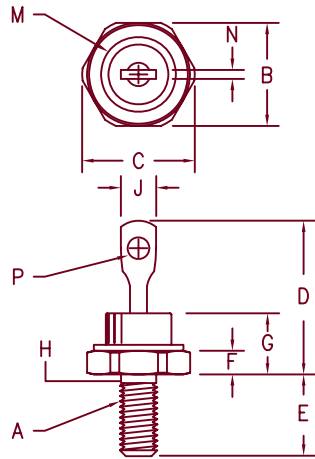


# 15 Amp Schottky Rectifier

## 1N5826 — 1N5828



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

| 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    | ----    | .310    | ----       | 7.87    |       |
| 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 |
|--------------------------|------------------------------|---------------------------------|
| 1N5826                   | 20V                          | 20V                             |
| 1N5827                   | 30V                          | 30V                             |
| 1N5828                   | 40V                          | 40V                             |

\*Add the Suffix R for Reverse Polarity

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- VRRM – 20 to 40V
- 15 Amperes
- Reverse Energy Tested

### Electrical Characteristics

|                                     |                            |  |
|-------------------------------------|----------------------------|--|
| Average forward current             | I <sub>F(AV)</sub> 15 Amps | T <sub>C</sub> = 117°C, Square wave, R <sub>θJC</sub> = 1.6°C/W<br>8.3 ms, half sine T <sub>J</sub> = 150°C<br>f = 1 KHz, 25°C, 1 μsec Square wave |
| Maximum surge current               | I <sub>FSM</sub> 600 Amps  |  |
| Max repetitive peak reverse current | I <sub>R(OV)</sub> 2 Amps  | I <sub>FM</sub> = 40A: T <sub>J</sub> = 25°C*<br>I <sub>FM</sub> = 40A: T <sub>J</sub> = 25°C*<br>I <sub>FM</sub> = 40A: T <sub>J</sub> = 25°C*    |
| Max peak forward voltage—1N5826     | V <sub>FM</sub> .67 Volts  |  |
| Max peak forward voltage—1N5827     | V <sub>FM</sub> .77 Volts  | V <sub>RRM</sub> , T <sub>J</sub> = 25°C<br>V <sub>R</sub> = 5.0V, T <sub>J</sub> = 25°C   |
| Max peak forward voltage—1N5828     | V <sub>FM</sub> .87 Volts  |  |
| Max peak reverse current            | I <sub>RM</sub> 2 mA       |  |
| Typical junction capacitance        | C <sub>J</sub> 1200 pF     |  |

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

### Thermal and Mechanical Characteristics

|                                      |                  |                                |
|--------------------------------------|------------------|--------------------------------|
| Storage temp range                   | T <sub>STG</sub> | -55°C to 175°C                 |
| Operating junction temp range        | T <sub>J</sub>   | -55°C to 150°C                 |
| Max thermal resistance               | R <sub>θJC</sub> | 1.6°C/W Junction to case       |
| Typical thermal resistance (greased) | R <sub>θCS</sub> | 0.5°C/W Case to sink           |
| Mounting torque                      |                  | 12-15 inch pounds              |
| Weight                               |                  | 0.2 ounces (6.0 grams) typical |



