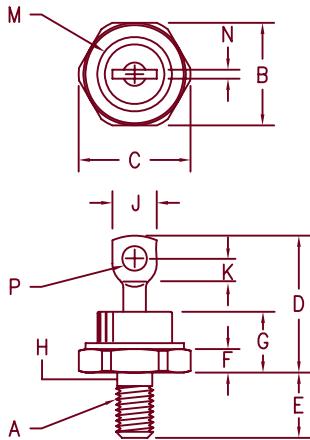


80 Amp Schottky Rectifier

SBR8040 — SBR8050



Notes:

1. Full threads within 2 1/2 threads
2. Standard Polarity: Stud is Cathode
Reverse Polarity: Stud is Anode

	Dim. Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
A	---	---	---	---	1/4-28
B	.669	.688	17.00	17.47	
C	---	.794	---	20.16	
D	.750	1.00	19.05	25.40	
E	.422	.453	10.72	11.50	
F	.115	.200	2.93	5.08	
G	---	.450	---	11.43	
H	.220	.249	5.59	6.32	1
J	---	.375	---	9.52	
K	.156	---	3.97	---	
M	---	.510	---	12.95	Dia
N	---	.080	---	2.03	
P	.140	.175	3.56	4.44	Dia

DO-203AB (DO-5)

Microsemi Catalog Number	Industry Part Number	Working Reverse Voltage	Peak Reverse Voltage	Repetitive Peak Reverse Voltage
SBR8040 *	75HQ035, 85HQ035 75HQ040, 85HQ040 MBR8040	40V	40V	
SBR8045 *	75HQ045, 85HQ045 MBR8045	45V	45V	
SBR8050 *		50V	50V	

*Add Suffix R For Reverse Polarity

- Schottky Barrier Rectifier
- 175°C Junction Temperature
- Guard Ring Protection
- Reverse Energy Tested
- V_{RRM} – 40 to 50 Volts
- 80 Amperes

Electrical Characteristics

Average forward current,
Maximum surge current,
Max repetitive peak reverse current
Max peak forward voltage,
Max peak forward voltage,
Max peak reverse current
Max peak reverse current
Typical junction capacitance

$I_{F(AV)}$ = 80 Amps
 I_{FSM} = 1200 Amps
 $I_{R(OV)}$ = 2 Amps
 V_{FM} = 0.58 Volts
 V_{FM} = 0.74 Volts
 I_{RM} = 30 mA
 I_{RM} = 2 mA
 C_J = 2300 pF

T_C = 130°C, Square wave, $R_{\theta JC}$ = 0.8°C/W
8.3 ms, half sine T_J = 175°C
 f = 1 KHz, 25°C, 1 μ sec Square wave
 I_{FM} = 80A, T_J = 175°C*
 I_{FM} = 80A, T_J = 25°C*
 V_{RRM} , T_J = 125°C*
 V_{RRM} , T_J = 25°C*
 V_R = 5.0V, T_J = 25°C

*Pulse test: Pulse width 300 μ sec, Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range
Operating junction temp range
Max thermal resistance
Typical thermal resistance (greased)
Mounting torque
Weight

