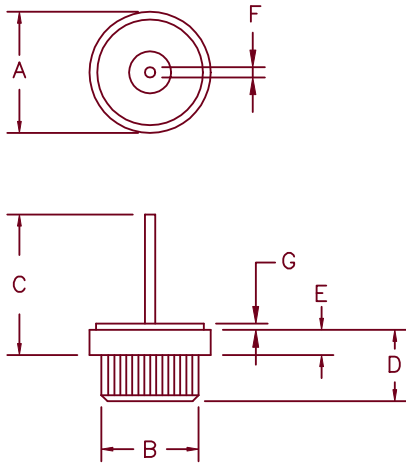


# 50 Amp Schottky Rectifier

## SBR5090PF — SBR50100PF



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.590	.630	14.98	16.00	Dia.
B	.499	.510	12.67	12.95	Dia.
C	1.15	1.40	29.21	15.20	
D	.320	.350	8.12	8.89	
E	.090	.096	2.29	2.44	
F	.047	.055	1.19	1.40	Dia.
G	.020	.038	.510	.970	

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
SBR5090PF*	90V	90V
SBR50100PF*	100V	100V

\* Add Suffix R for Reverse Polarity

- Schottky Barrier Rectifier
- Guard Ring Protected
- 175°C Junction Temperature
- VRRM – 90 to 100 Volts
- Reverse Energy Tested

### Electrical Characteristics

Average forward current	$I_F(AV)$ 50 Amps	$T_C = 136^\circ C$ , Square wave, $R_{\theta JC} = 1.0^\circ C/W$ 8.3 ms, half sine, $T_J = 175^\circ C$ $f = 1$ KHz, $25^\circ C$ , 1 $\mu$ sec Square wave $I_{FM} = 60A$ : $T_J = 25^\circ C^*$ $V_{RRM}$ , $T_J = 125^\circ C^*$ $V_{RRM}$ , $T_J = 25^\circ C$ $V_R = 5.0V$ , $T_J = 25^\circ C$
Maximum surge current	$I_{FSM}$ 800 Amps	
Max repetitive peak reverse current	$I_{R(OV)}$ 1 Amps	
Max peak forward voltage	$V_{FM}$ .89 Volts	
Max peak reverse current	$I_{RM}$ 10 mA	
Max peak reverse current	$I_{RM}$ 1 mA	
Typical junction capacitance	$C_J$ 1300 pF	

\*Pulse test: Pulse width 300  $\mu$ 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
Weight		.32 ounces (9.2 grams) typical

# SBR5090PF — SBR50100PF

Figure 1  
Typical Forward Characteristics

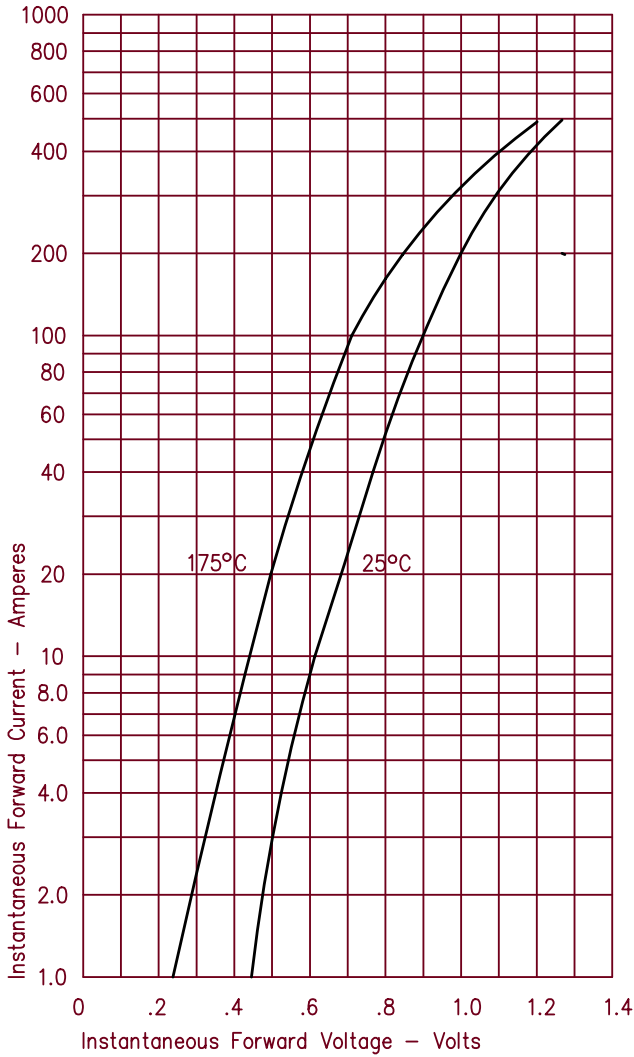


Figure 3  
Typical Junction Capacitance

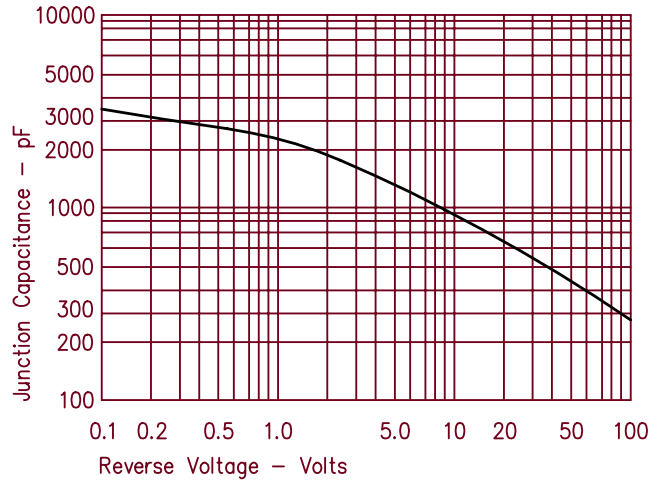


Figure 4  
Forward Current Derating

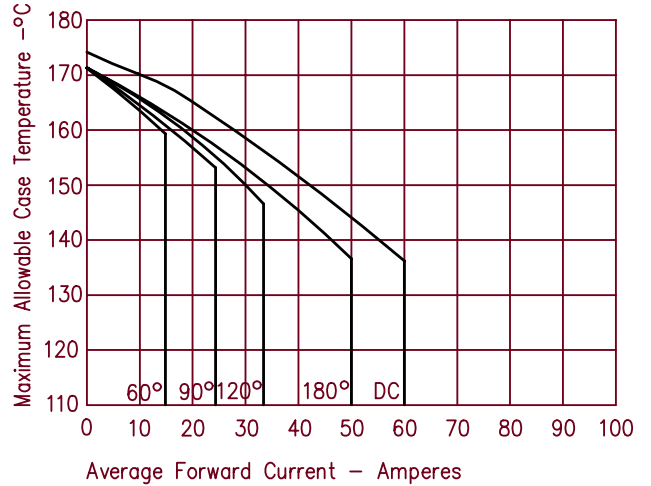


Figure 2  
Typical Reverse Characteristics

