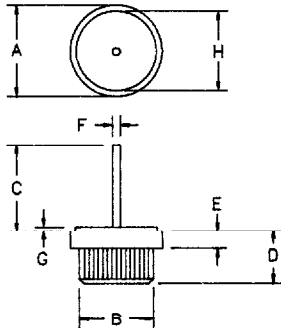


50 Amp Schottky Rectifier SBR5035 — SBR5050



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.590	.630	15.0	16.0	Dia.
B	.499	.510	12.6	13.0	Dia.
C	.600	—	15.2	—	
D	.350	.370	8.90	9.40	
E	.090	.130	2.28	3.30	
F	.097	.103	2.46	2.62	Dia.
G	.030	.035	.762	.900	
H	.500	.510	12.7	13.0	Dia.

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
SBR5035	35V	35V
SBR5040	40V	40V
SBR5050	50V	50V

- Schottky Barrier Rectifier
- Guard Ring Protected
- 175°C Junction Temperature
- VRRM — 35 to 50 Volts
- Reverse Energy Tested

Electrical Characteristics

Average forward current	$I_F(AV)$ 50 Amps	$T_C = 140^\circ C$, Square wave, $R_{\theta JC} = 1.0^\circ C/W$
Maximum surge current	I_{FSM} 1200 Amps	8.3 ms, half sine, $T_J = 175^\circ C$
Max repetitive peak reverse current	$I_R(OV)$ 2 Amps	$f = 1$ KHz, $25^\circ C$, 1 μ sec Square wave
Max peak forward voltage	V_{FM} .68 Volts	$I_{FM} = 50A$; $T_J = 25^\circ C^*$
Max peak forward voltage	V_{FM} .55 Volts	$I_{FM} = 50A$; $T_J = 175^\circ C^*$
Max peak reverse current	I_{RM} 30 mA	V_{RRM} , $T_J = 125^\circ C^*$
Max peak reverse current	I_{RM} 2 mA	V_{RRM} , $T_J = 25^\circ C$
Max peak reverse current	I_{RM} 20 μ A	V_{RRM} , $T_J = 25^\circ C$
Maximum junction capacitance	C_J 2300 pF	$V_R = 5.0V$, $T_J = 25^\circ C$

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

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	$-55^\circ C$ to $175^\circ C$
Operating junction temp range	T_J	$-55^\circ C$ to $175^\circ C$
Max thermal resistance	$R_{\theta JC}$	1.0 $^\circ C/W$ Junction to case
Typical thermal resistance	$R_{\theta JC}$	0.9 $^\circ C/W$ Junction to case
Weight		.3 ounces (9.0 grams) typical

Microsemi Corp.
Colorado

SBR5035 — SBR5050



Figure 1
Typical Forward Characteristics

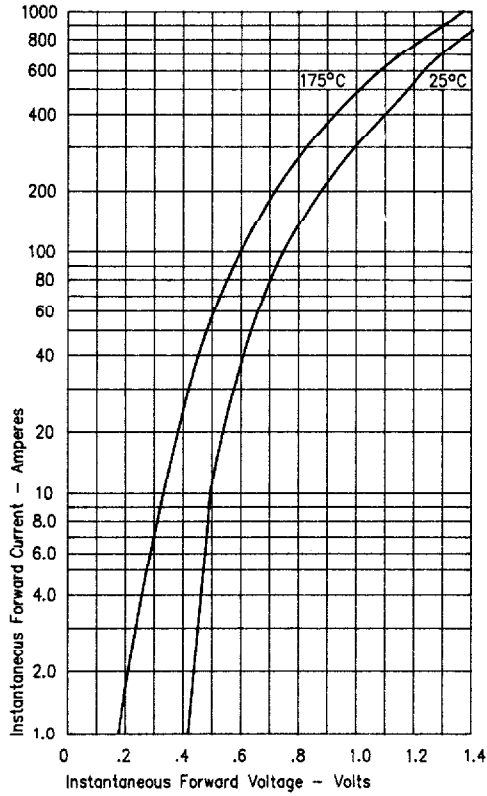


Figure 3
Typical Junction Capacitance

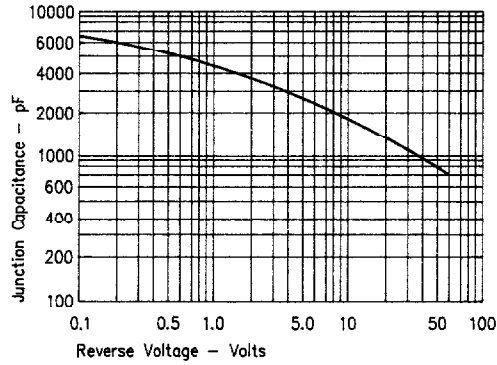


Figure 4
Forward Current Derating

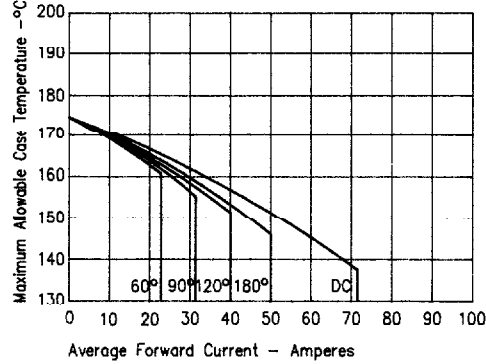


Figure 2
Typical Reverse Characteristics

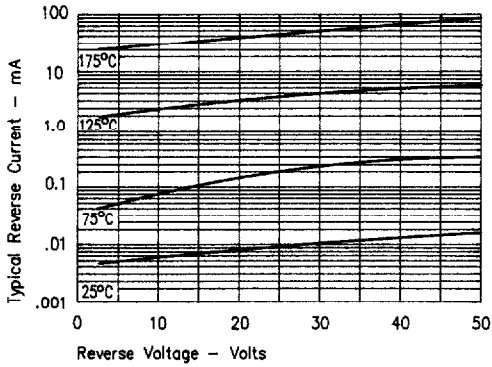


Figure 5
Maximum Forward Power Dissipation

