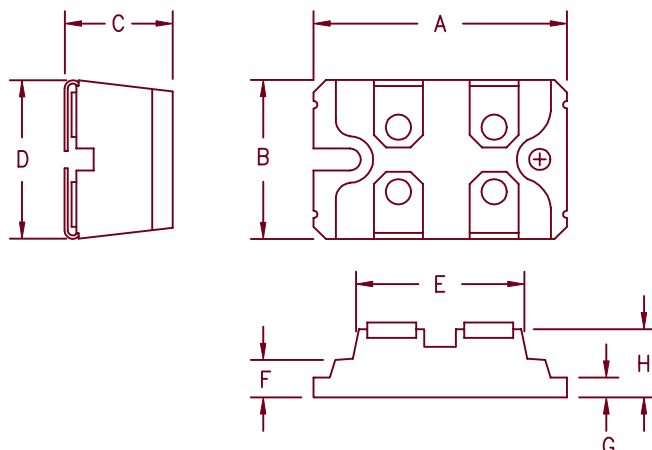
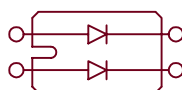


# 2 X 160A Schottky Barrier Rectifier SPB16035 — SPB16045



| Dim. | Inches  |         | Millimeter |         | Notes |
|------|---------|---------|------------|---------|-------|
|      | Minimum | Maximum | Minimum    | Maximum |       |
| A    | 1.494   | 1.504   | 37.95      | 38.20   |       |
| B    | 0.976   | 0.986   | 24.79      | 25.04   |       |
| C    | 0.472   | 0.480   | 12.00      | 12.24   |       |
| D    | 0.990   | 1.000   | 25.15      | 25.40   |       |
| E    | 1.049   | 1.059   | 26.67      | 26.90   |       |
| F    | 0.164   | 0.174   | 4.16       | 4.42    |       |
| G    | 0.080   | 0.084   | 2.03       | 2.13    |       |
| H    | 0.372   | 0.378   | 9.45       | 9.60    |       |

SOT-227



| Microsemi<br>Catalog Number | Industry<br>Part Number       | Working Peak<br>Reverse Voltage | Repetitive Peak<br>Reverse Voltage |
|-----------------------------|-------------------------------|---------------------------------|------------------------------------|
| SPB16035                    |                               | 35V                             | 35V                                |
| SPB16040                    |                               | 40V                             | 40V                                |
| SPB16045                    | DSS2x121-0045B<br>STPS24045TV | 45V                             | 45V                                |

- 2500V isolation — Terminals to Base
- Low Forward Voltage Drop
- 2 Schottky Rectifiers in one pkg.
- 35–45V @ 160A/leg
- Low Switching losses

## Electrical Characteristics

|                                            |                      |                                                                         |
|--------------------------------------------|----------------------|-------------------------------------------------------------------------|
| Average forward current per leg            | $I_{F(AV)}$ 160 Amps | $T_C = 76^\circ\text{C}$                                                |
| Average forward current per package        | $I_{F(AV)}$ 320 Amps | $T_C = 76^\circ\text{C}$                                                |
| Maximum surge current per leg              | $I_{FSM}$ 2500 Amps  | 8.3ms, half sine, $T_J = 175^\circ\text{C}$                             |
| Maximum repetitive reverse current per leg | $I_{R(OV)}$ 2 Amps   | $f = 1\text{ KHz}$ , $25^\circ\text{C}$ , 1 $\mu\text{sec}$ square wave |
| Max peak forward voltage per leg           | $V_{FM}$ 0.57 Volts  | $I_{FM} = 160\text{A}$ ; $T_J = 25^\circ\text{C}^*$                     |
| Max peak reverse current per leg           | $I_{RM}$ 8 mA        | $V_{RRM}$ , $T_J = 25^\circ\text{C}^*$                                  |
| Max peak reverse current per leg           | $V_{ISOL}$ 2500 VDC  | any terminal to base                                                    |
| Typical junction capacitance per leg       | $C_J$ 7000 pF        | $V_R = 5.0\text{V}$ , $T_J = 25^\circ\text{C}$                          |

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

## Thermal and Mechanical Characteristics

|                                |                 |                                            |
|--------------------------------|-----------------|--------------------------------------------|
| Storage temp range             | $T_{STG}$       | $-55^\circ\text{C}$ to $175^\circ\text{C}$ |
| Operating junction temp range  | $T_J$           | $-55^\circ\text{C}$ to $150^\circ\text{C}$ |
| Max thermal resistance per leg | $R_{\theta JC}$ | 0.35 $^\circ\text{C/W}$                    |
| Max thermal resistance per pkg | $R_{\theta JC}$ | 0.18 $^\circ\text{C/W}$                    |
| Mounting Torque                |                 | 9–13 inch pounds                           |
| Weight                         |                 | 1.1 ounces (30 grams) typical              |

