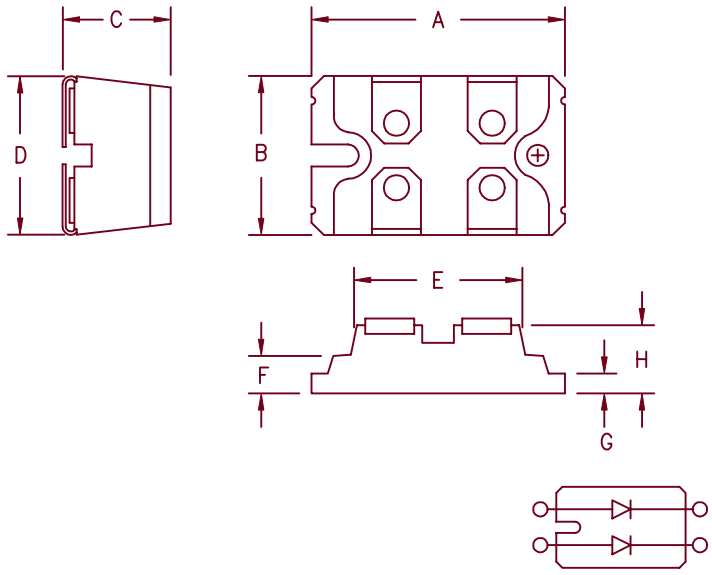
2 X 160A Schottky Barrier Rectifier

SPB16035 – SPB16045



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
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°C
Average forward current per package	$I_{F(AV)}$	320 Amps	T_C = 76°C
Maximum surge current per leg	I_{FSM}	2500 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} = 160A; T_J = 25°C*
Max peak reverse current per leg	I_{RM}	8 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	7000 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	$R_{\theta JC}$	0.35°C/W
Max thermal resistance per pkg	$R_{\theta JC}$	0.18°C/W
Mounting Torque		9–13 inch pounds
Weight		1.1 ounces (30 grams) typical

