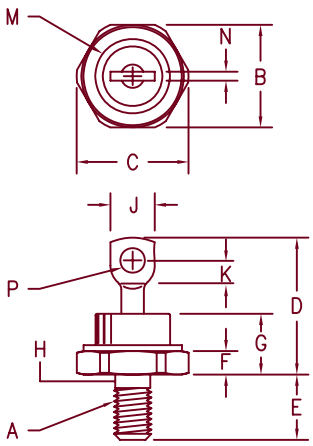
60 Amp Schottky Rectifier

SBR6090 – SBR60100



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 Peak Reverse Voltage	Peak Reverse Voltage
SBR6090*	60HQ080 MBR6080	90V	90V
SBR60100*	60HQ100 MBR60100	100V	100V

*Add Suffix R For Reverse Polarity

- Schottky barrier rectifier
- Hermetic packaging
- Guard ring protected
- Reverse Energy Tested
- 175°C junction temperature
- V_{RRM} – 90 to 100 Volts

Electrical Characteristics

Average forward current	$I_{F(AV)}$ 60 Amps	T_C = 130°C, square wave, $R_{\theta JC}$ = 1.0 °C/W
Maximum surge current	I_{FSM} 1000 Amps	8.3ms, half sine, T_J = 175°C
Max repetitive peak reverse current	$I_{R(0V)}$ 2 Amp	f = 1 KHz, 25°C, 1 μsec square wave
Max peak forward voltage	V_{FM} .89 Volts	I_{FM} = 60A: 25°C *
Max peak forward voltage	V_{FM} .70 Volts	I_{FM} = 60A: 125°C *
Max peak reverse current	I_{RM} 50 mA	V_{RRM}, T_J = 125°C *
Max peak reverse current	I_{RM} 1.0 mA	V_{RRM}, T_J = 25°C
Typical junction capacitance	C_J 1250 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}	–65°C to 175°C
Operating junction temp range	T_J	–65°C to 175°C
Maximum thermal resistance	$R_{\theta JC}$	1.0°C/W Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.5°C/W Case to sink
Mounting torque		25–30 inch pounds
Weight		.54 ounces (15.3 grams) typical

