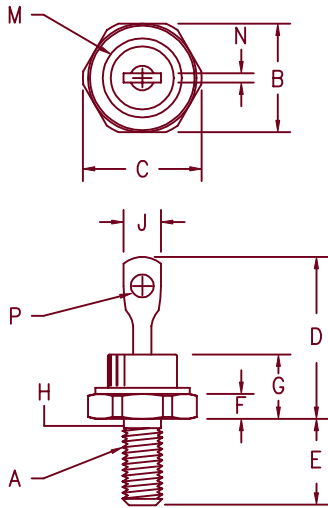


# 25 Amp Schottky Rectifiers 1N5829 — 1N5831



- 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
Maximum surge current	I <sub>FSM</sub>	800A	800A	800A	8.3ms, half sine, T <sub>J</sub> = 125°C
Max peak forward voltage	V <sub>FM</sub>	.360V	.370V	.380V	I <sub>FM</sub> = 10A: T <sub>J</sub> = 25°C*
Max peak forward voltage	V <sub>FM</sub>	.440V	.460V	.480V	I <sub>FM</sub> = 25A: T <sub>J</sub> = 25°C*
Max peak forward voltage	V <sub>FM</sub>	.720V	.770V	.820V	I <sub>FM</sub> = 78.5A: T <sub>J</sub> = 25°C*
Max peak reverse current	I <sub>RM</sub>	150mA	150mA	150mA	V <sub>RRM, T<sub>J</sub></sub> = 100°C
Max peak reverse current	I <sub>RM</sub>	3.0mA	3.0mA	3.0mA	V <sub>RRM, T<sub>J</sub></sub> = 25°C
Typical junction capacitance	C <sub>J</sub>	1650pF	1650pF	1650pF	T <sub>J</sub> = 25°C, V <sub>R</sub> = 5V, f = 1MHz

