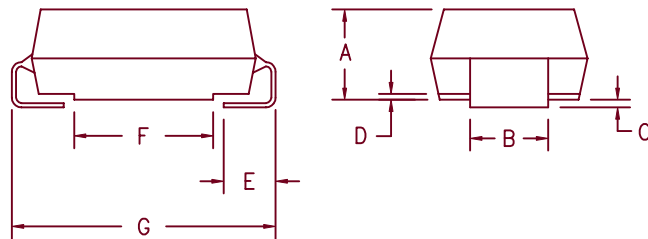
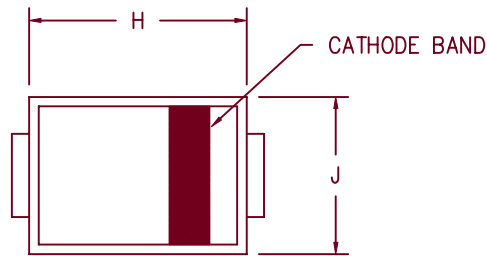


# 1 Amp Schottky Rectifiers 5817SMJ — 5819SMJ



| Dim. | Inches  |         | Millimeter |         | Notes |
|------|---------|---------|------------|---------|-------|
|      | Minimum | Maximum | Minimum    | Maximum |       |
| A    | .078    | .116    | 1.98       | 2.95    |       |
| B    | .075    | .089    | 1.90       | 2.25    |       |
| C    | .002    | .008    | 0.05       | 0.20    |       |
| D    | ---     | .020    | ---        | 0.51    |       |
| E    | .035    | .055    | 0.89       | 1.40    |       |
| F    | .065    | .091    | 1.65       | 2.32    |       |
| G    | .205    | .224    | 5.21       | 5.69    |       |
| H    | .160    | .180    | 4.06       | 4.57    |       |
| J    | .130    | .155    | 3.30       | 3.94    |       |

SMB

| Microsemi Catalog Number | Industry Part Number           | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|--------------------------|--------------------------------|------------------------------|---------------------------------|
| 5817SMJ                  | SK12<br>MBRS120T3              | 20V                          | 20V                             |
| 5818SMJ                  | SK13<br>MBRS130T3<br>MBRS130TR | 30V                          | 30V                             |
| 5819SMJ                  | SK14<br>MBRS140T3              | 40V                          | 40V                             |

- Underwriters Laboratory Flammability Class 94V-0
- Schottky Barrier Rectifier
- Guard ring protection
- Low forward voltage
- Low thermal resistance rating

## Electrical Characteristics

|                              |                    | 5817SMJ | 5818SMJ | 5819SMJ |   |
|------------------------------|--------------------|---------|---------|---------|---|
| Average forward current      | I <sub>F(AV)</sub> | 1A      | 1A      | 1A      | Square wave                                     |
| Lead temperature             | T <sub>L</sub>     | 117°C   | 118°C   | 118°C   | R <sub>θJC</sub> = 15°C/W                       |
| Maximum surge current        | I <sub>FSM</sub>   | 50A     | 50A     | 50A     | 8.3ms, half sine, T <sub>J</sub> = 150°C        |
| Max peak forward voltage     | V <sub>FM</sub>    | .32V    | .37V    | .37V    | I <sub>FM</sub> = 0.1A; T <sub>J</sub> = 25°C * |
| Max peak forward voltage     | V <sub>FM</sub>    | .45V    | .55V    | .55V    | I <sub>FM</sub> = 1.0A; T <sub>J</sub> = 25°C * |
| Max peak forward voltage     | V <sub>FM</sub>    | .65V    | .85V    | .85V    | I <sub>FM</sub> = 3.0A; T <sub>J</sub> = 25°C * |
| Max peak reverse current     | I <sub>RM</sub>    | 1mA     | 1mA     | 1mA     | V <sub>RRM, T<sub>J</sub></sub> = 25°C          |
| Typical junction capacitance | C <sub>J</sub>     | 105pF   | 50pF    | 50pF    | V <sub>R</sub> = 5.0V, T <sub>J</sub> = 25°C    |

