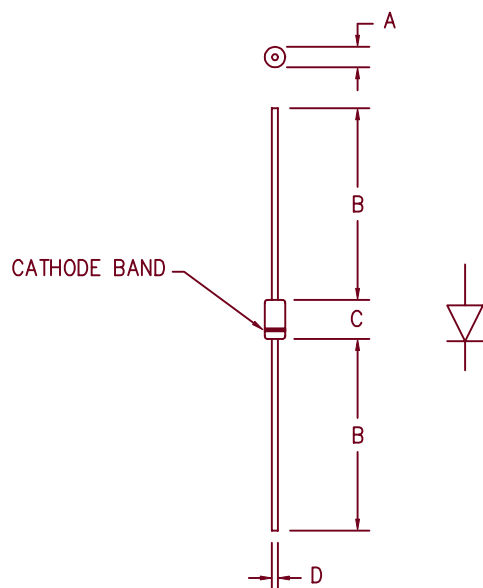


# 1 Amp Schottky Rectifier

## 1N5817, 1N5818, 1N5819



| Dim. | Inches  |         | Millimeter |         | Notes |
|------|---------|---------|------------|---------|-------|
|      | Minimum | Maximum | Minimum    | Maximum |       |
| A    | .081    | .107    | 2.057      | 2.718   | Dia.  |
| B    | 1.10    | ---     | 27.94      | ---     |       |
| C    | .160    | .205    | 4.064      | 5.207   |       |
| D    | .028    | .034    | .711       | .864    | Dia.  |

PLASTIC D041

| Microsemi<br>Catalog Number | Industrial<br>Part Number | Working<br>Peak Reverse<br>Voltage | Repetitive<br>Peak Reverse<br>Voltage |
|-----------------------------|---------------------------|------------------------------------|---------------------------------------|
| 1N5817                      | VSK120                    | 20V                                | 20V                                   |
| 1N5818                      | VSK130                    | 30V                                | 30V                                   |
| 1N5819                      | VSK140                    | 40V                                | 40V                                   |

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- High Reliability
- High Current Capability

### Electrical Characteristics

|                              |           | 1N5817 | 1N5818 | 1N5819 |                                          |
|------------------------------|-----------|--------|--------|--------|------------------------------------------|
| Average forward current      | $I_F(AV)$ | 1A     | 1A     | 1A     | $R_{\theta JL} = 15^\circ C/W, L = 1/4"$ |
| Ambient Temperature          |           | 135°C  | 130°C  | 130°C  | 8.3ms, half sine, $T_J = 150^\circ C$    |
| Maximum surge current        | $I_{FSM}$ | 50A    | 50A    | 50A    | $I_{FM} = 0.1A: T_J = 25^\circ C^*$      |
| Max peak forward voltage     | $V_{FM}$  | .32V   | .37V   | .37V   | $I_{FM} = 1.0A: T_J = 25^\circ C^*$      |
| Max peak forward voltage     | $V_{FM}$  | .45V   | .55V   | .55V   | $I_{FM} = 3.0A: T_J = 25^\circ C^*$      |
| Max peak forward voltage     | $V_{FM}$  | .65V   | .85V   | .85V   | $V_{RRM}, T_J = 25^\circ C$              |
| Max peak reverse current     | $I_{RM}$  | 1mA    | 1mA    | 1mA    | $V_R = 5.0V, T_J = 25^\circ C$           |
| Typical junction capacitance | $C_J$     | 105pF  | 50pF   | 50pF   |                                          |

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

### Thermal and Mechanical Characteristics

|                               |                            |                                  |
|-------------------------------|----------------------------|----------------------------------|
| Storage temperature range     | $T_{STG}$                  | -55°C to 150°C                   |
| Operating junction temp range | $T_J$                      | -55°C to 150°C                   |
| Maximum thermal resistance    | $L = 1/4"$ $R_{\theta JL}$ | 15°C/W Junction to Lead          |
| Weight                        |                            | .011 ounces (0.34 grams) typical |

