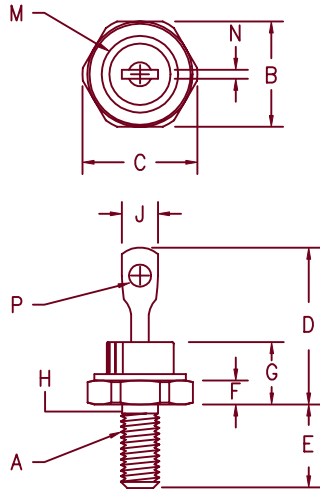


Fast Recovery Rectifier

1N3889 — 1N3893



Notes:

- 10-32 UNF3A threads
- Full threads within 2 1/2 threads
- 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 Catalog Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|--------------------------|------------------------------|---------------------------------|
| 1N3889* | 50V | 50V |
| 1N3890* | 100V | 100V |
| 1N3891* | 200V | 200V |
| 1N3892* | 300V | 300V |
| 1N3893* | 400V | 400V |

*Add Suffix R For Reverse Polarity

- Fast Recovery Rectifier
- 175°C Junction Temperature
- VRRM 100 to 400 Volts
- 12 Amps Current Rating

Electrical Characteristics

| | | |
|------------------------------|---------------------|---|
| Average forward current | $I_F(AV)$ 12 Amps | $T_C = 100^\circ C$, Square wave, $R_{\theta JC} = 2.0^\circ C/W$ |
| Maximum surge current | I_{FSM} 175 Amps | 8.3 ms, half sine $T_C = 100^\circ C$ |
| Max peak forward voltage | V_{FM} 1.50 Volts | $I_{FM} = 38A$ $T_J = 25^\circ C^*$ |
| Max peak reverse current | I_{RM} 2 mA | V_{RRM} , $T_J = 150^\circ C$ |
| Max peak reverse current | I_{RM} 10 μA | V_{RRM} , $T_J = 25^\circ C$ |
| Max reverse recovery time | t_{RR} 200 ns | $I_F = 1A$ dc, $V_R = 30V$, $di/dt = 25A/\mu s$, $T_C = 55^\circ C$ |
| Typical junction capacitance | C_J 115 pF | $V_R = 10V$, $f = 1Mhz$, $T_J = 25^\circ C$ |

*Pulse test: Pulse width 300 μs ec, Duty cycle 2%

Thermal and Mechanical Characteristics

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

1N3889 — 1N3893

Figure 1
Typical Forward Characteristics

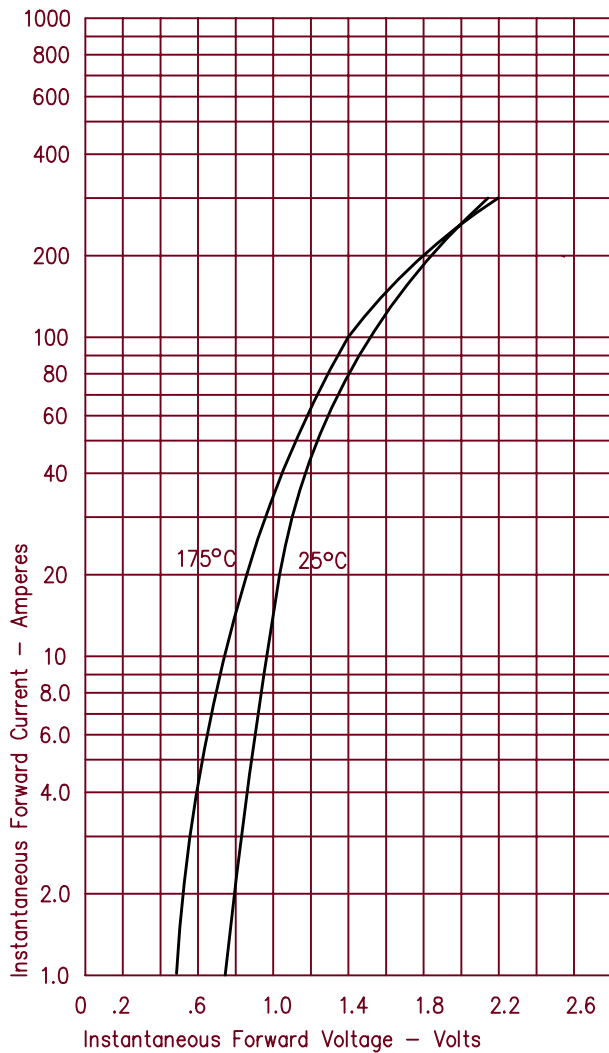


Figure 3
Typical Junction Capacitance

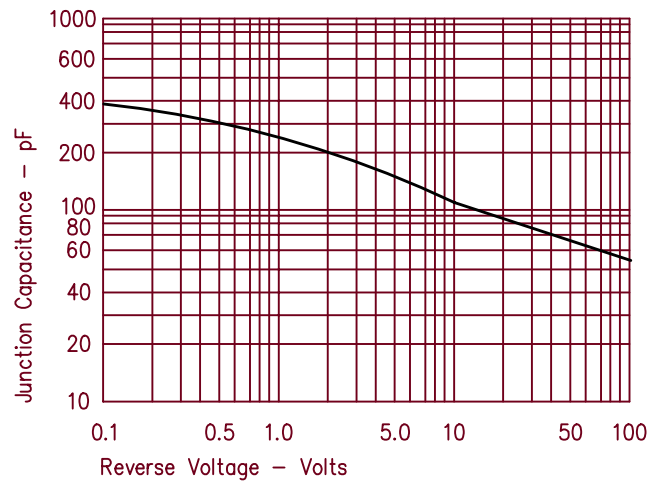


Figure 4
Forward Current Derating

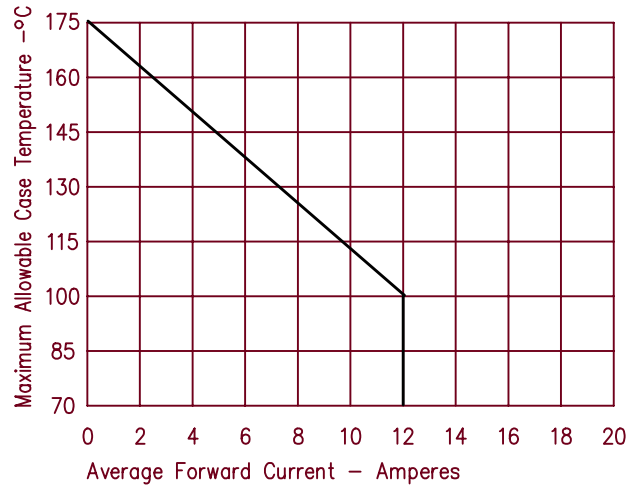


Figure 2
Typical Reverse Characteristics