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SBR6090 – SBR60100

Figure 1
Typical Forward Characteristics

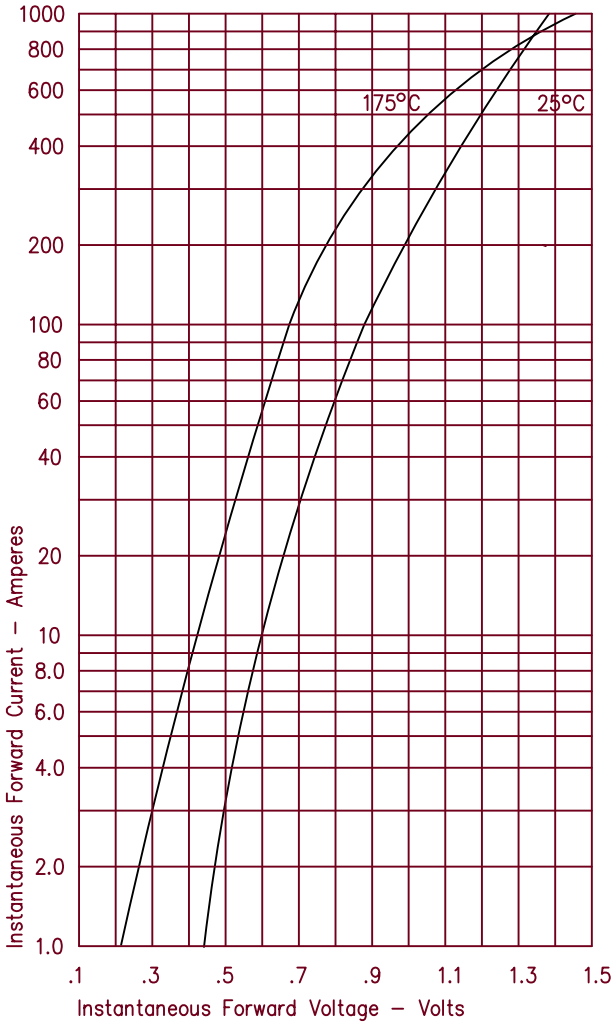


Figure 2
Typical Reverse Characteristics

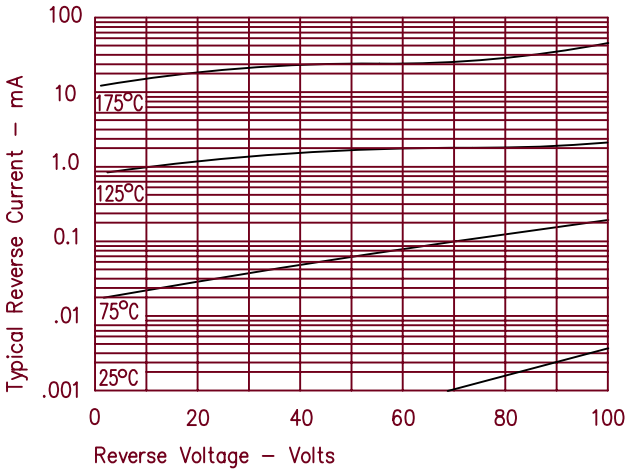


Figure 3
Typical Junction Capacitance

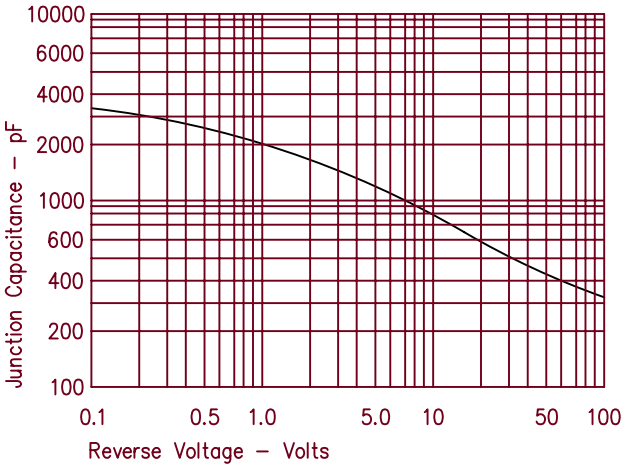


Figure 4
Forward Current Derating

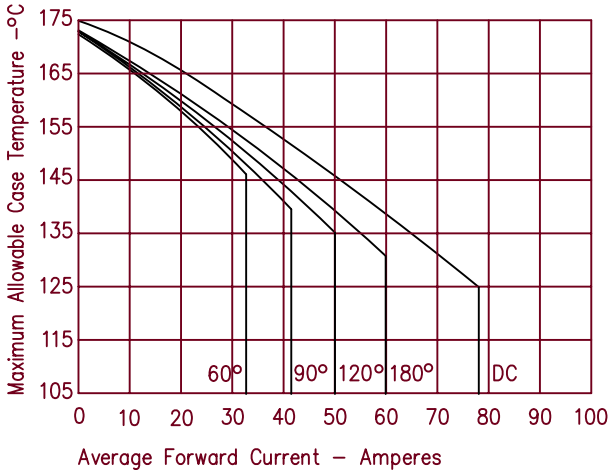
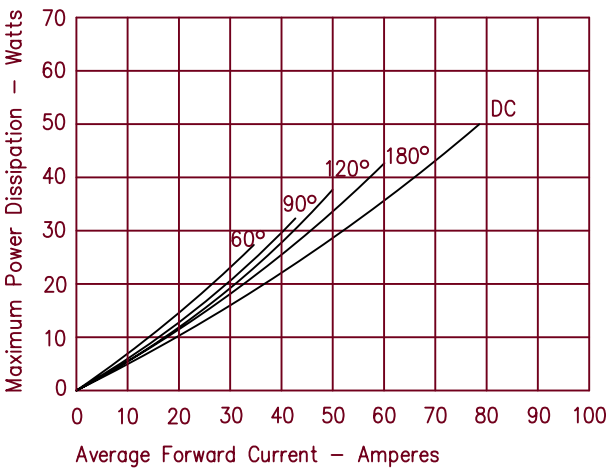


Figure 5
Maximum Forward Power Dissipation



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