T_{STG}

T_J

$R_{\theta JC}$

$R_{\theta CS}$

-65°C to +175°C

-65°C to +175°C

0.8°C/W Junction to sink

0.5°C/W Case to sink

25–30 inch pounds

.54 ounce (15.3 grams) typical

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05-30-07 Rev. 3

SBR8040 — SBR8050

Figure 1
Typical Forward Characteristics

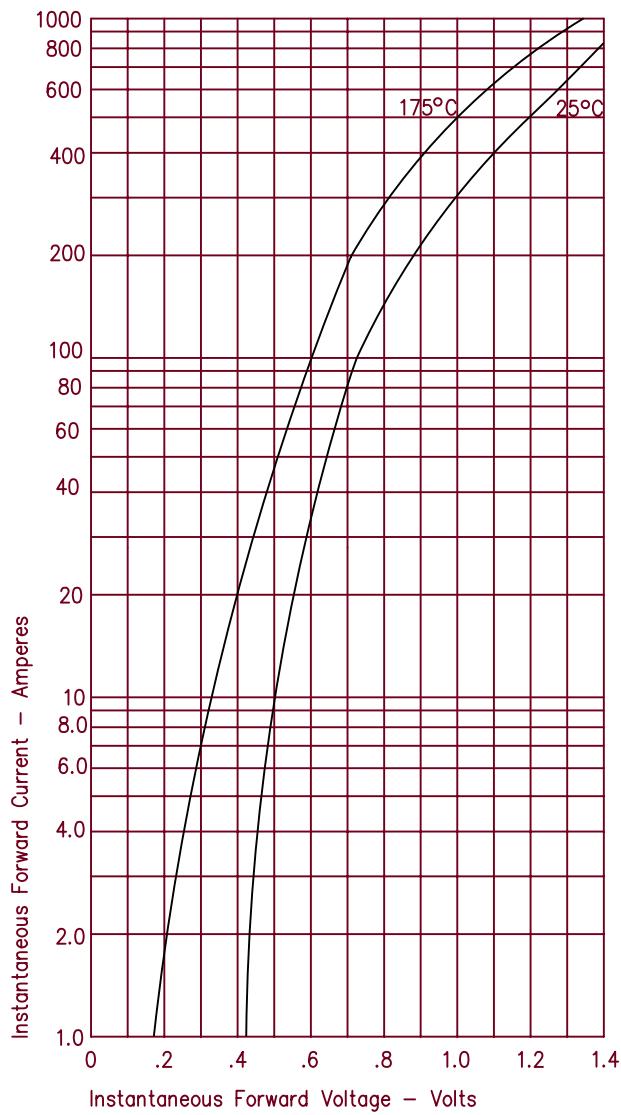


Figure 2
Typical Reverse Characteristics

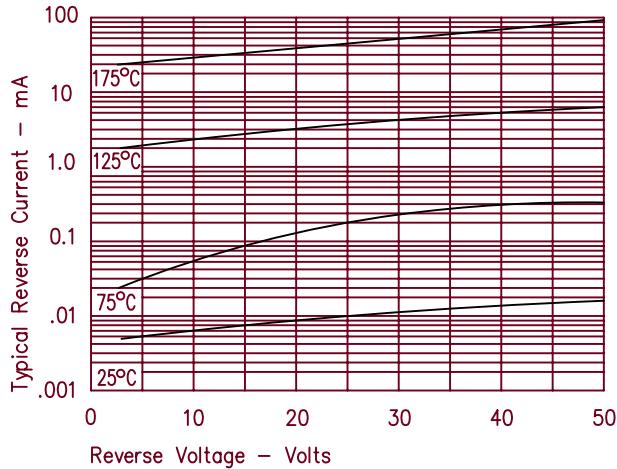


Figure 3
Typical Junction Capacitance

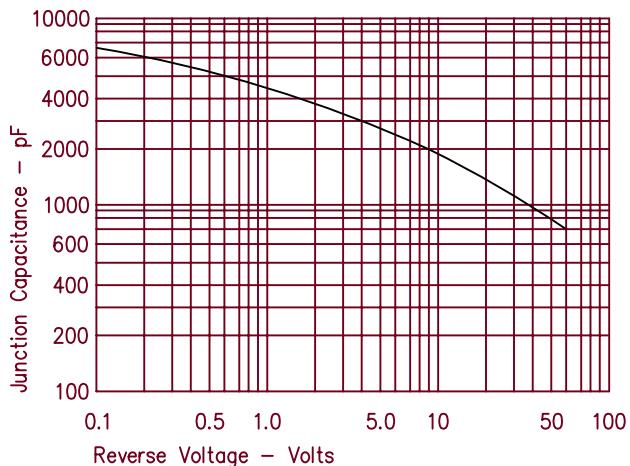


Figure 4
Forward Current Derating

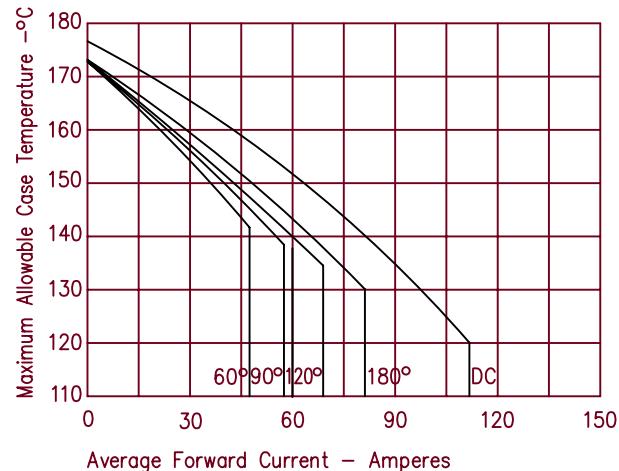
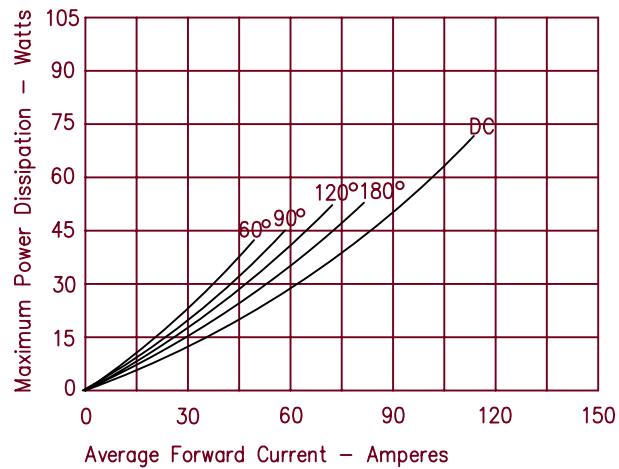


Figure 5
Maximum Forward Power Dissipation



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