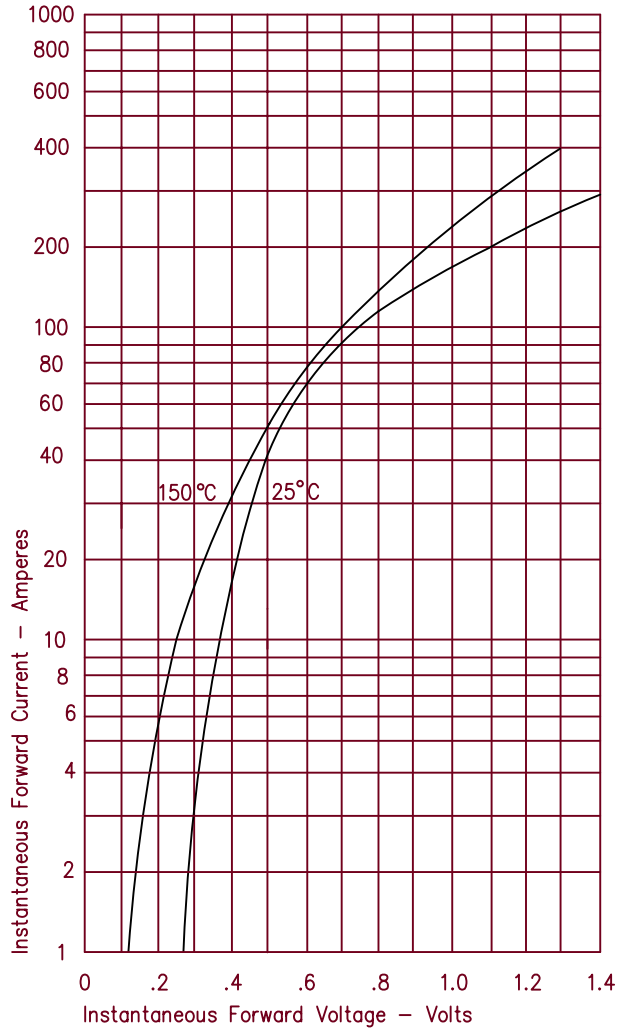


Figure 3  
Typical Junction Capacitance

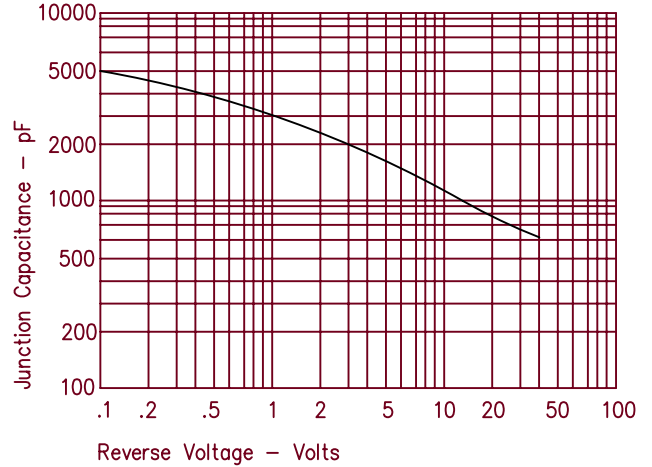


Figure 4  
Maximum Forward Power Dissipation

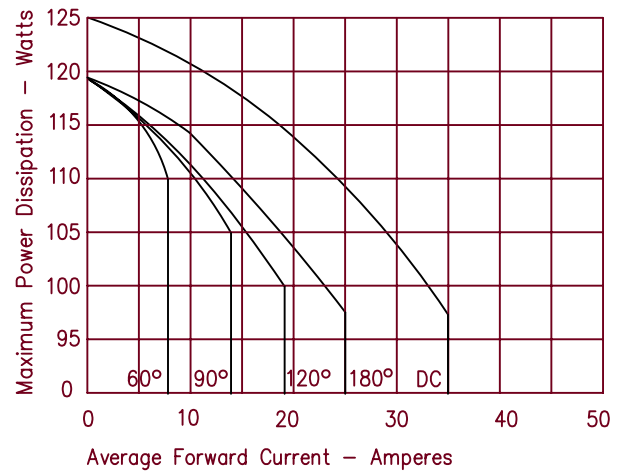


Figure 2  
Typical Reverse Characteristics

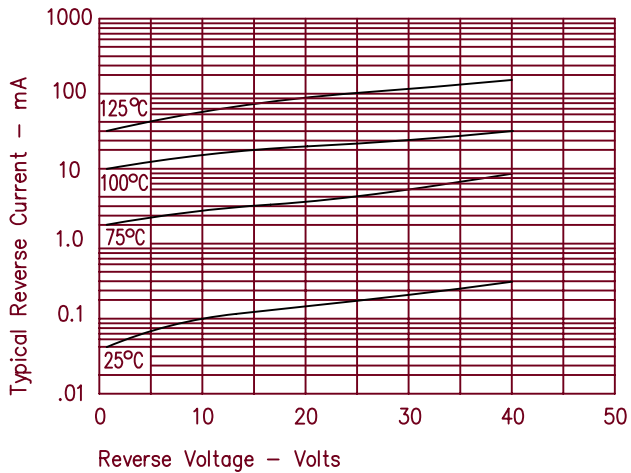


Figure 5  
Maximum Forward Power Dissipation

