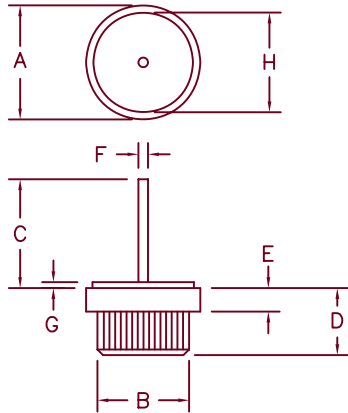


# 50 Amp Schottky Rectifier Pressfit SBR5035PF — SBR5050PF



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
SBR5035PF*	35V	35V
SBR5040PF*	40V	40V
SBR5045PF*	45V	45V
SBR5050PF*	50V	50V

\*Add the Suffix R for Reverse Polarity

- 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	$T_C = 142^\circ\text{C}$ , Square wave, $R_{\theta JC} = 1.0^\circ\text{C/W}$
Maximum surge current	$I_{FSM}$ 800 Amps	8.3 ms, half sine, $T_J = 175^\circ\text{C}$
Max repetitive peak reverse current	$I_{R(OV)}$ 2 Amps	$f = 1 \text{ KHz}$ , $25^\circ\text{C}$ , 1 $\mu\text{sec}$ Square wave
Max peak forward voltage	$V_{FM}$ .55 Volts	$I_{FM} = 50\text{A}$ : $T_J = 175^\circ\text{C}^*$
Max peak forward voltage	$V_{FM}$ .68 Volts	$I_{FM} = 50\text{A}$ : $T_J = 25^\circ\text{C}^*$
Max peak reverse current	$I_{RM}$ 30 mA	$V_{RRM}$ , $T_J = 125^\circ\text{C}^*$
Max peak reverse current	$I_{RM}$ 2 mA	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical junction capacitance	$C_J$ 2300 pF	$V_R = 5.0\text{V}$ , $T_J = 25^\circ\text{C}$

\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

## Thermal and Mechanical Characteristics

Storage temp range	$T_{STG}$	$-55^\circ\text{C}$ to $175^\circ\text{C}$
Operating junction temp range	$T_J$	$-55^\circ\text{C}$ to $175^\circ\text{C}$
Max thermal resistance	$R_{\theta JC}$	$1.0^\circ\text{C/W}$ Junction to case
Weight		.32 ounces (9.2 grams) typical



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05-25-07 Rev. 2

# SBR5035PF — SBR5050PF

Figure 1  
Typical Forward Characteristics

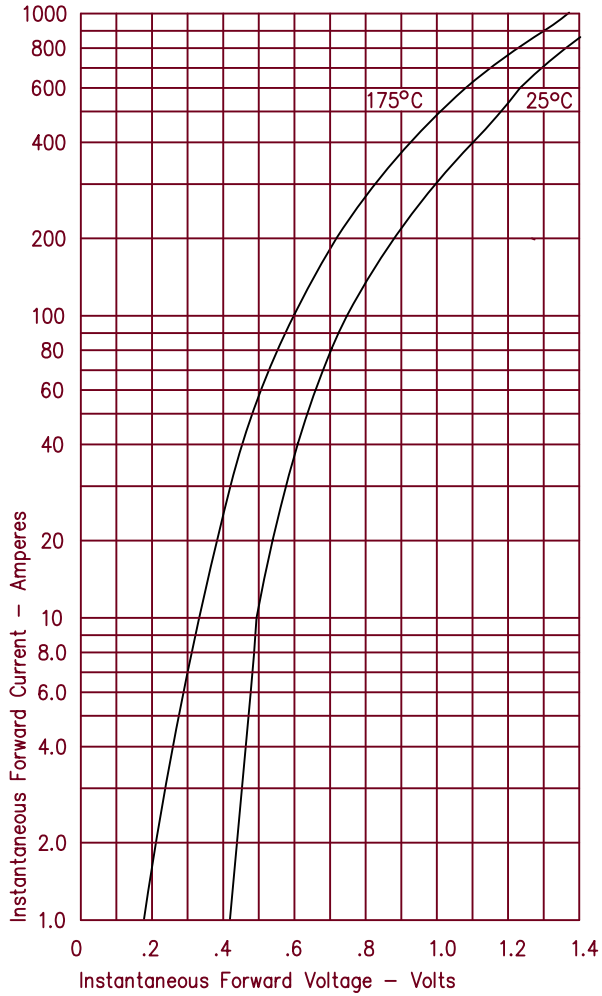


Figure 3  
Typical Junction Capacitance

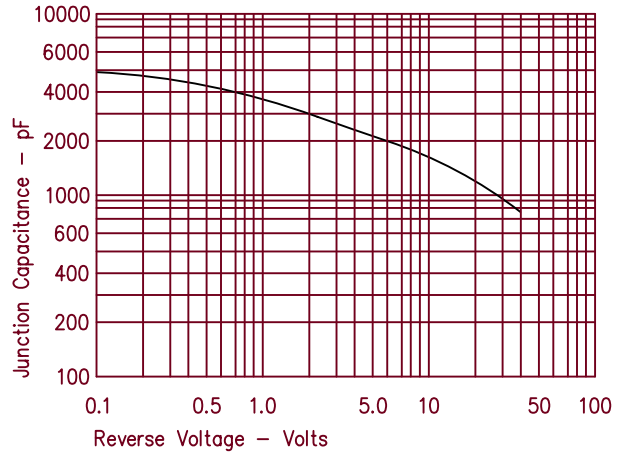


Figure 4  
Forward Current Derating

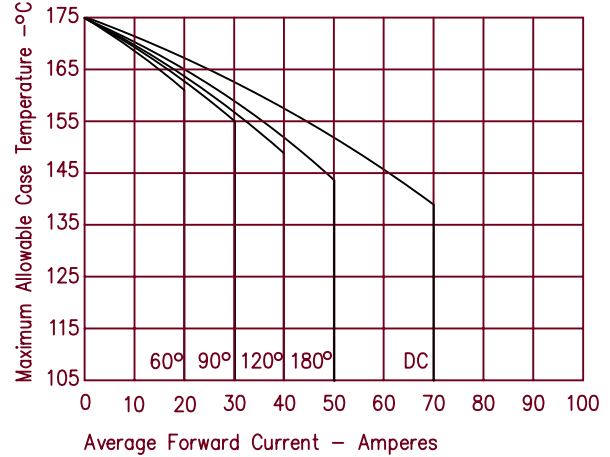


Figure 2  
Typical Reverse Characteristics