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# 1N5817

Figure 1  
Typical Forward Characteristics

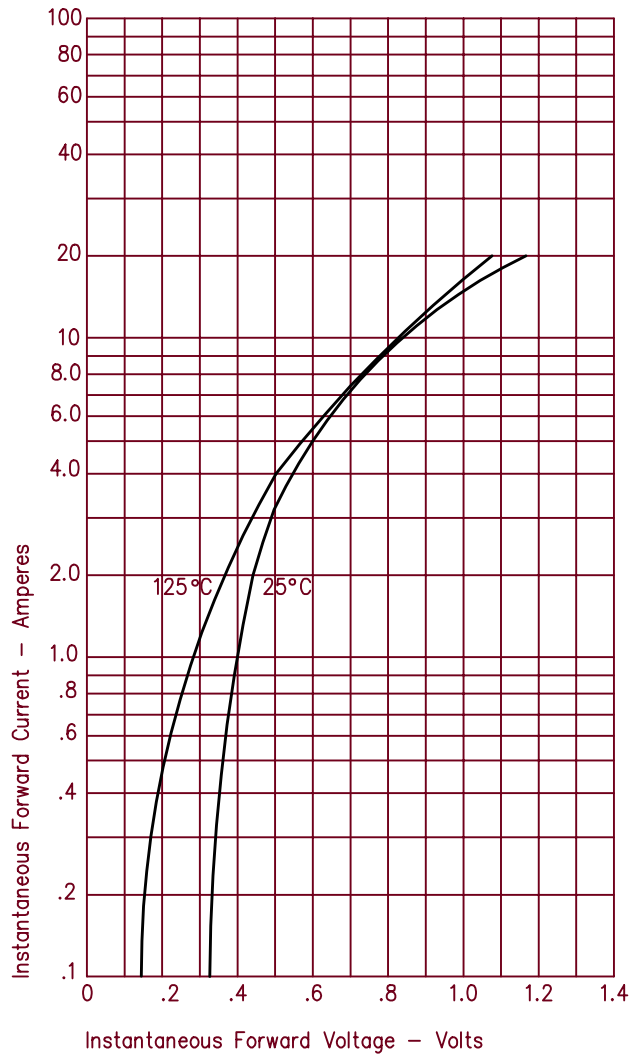


Figure 3  
Typical Junction Capacitance

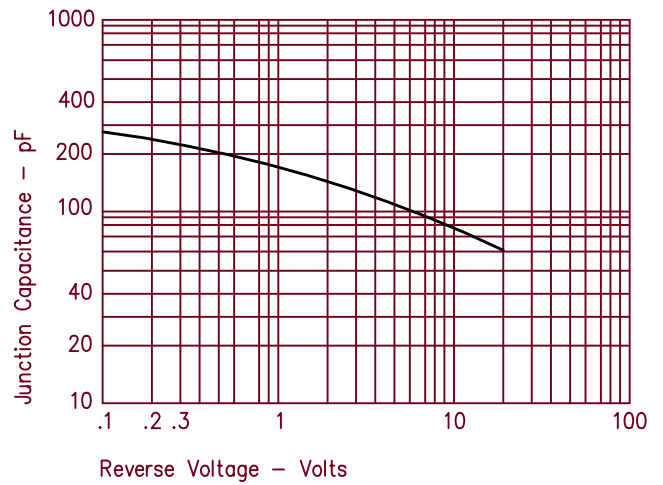
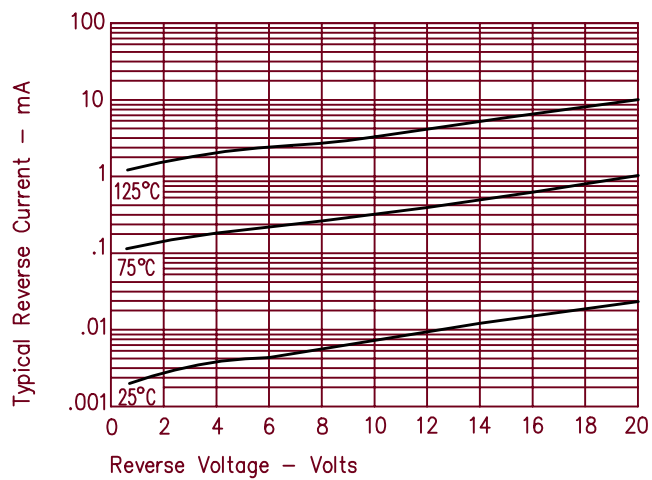