\*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

3-7-00 Rev. 2

# 1N5829-1N5831

Figure 1  
Typical Forward Characteristics

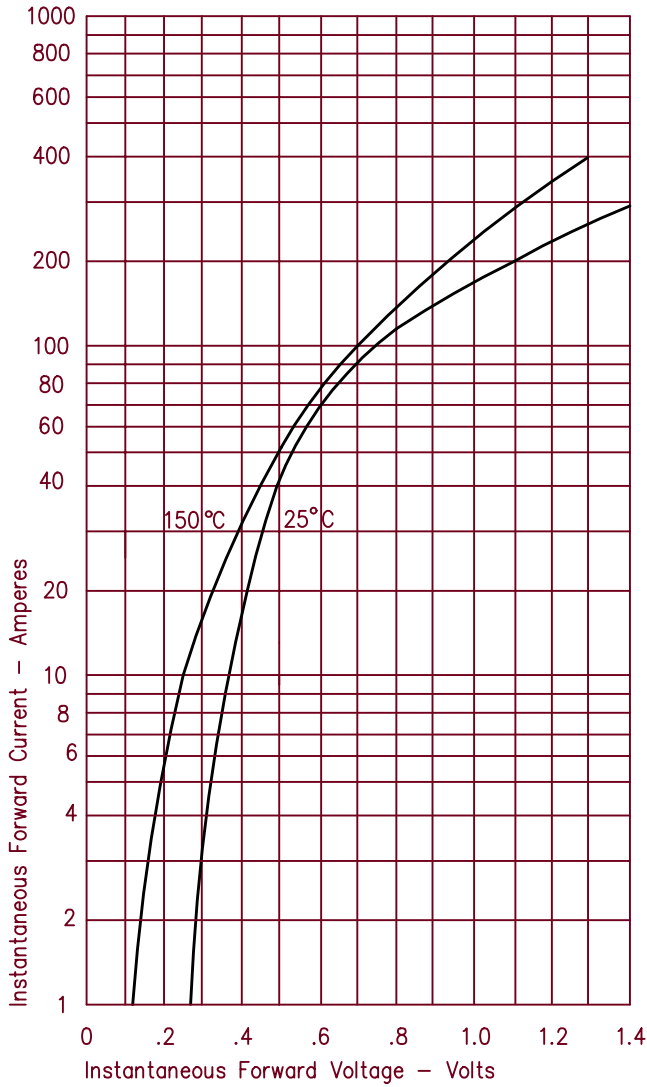


Figure 3  
Typical Junction Capacitance

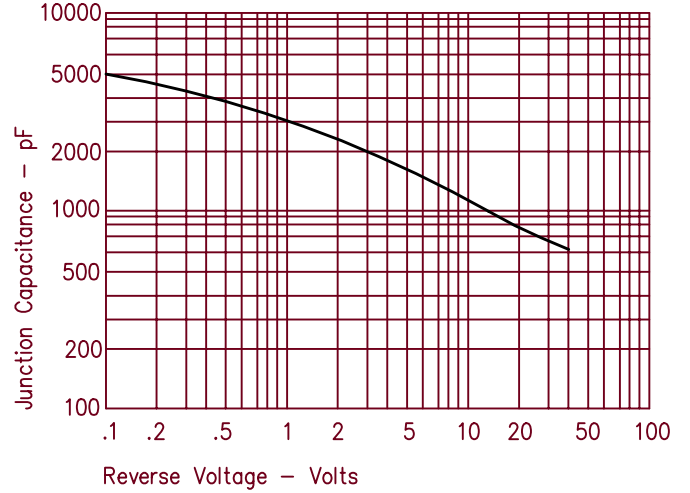


Figure 4  
Maximum Forward Power Dissipation

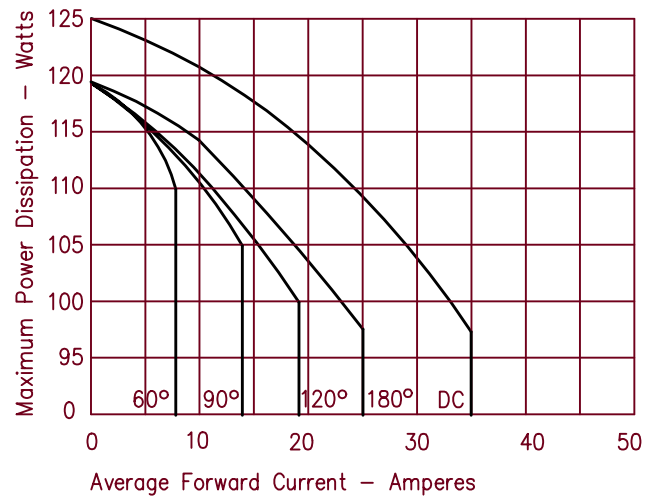


Figure 2  
Typical Reverse Characteristics

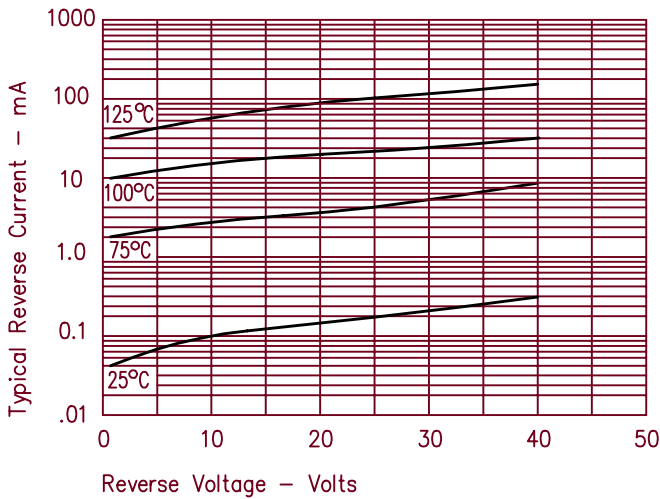


Figure 5  
Maximum Forward Power Dissipation

