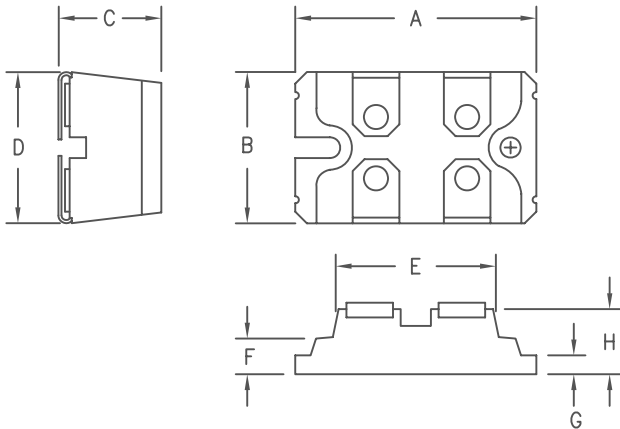


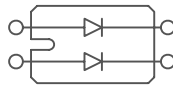
# 2 X 160A Schottky Barrier Rectifier

## 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 Catalog Number	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
SPB16035		35V	35V
SPB16040		40V	40V
SPB16045	DSS2x121-0045B 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 voltage 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

**SCOTTSDALE**  
**Microsemi** 8700 East Thomas Road, P.O. Box 1390  
 Scottsdale, AZ 85252  
 PH: (480) 941-6300  
 FAX: (480) 947-1503  
[www.microsemi.com](http://www.microsemi.com)

05-30-07 Rev. 2

# SPB16035 — SPB16045

Figure 1  
Typical Forward Characteristics – Per Leg

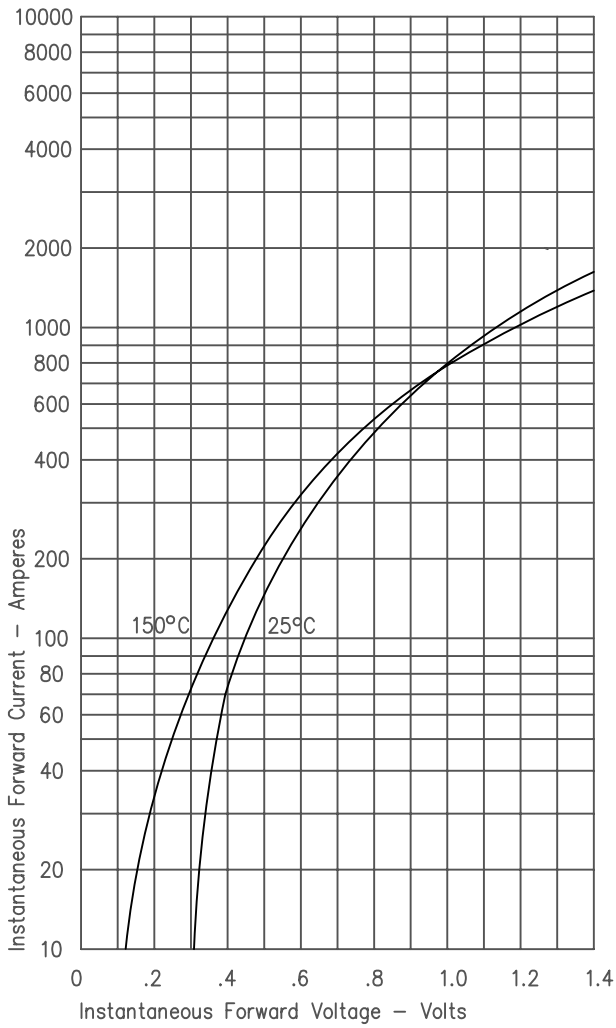


Figure 2  
Typical Reverse Characteristics – Per Leg

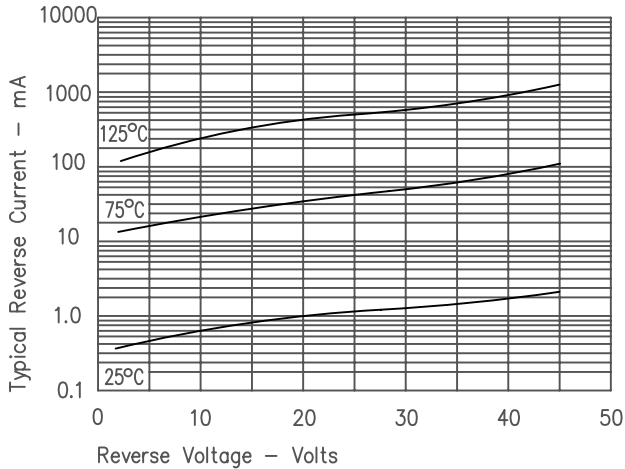


Figure 3  
Typical Junction Capacitance – Per Leg

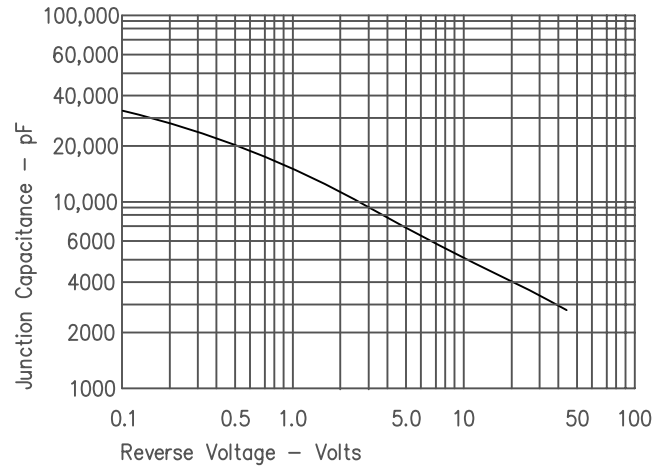


Figure 4  
Forward Current Derating – Per Leg

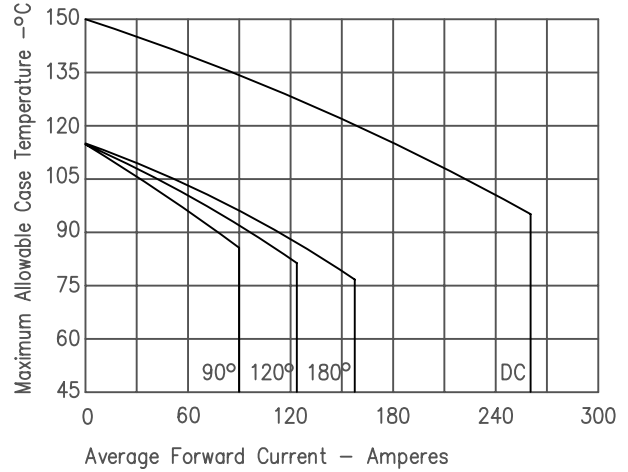


Figure 5  
Maximum Forward Power Dissipation – Per Leg

