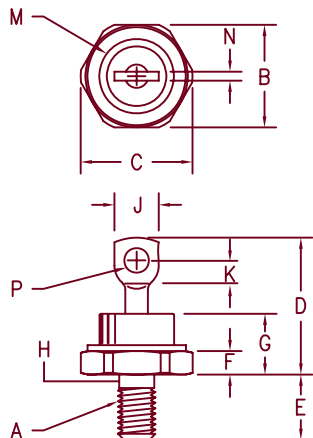


80 Amp Schottky Rectifier SBR8040 — SBR8050



Notes:

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

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
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
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
- VRRM - 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

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

*Pulse test: Pulse width 300 μsec , 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 $+175^\circ\text{C}$
 -65°C to $+175^\circ\text{C}$
 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

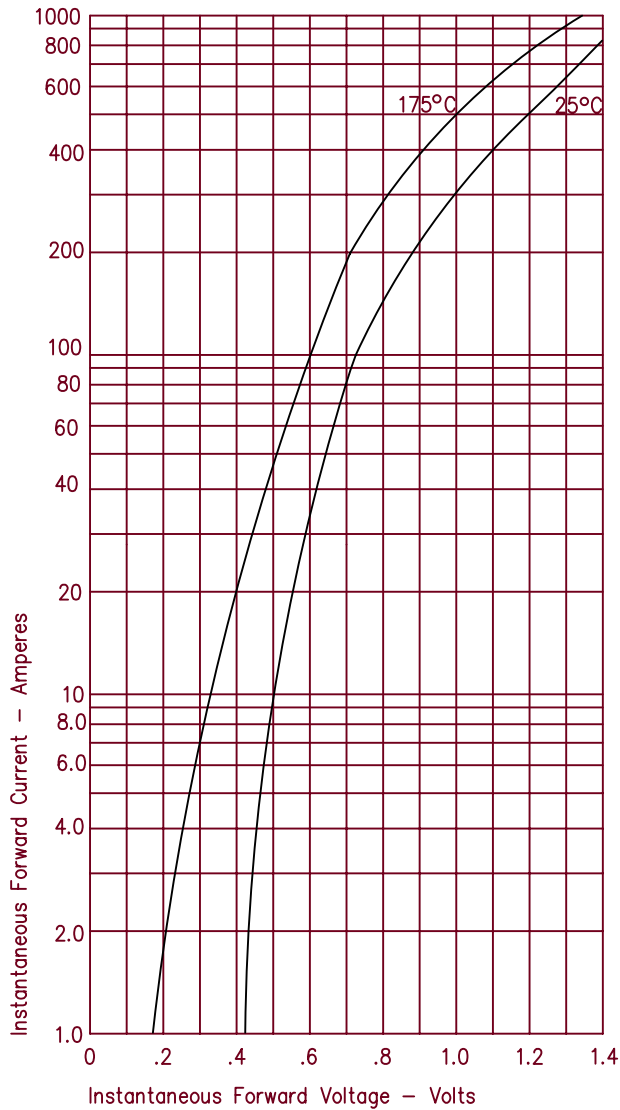


Figure 2
Typical Reverse Characteristics

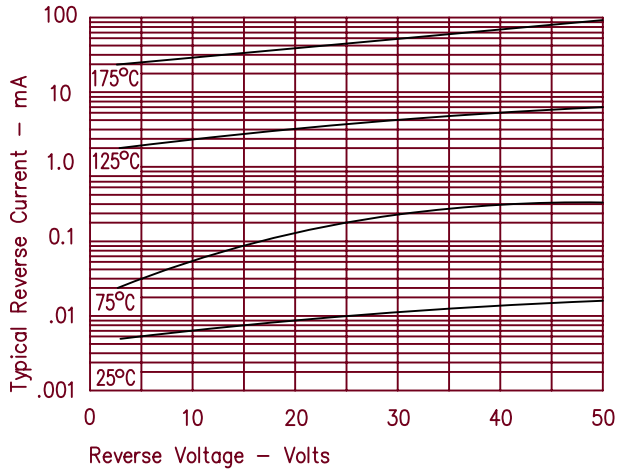


Figure 3
Typical Junction Capacitance

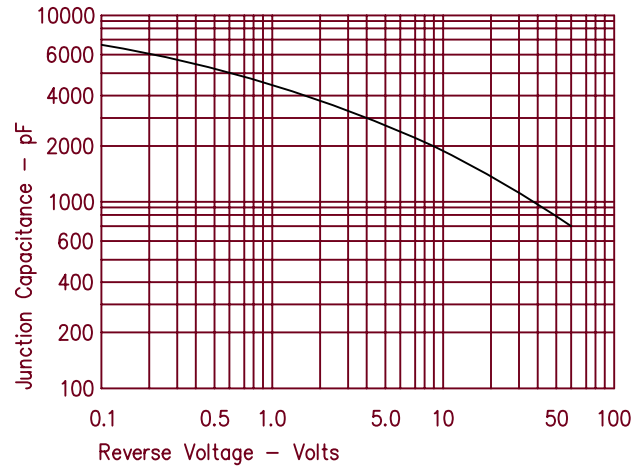


Figure 4
Forward Current Derating

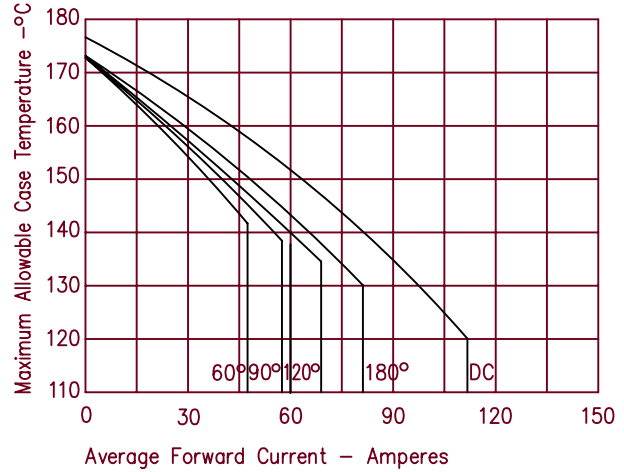
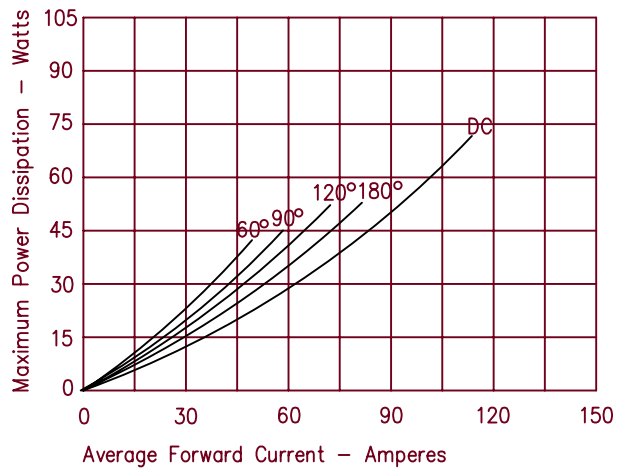


Figure 5
Maximum Forward Power Dissipation



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