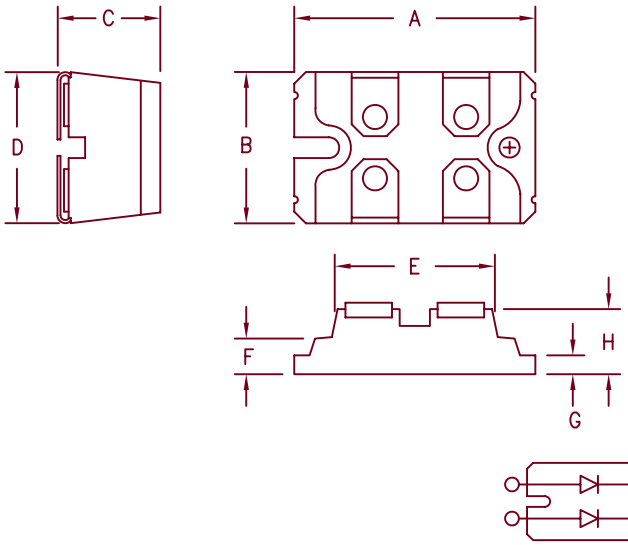
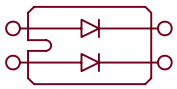
2 X 100A Schottky Barrier Rectifier

SPB10035 – SPB10045



Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
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
SPB10035		35V	35V
SPB10040		40V	40V
SPB10045	DSS2x81–0045B STPS120H45TV STPS160H45TV	45V	45V

- 2500V isolation – Terminals to Base
- Low Forward Voltage Drop
- 2 Schottky Rectifiers in one pkg.
- 35–45V @ 100A/leg
- Low Switching losses

Electrical Characteristics

Average forward current per leg	$I_{F(AV)}$	100 Amps	T_C = 103°C
Average forward current per package	$I_{F(AV)}$	200 Amps	T_C = 103°C
Maximum surge current per leg	I_{FSM}	1600 Amps	8.3ms, half sine, T_J = 175°C
Maximum repetitive reverse current per leg	$I_{R(OV)}$	2 Amps	f = 1 KHz, 25°C, 1 µsec square wave
Max peak forward voltage per leg	V_{FM}	0.57 Volts	I_{FM} = 100A; T_J = 25°C*
Max peak reverse current per leg	I_{RM}	5 mA	V_{RRM}, T_J = 25°C*
Max peak reverse current per leg	V_{ISOL}	2500 VDC	any terminal to base
Typical junction capacitance per leg	C_J	5500 pF	V_R = 5.0V, T_J = 25°C

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

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	–55°C to 175°C
Operating junction temp range	T_J	–55°C to 150°C
Max thermal resistance per leg	$R_{\theta JC}$	0.50°C/W
Max thermal resistance per pkg	$R_{\theta JC}$	0.25°C/W
Mounting Torque		9–13 inch pounds
Weight		1.1 ounces (30 grams) typical