Figure 2  
Typical Reverse Characteristics



# 1N5818 & 1N5819

Figure 1  
Typical Forward Characteristics

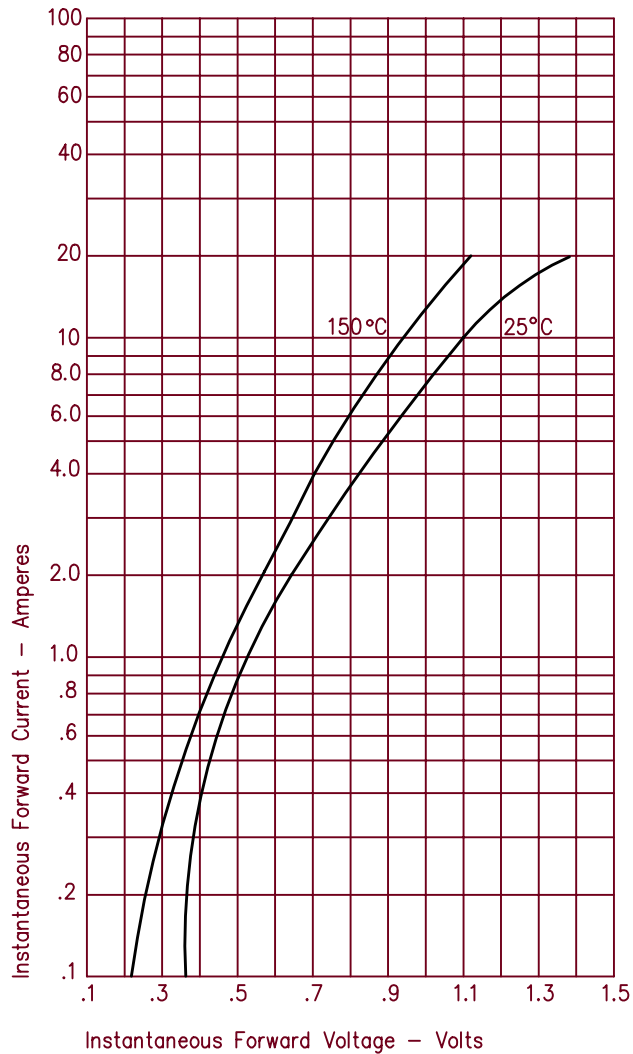


Figure 3  
Typical Junction Capacitance

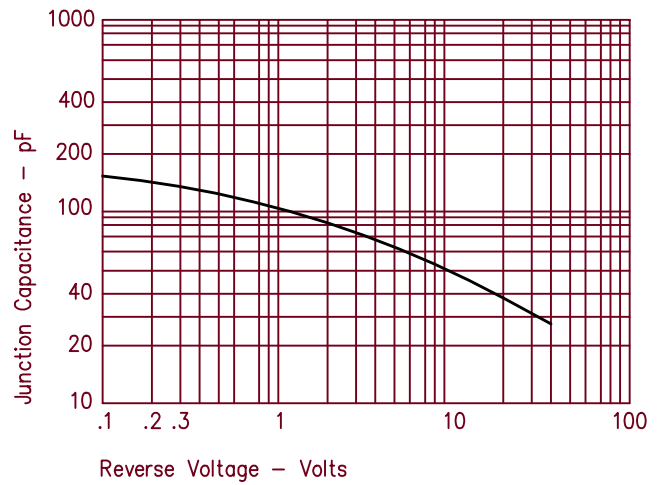


Figure 2  
Typical Reverse Characteristics

