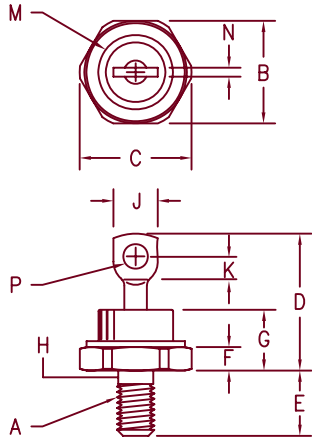


# 80 Amp Schottky Rectifier

## 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	----	----	17.00	17.47	1/4-28
B	.669	.688			
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 Peak Reverse Voltage	Repetitive Peak Reverse Voltage	
SBR8040 *	75HQ035, 85HQ035 75HQ040, 85HQ040 MBR8040	40V	40V	<ul style="list-style-type: none"> <li>● Schottky Barrier Rectifier</li> <li>● 175°C Junction Temperature</li> <li>● Guard Ring Protection</li> <li>● Reverse Energy Tested</li> <li>● VRRM - 40 to 50 Volts</li> <li>● 80 Amperes</li> </ul>
SBR8045 *	75HQ045, 85HQ045 MBR8045	45V	45V	
SBR8050 *		50V	50V	

\*Add Suffix R For Reverse Polarity

### 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, $25^\circ\text{C}$ , 1 $\mu\text{sec}$ Square wave $I_{FM} = 80\text{A}$ , $T_J = 175^\circ\text{C}^*$ $I_{FM} = 80\text{A}$ , $T_J = 25^\circ\text{C}^*$ $V_{RRM}$ , $T_J = 125^\circ\text{C}^*$ $V_{RRM}$ , $T_J = 25^\circ\text{C}$ $V_R = 5.0\text{V}$ , $T_J = 25^\circ\text{C}$
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\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

### Thermal and Mechanical Characteristics

Storage temp range Operating junction temp range Max thermal resistance Typical thermal resistance (greased) Mounting torque Weight	$T_{STG}$ $T_J$ $R_{\theta JC}$ $R_{\theta CS}$	$-65^\circ\text{C}$ to $+175^\circ\text{C}$ $-65^\circ\text{C}$ to $+175^\circ\text{C}$ $0.8^\circ\text{C/W}$ Junction to sink $0.5^\circ\text{C/W}$ Case to sink 25-30 inch pounds .54 ounce (15.3 grams) typical
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# SBR8040 — SBR8050