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4–9–02 Rev. IR

SPB16035 – SPB16045

Figure 1
Typical Forward Characteristics – Per Leg

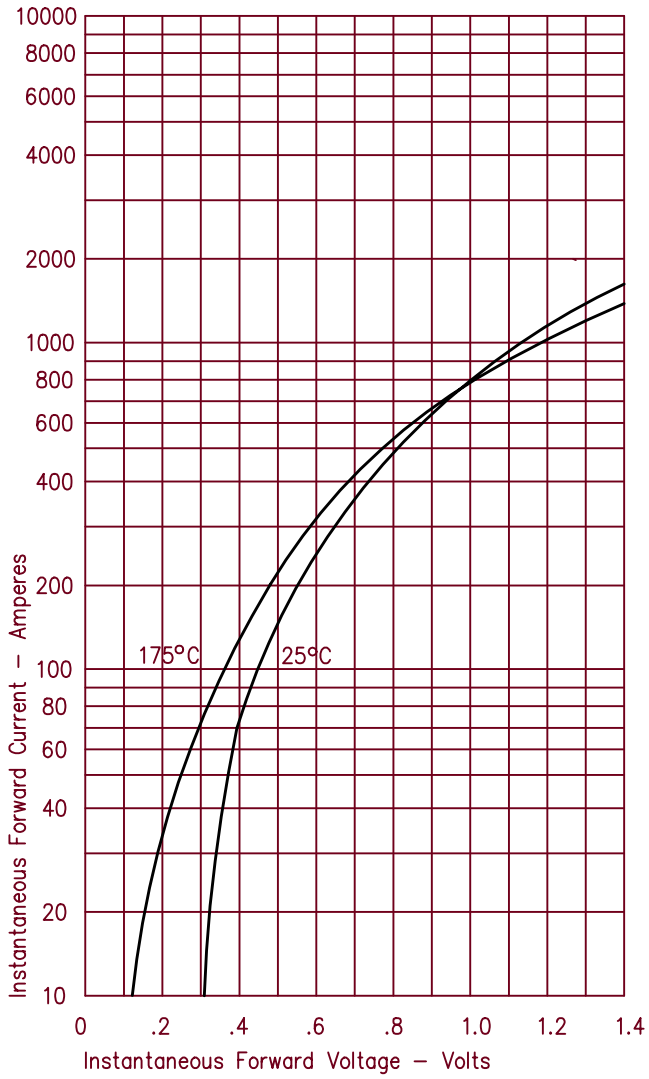

Figure 2
Typical Reverse Characteristics – Per Leg

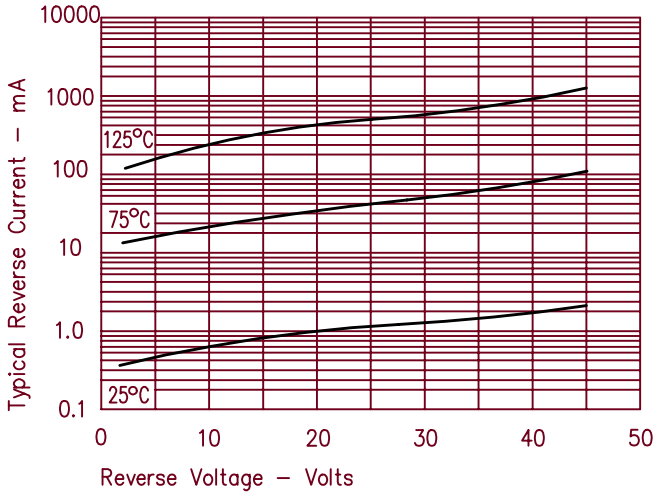

Figure 3
Typical Junction Capacitance – Per Leg

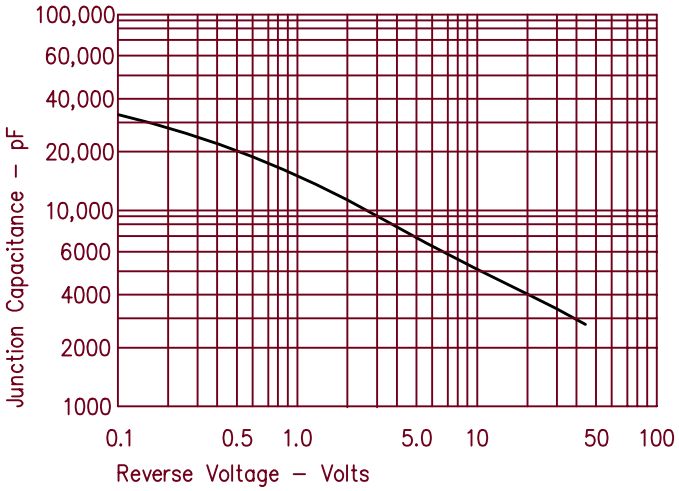

Figure 4
Forward Current Derating – Per Leg

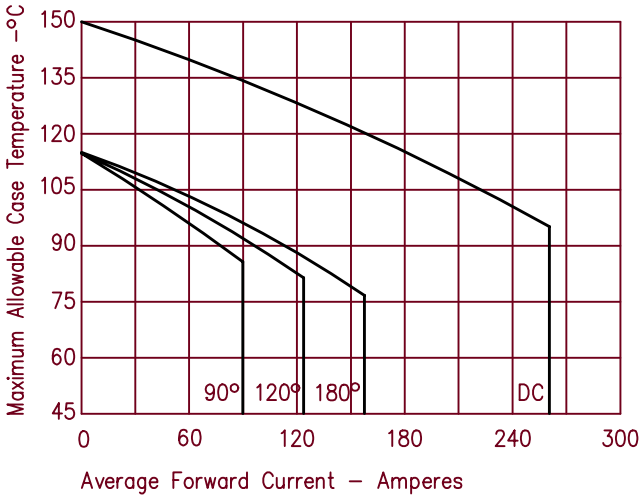

Figure 5
Maximum Forward Power Dissipation – Per Leg