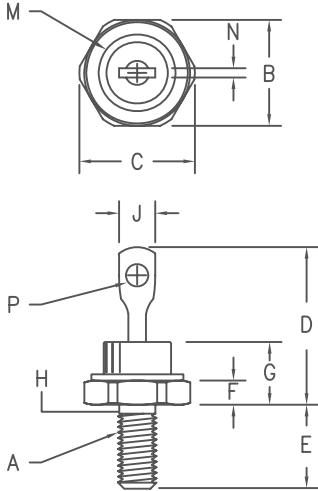


# Fast Recovery Rectifier

## 1N3879 — 1N3883



### 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    | ---     | .800    | ---        | 20.32   |       |
| E    | .422    | .453    | 10.72      | 11.50   |       |
| F    | .075    | .175    | 1.90       | 4.44    | 2     |
| G    | ---     | .405    | ---        | 10.29   |       |
| H    | .163    | .189    | 4.14       | 4.80    |       |
| J    | ---     | .250    | ---        | 6.35    |       |
| M    | ---     | .424    | ---        | 10.77   |       |
| N    | .020    | .065    | .510       | 1.65    | Dia.  |
| P    | .060    | ---     | 1.52       | ---     |       |

D0203AA (D04)

| Microsemi<br>Catalog Number | Working Peak<br>Reverse Voltage | Repetitive Peak<br>Reverse Voltage |
|-----------------------------|---------------------------------|------------------------------------|
| 1N3879*                     | 50V                             | 50V                                |
| 1N3880*                     | 100V                            | 100V                               |
| 1N3881*                     | 200V                            | 200V                               |
| 1N3882*                     | 300V                            | 200V                               |
| 1N3883*                     | 400V                            | 400V                               |

\*Add Suffix R For Reverse Polarity

- Fast Recovery Rectifier
- 175°C Junction Temperature
- $V_{RRM}$  100 to 400 Volts
- 6 Amps Current Rating

### Electrical Characteristics

|                              |                           |                                                                                                         |
|------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------|
| Average forward current      | $I_F(AV)$ 6 Amps          | $T_C = 100^\circ\text{C}$ , Square wave, $R_{\theta JC} = 2.0^\circ\text{C/W}$                          |
| Maximum surge current        | $I_{FSM}$ 200 Amps        | 8.3 ms, half sine $T_C = 100^\circ\text{C}$                                                             |
| Max peak forward voltage     | $V_{FM}$ 1.40 Volts       | $I_{FM} = 20\text{A}$ , $T_J = 25^\circ\text{C}$ *                                                      |
| Max peak reverse current     | $I_{RM}$ 3 mA             | $V_{RRM}$ , $T_J = 150^\circ\text{C}$                                                                   |
| Max peak reverse current     | $I_{RM}$ 15 $\mu\text{A}$ | $V_{RRM}$ , $T_J = 25^\circ\text{C}$                                                                    |
| Max reverse recovery time    | $t_{RR}$ 200 ns           | $I_F = 1\text{A dc}$ , $V_R = 30\text{V}$ , $di/dt = 25\text{A}/\mu\text{s}$ , $T_C = 55^\circ\text{C}$ |
| Typical junction capacitance | $C_J$ 115 pF              | $V_R = 10\text{V}$ , $f = 1\text{MHz}$ , $T_J = 25^\circ\text{C}$                                       |

\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

### Thermal and Mechanical Characteristics

|                               |                 |                                            |
|-------------------------------|-----------------|--------------------------------------------|
| Storage temp range            | $T_{STG}$       | $-65^\circ\text{C}$ to $175^\circ\text{C}$ |
| Operating junction temp range | $T_J$           | $-65^\circ\text{C}$ to $150^\circ\text{C}$ |
| Max thermal resistance        | $R_{\theta JC}$ | $2.0^\circ\text{C/W}$ Junction to case     |
| Mounting torque               |                 | 12–15 inch pounds                          |
| Weight                        |                 | .16 ounces (5.0 grams)                     |

