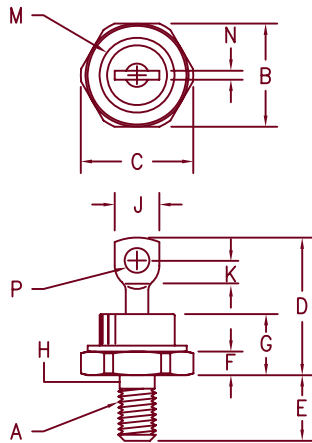


# 40 Amp Schottky Rectifier

## 1N5832 — 1N5834



### Notes:

1. Full threads within 2 1/2 threads
2. Stud is Cathode.

| Dim. | Inches  |         | Millimeter |         | Notes |
|------|---------|---------|------------|---------|-------|
|      | Minimum | Maximum | Minimum    | Maximum |       |
| A    | ---     | ---     | ---        | ---     | 1,2   |
| B    | .669    | .687    | 16.99      | 17.45   |       |
| C    | ---     | .794    | ---        | 20.17   |       |
| D    | ---     | 1.00    | ---        | 25.40   |       |
| E    | .422    | .453    | 10.72      | 11.51   |       |
| F    | .115    | .200    | 2.92       | 5.08    |       |
| G    | ---     | .450    | ---        | 11.43   |       |
| H    | .220    | .249    | 5.59       | 6.32    | 1     |
| J    | ---     | .375    | ---        | 9.52    |       |
| K    | .156    | ---     | 3.96       | ---     |       |
| M    | ---     | .515    | ---        | 13.08   | Dia   |
| N    | ---     | .080    | ---        | 2.03    |       |
| P    | .140    | .175    | 3.56       | 4.44    | Dia   |

DO-213AB (DO-5)

| Microsemi Catalog Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|--------------------------|------------------------------|---------------------------------|---------------------------------|
| 1N5832                   | 20V                          | 20V                             | 24V                             |
| 1N5833                   | 30V                          | 30V                             | 36V                             |
| 1N5834                   | 40V                          | 40V                             | 48V                             |

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- 40 Amperes
- 125°C Junction Temperature
- $V_{RRM}$  20 to 40 Volts

### Electrical Characteristics

|                              |           | 1N5832 | 1N5833 | 1N5834 |                                                                       |
|------------------------------|-----------|--------|--------|--------|-----------------------------------------------------------------------|
| Average forward current      | $I_F(AV)$ | 40A    | 40A    | 40A    | $T_C = 100^\circ C$ , half sine wave, $R_{\theta JC} = 1.0^\circ C/W$ |
| Maximum surge current        | $I_{FSM}$ | 800A   | 800A   | 800A   | 8.3ms, half sine, $T_J = 125^\circ C$                                 |
| Max peak forward voltage     | $V_{FM}$  | .360V  | .370V  | .380V  | $I_{FM} = 10A, T_J = 25^\circ C^*$                                    |
| Max peak forward voltage     | $V_{FM}$  | .520V  | .550V  | .590V  | $I_{FM} = 40A, T_J = 25^\circ C^*$                                    |
| Max peak forward voltage     | $V_{FM}$  | .980V  | 1.080V | 1.180V | $I_{FM} = 125A, T_J = 25^\circ C^*$                                   |
| Max peak reverse current     | $I_{RM}$  | 150mA  | 150mA  | 150mA  | $V_{RRM}, T_J = 100^\circ C$                                          |
| Max peak reverse current     | $I_{RM}$  | 20mA   | 20mA   | 20mA   | $V_{RRM}, T_J = 25^\circ C^*$                                         |
| Typical junction capacitance | $C_J$     | 2200pF | 2200pF | 2200pF | $T_J = 25^\circ C, V_R = 5V$                                          |

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

### Thermal and Mechanical Characteristics

|                               |                 |                                 |
|-------------------------------|-----------------|---------------------------------|
| Storage temp range            | $T_{STG}$       | -65°C to 175°C                  |
| Operating junction temp range | $T_J$           | -65°C to 125°C                  |
| Max thermal resistance        | $R_{\theta JC}$ | 1.0°C/W junction to Case        |
| Max mounting torque           |                 | 30 inch pounds maximum          |
| Typical Weight                |                 | .54 ounces (15.3 grams) typical |



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05-09-07 Rev. 2

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Figure 1  
Typical Forward Characteristics