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

## Thermal and Mechanical Characteristics

|                               |                  |                                   |
|-------------------------------|------------------|-----------------------------------|
| Storage temperature range     | T <sub>STG</sub> | -55°C to 150°C                    |
| Operating junction temp range | T <sub>J</sub>   | -55°C to 150°C                    |
| Maximum thermal resistance    | R <sub>θJC</sub> | 15°C/W Junction to lead           |
| Weight                        |                  | .0047 ounces (.013 grams) typical |

9-17-03 Rev. 5

# 5817SMJ

Figure 1  
Typical Forward Characteristics

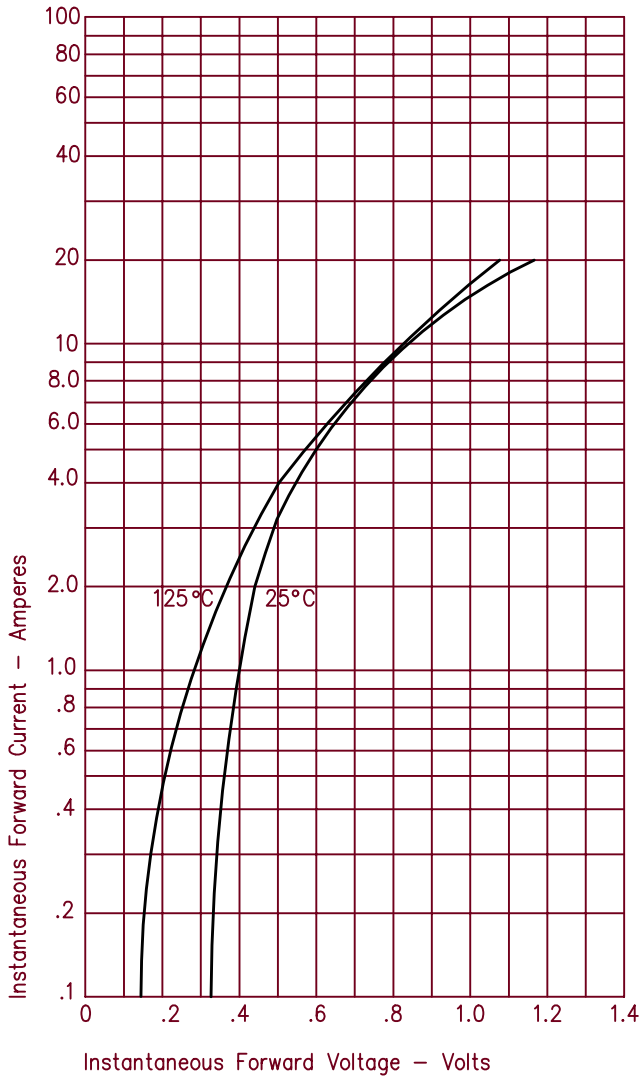


Figure 3  
Typical Junction Capacitance

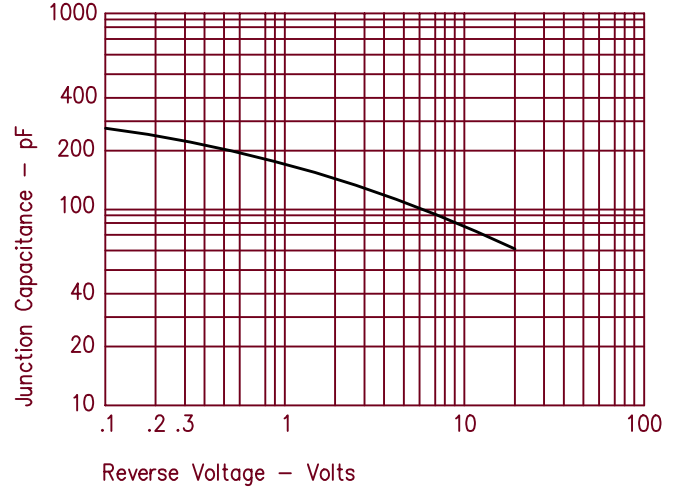
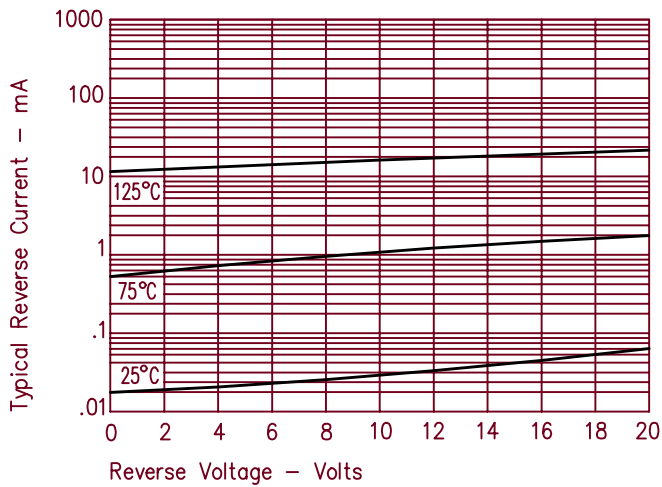