# 1N3879 — 1N3883

Figure 1  
Typical Forward Characteristics

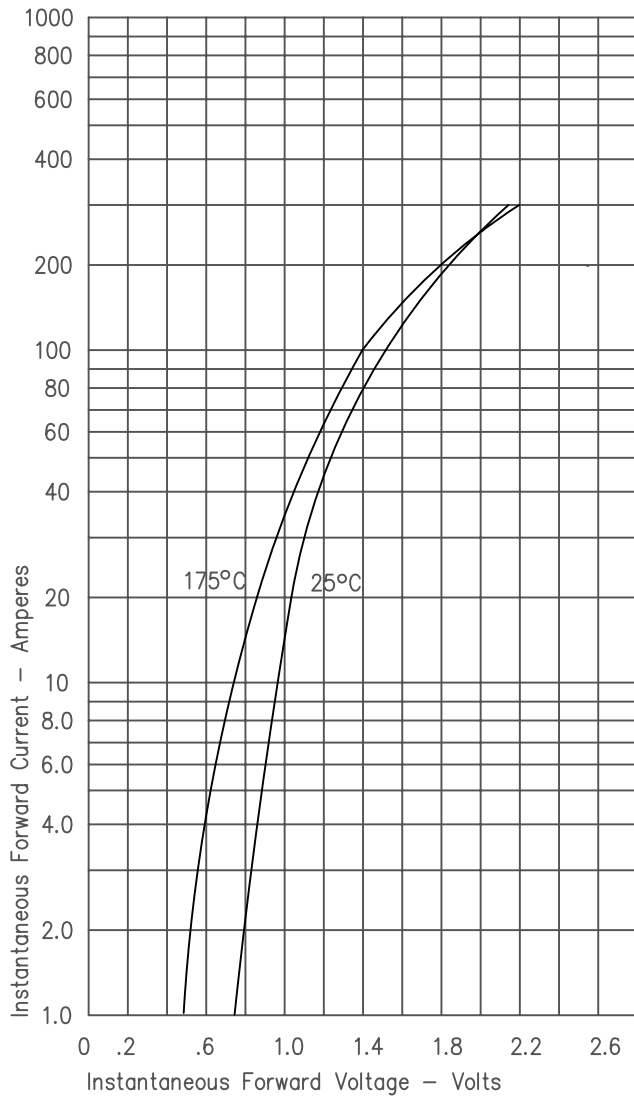


Figure 3  
Typical Junction Capacitance

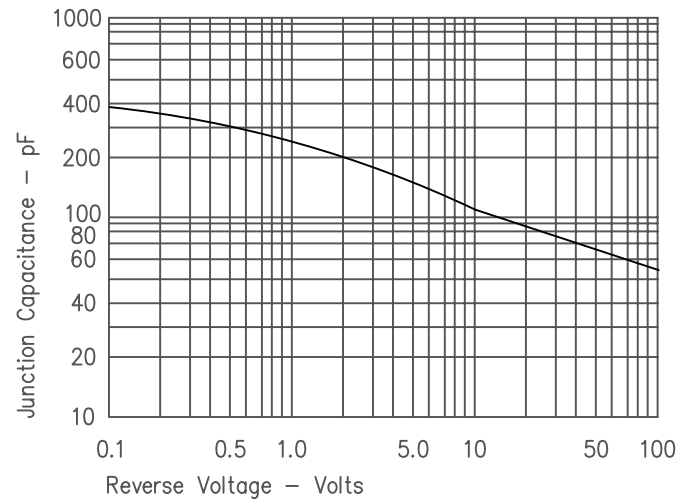


Figure 4  
Forward Current Derating

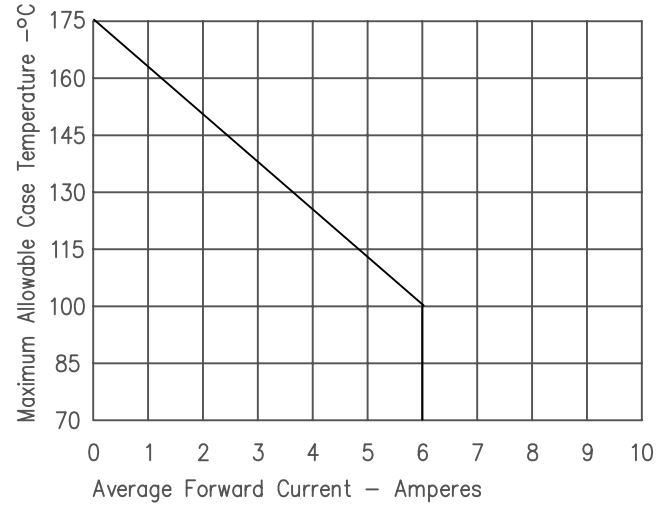


Figure 2  
Typical Reverse Characteristics