LAWRENCE

6 Lake Street  
Lawrence, MA 01841  
PH: (978) 620-2600  
FAX: (978) 689-0803  
www.microsemi.com

05-09-07 Rev. 1

# 1N5826 — 1N5828

Figure 1  
Typical Forward Characteristics

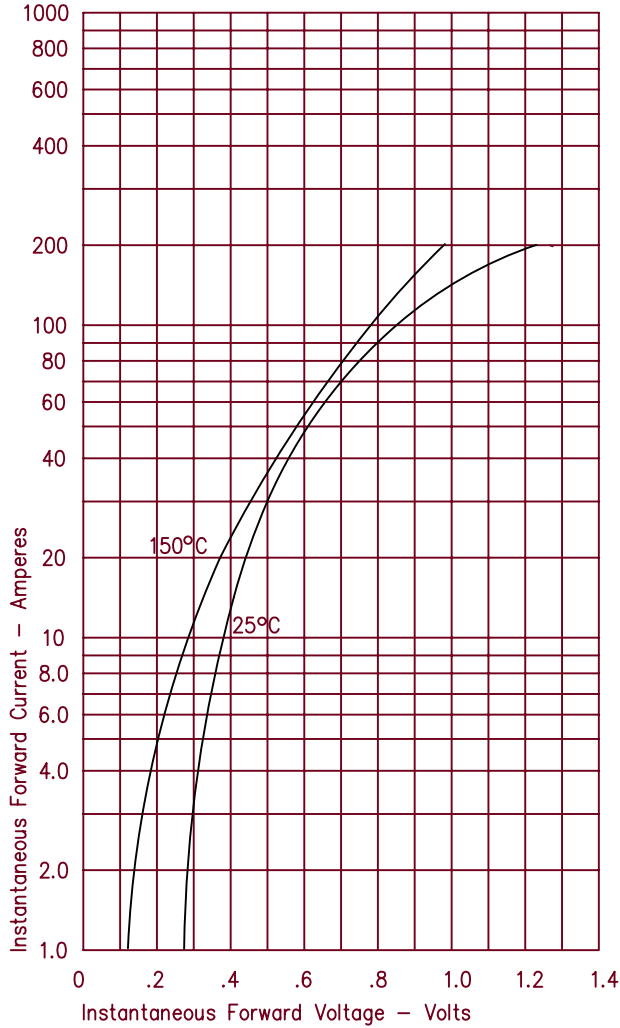


Figure 3  
Typical Junction Capacitance

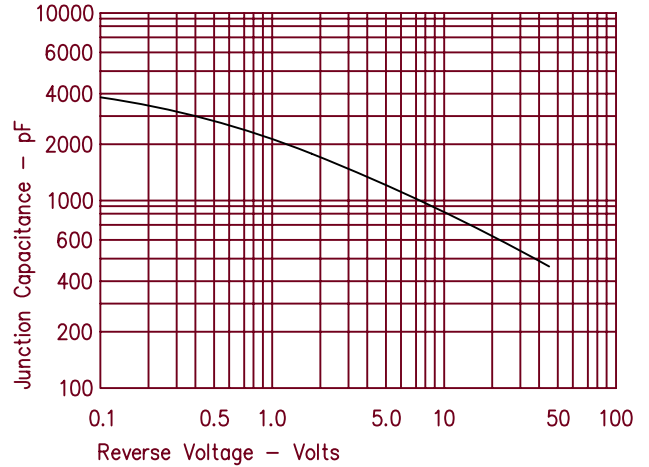


Figure 4  
Forward Current Derating

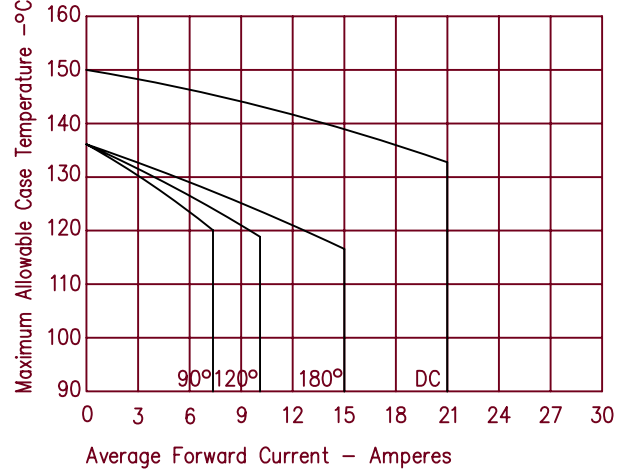


Figure 2  
Typical Reverse Characteristics

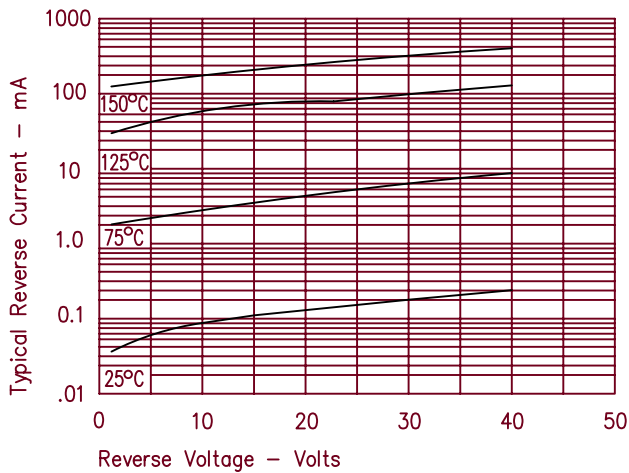


Figure 5  
Maximum Forward Power Dissipation