Figure 2  
Typical Reverse Characteristics



# 5818SMJ & 5819SMJ

Figure 1  
Typical Forward Characteristics

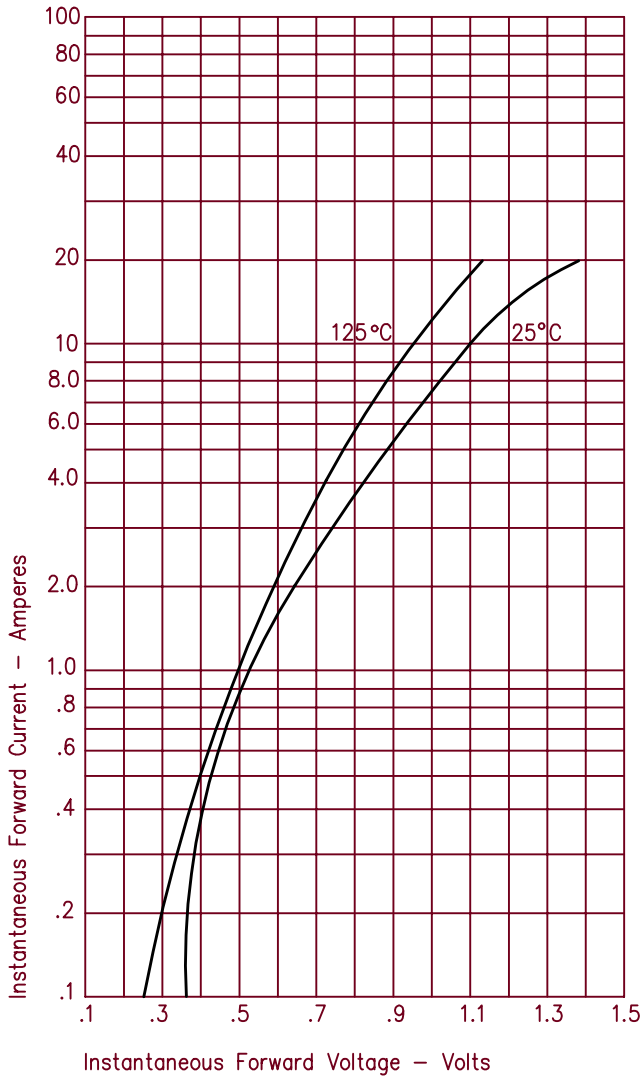


Figure 3  
Typical Junction Capacitance

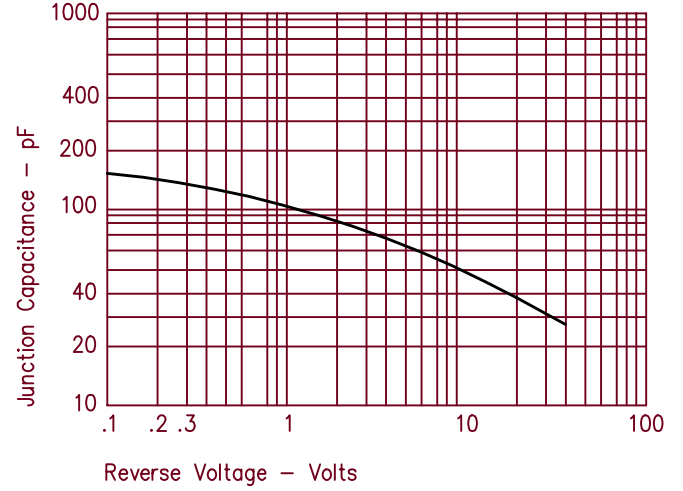


Figure 2  
Typical Reverse Characteristics