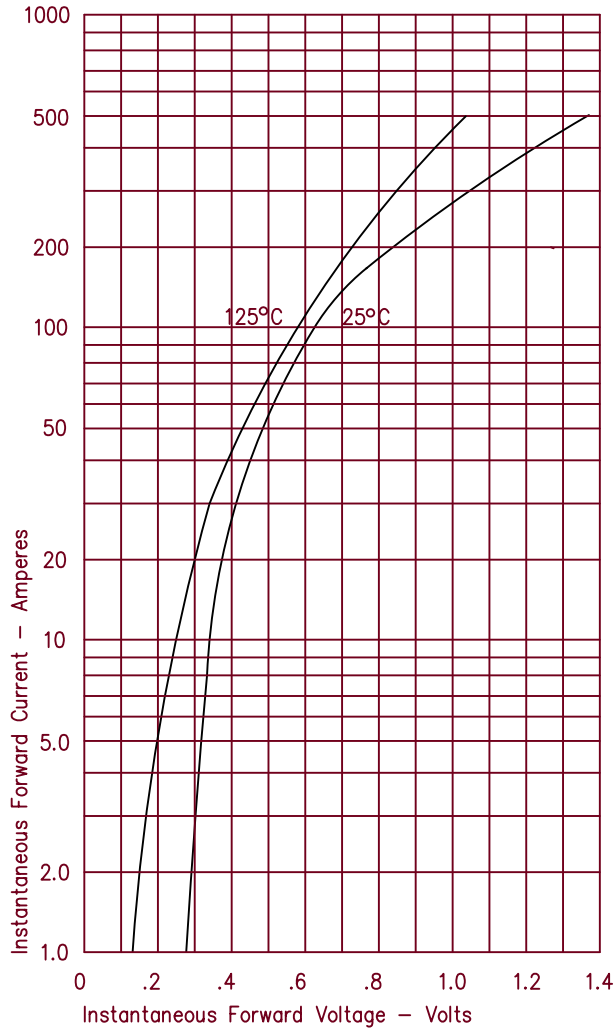


Figure 3  
Typical Junction Capacitance

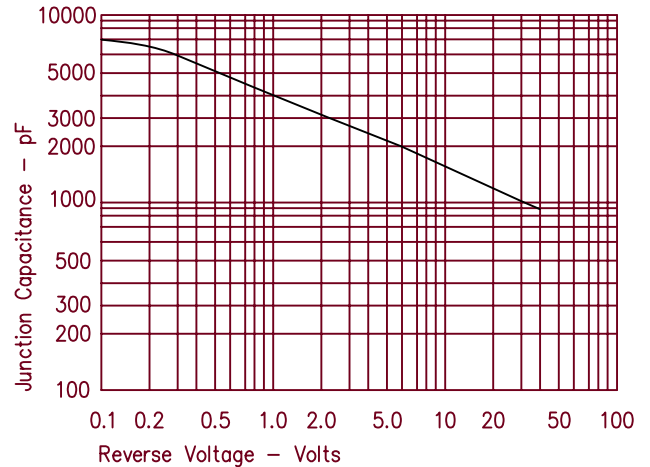


Figure 4  
Forward Current Derating

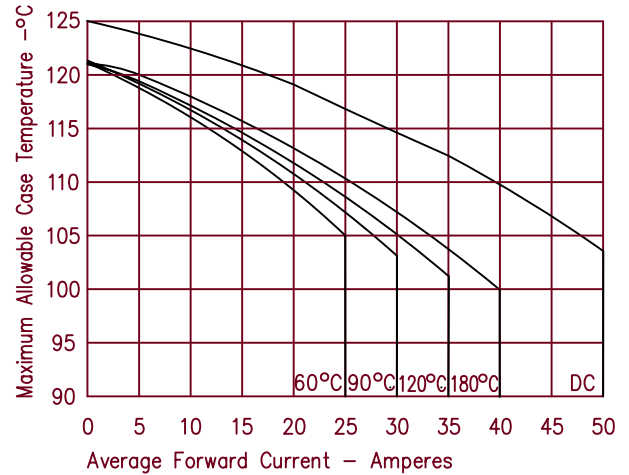


Figure 2  
Typical Reverse Characteristics

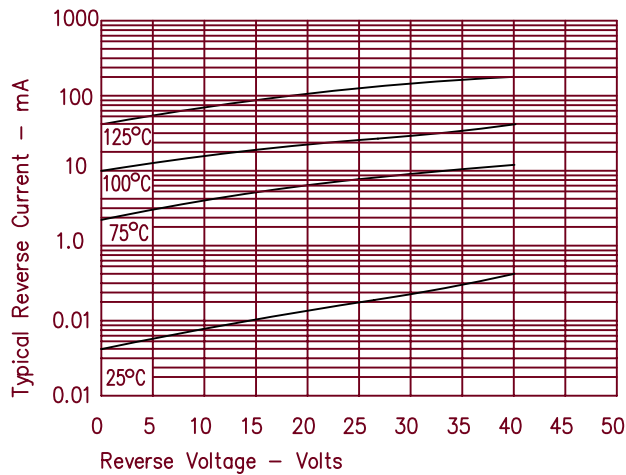


Figure 5  
Maximum Forward Power Dissipation