Figure 1  
Typical Forward Characteristics

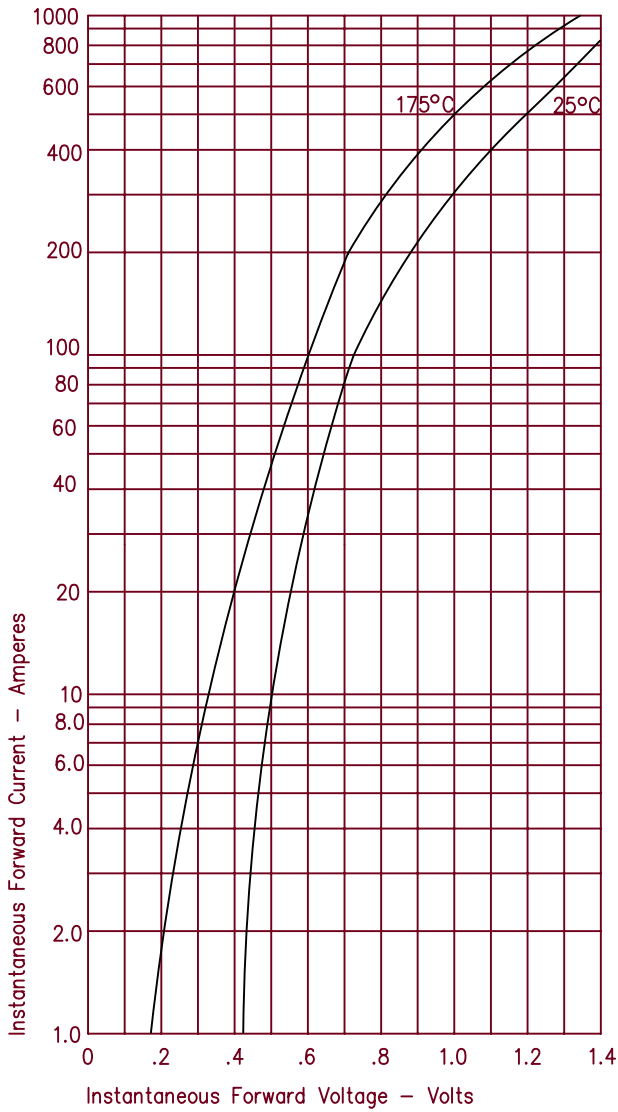


Figure 3  
Typical Junction Capacitance

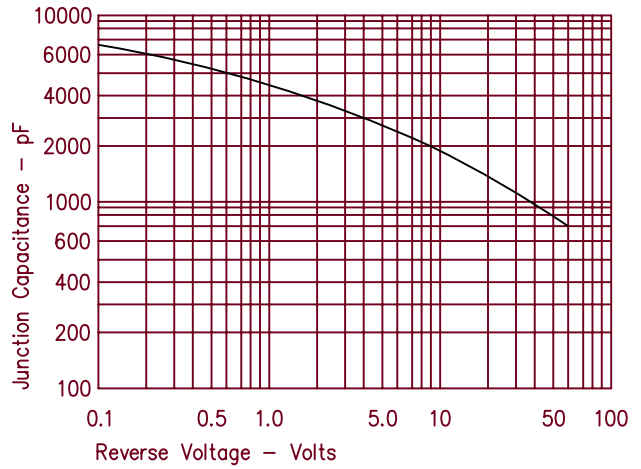


Figure 4  
Forward Current Derating

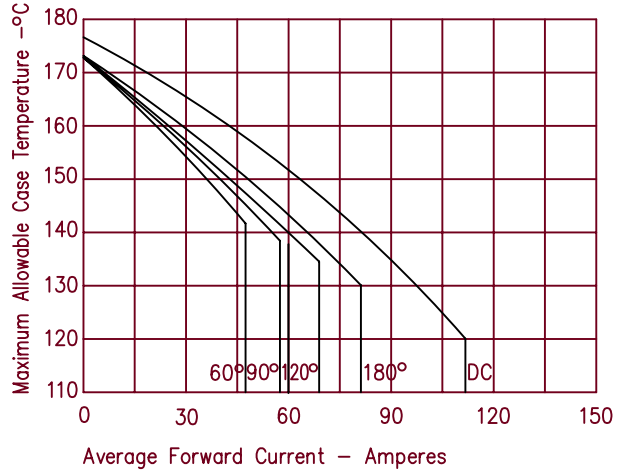


Figure 2  
Typical Reverse Characteristics

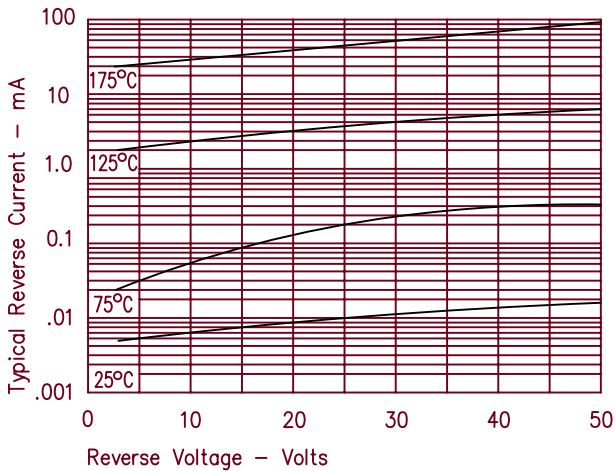


Figure 5  
Maximum Forward Power Dissipation