# SPB16035 — SPB16045

Figure 1  
Typical Forward Characteristics — Per Leg

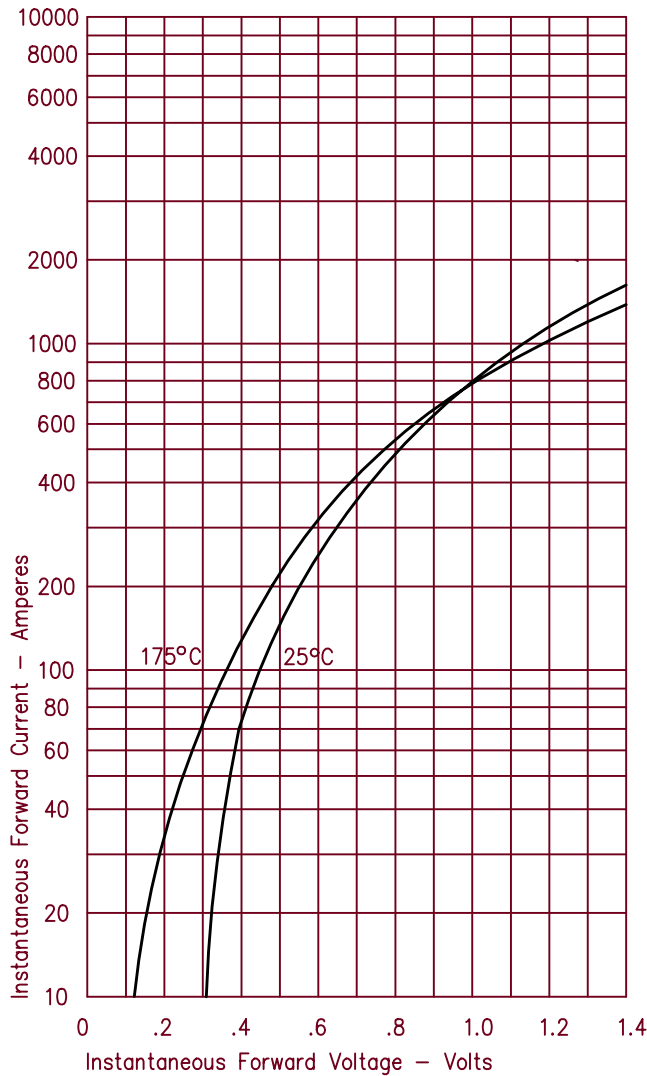


Figure 3  
Typical Junction Capacitance — Per Leg

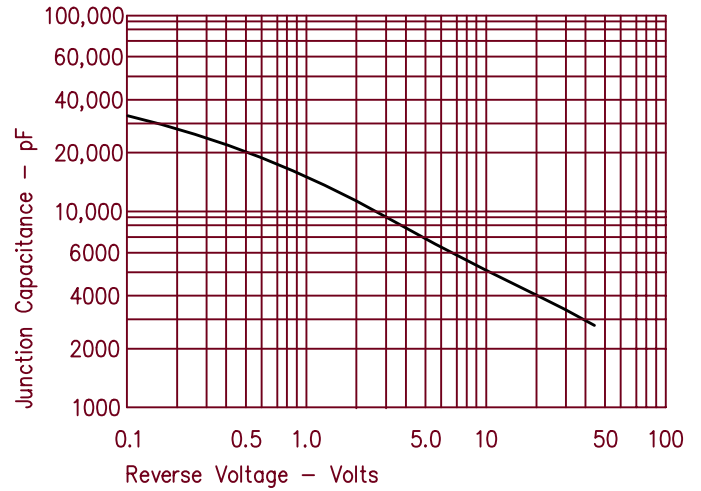


Figure 4  
Forward Current Derating — Per Leg

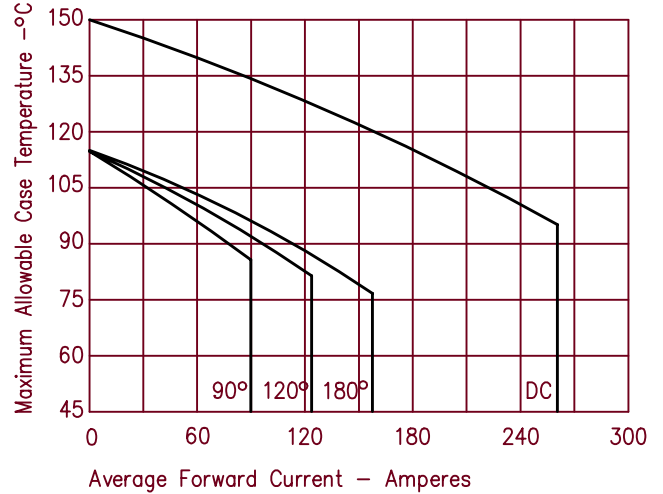


Figure 2  
Typical Reverse Characteristics — Per Leg

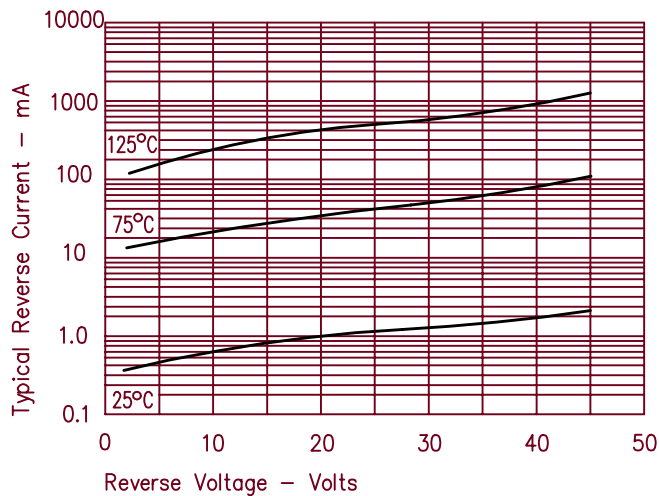


Figure 5  
Maximum Forward Power Dissipation — Per Leg