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05–30–07 Rev. 1

SPB10035 – SPB10045

Figure 1
Typical Forward Characteristics – Per Leg

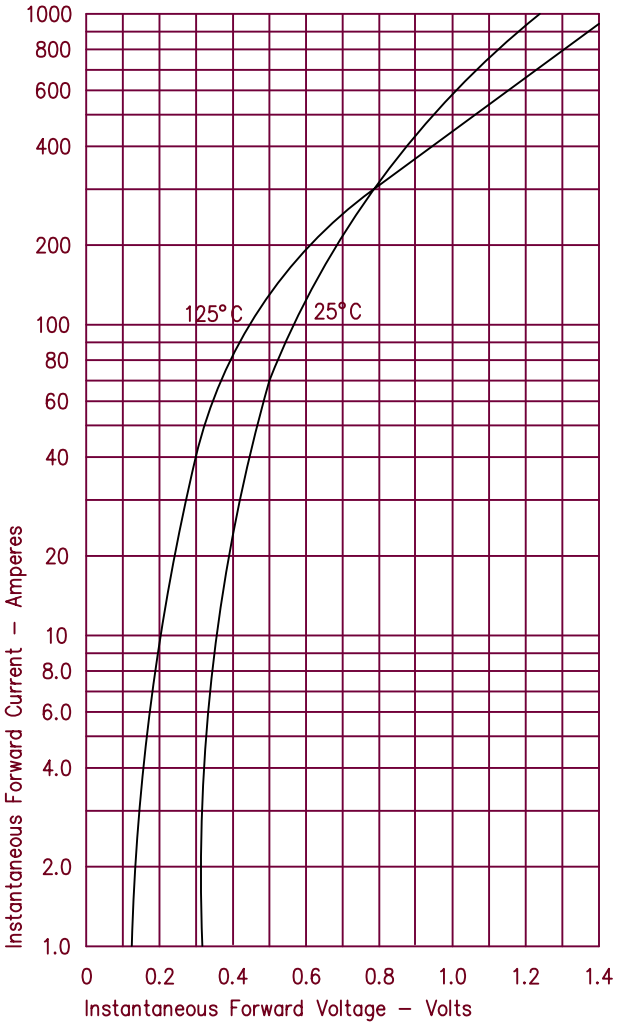

Figure 2
Typical Reverse Characteristics – Per Leg

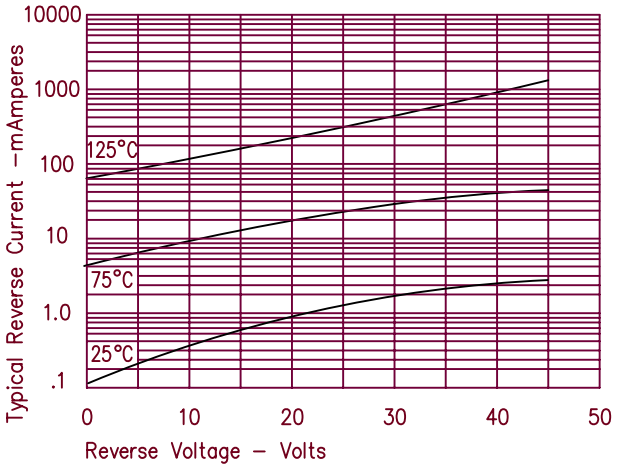

Figure 3
Typical Junction Capacitance – Per Leg

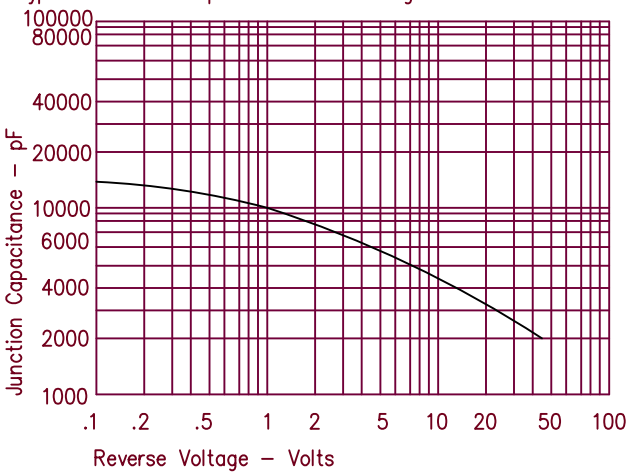

Figure 4
Forward Current Derating – Per Leg

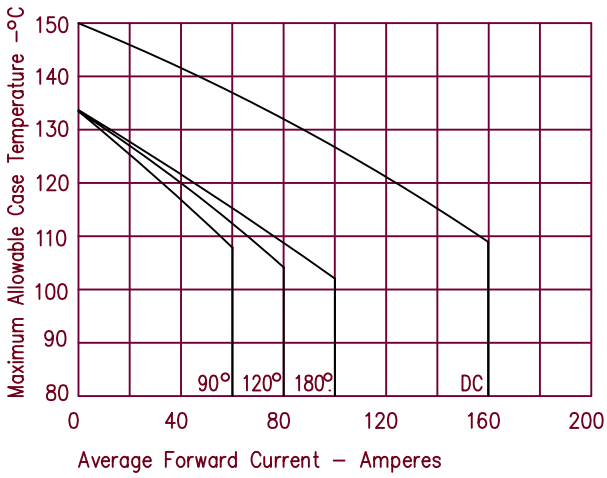

Figure 5
Maximum Forward Power Dissipation – Per Leg