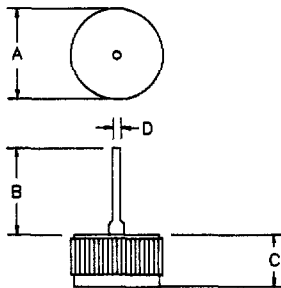


Silicon Power Rectifier S/R50PF Series



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.501	.505	12.70	12.85	Dia.
B	.450	0.50	11.40	12.70	
C	.335	.365	8.50	9.30	
D	0.97	.103	2.45	2.60	Dia.

Microsemi Catalog Number

Standard	Reverse
S5020PF	R5020PF
S5040PF	R5040PF
S5060PF	R5060PF
S5080PF	R5080PF

Repetitive Peak Reverse Voltage

200
400
600
800

- High Voltage, Low Leakage Current
- Glass Passivated Die
- Economical Design
- 700 Amps Surge Rating
- VRRM to 800V

Electrical Characteristics

Average Forward Current	$I_F(AV)$ 50 Amps	$T_C = 160^\circ C$, half sine wave, $R_{\theta JC} = 0.75^\circ C/W$
Maximum Surge Current	I_{FSM} 800 Amps	8.3ms, half sine, $T_J = 175^\circ C$
Maximum I^2t For Fusing	I^2t 2600 A^2s	
Max. Peak Forward Voltage	V_{FM} 1.0 Volts	$I_{FM} = 50A; T_J = 25^\circ C$
Max. Peak Reverse Current	I_{RM} 40 μA	$V_{RRM, T_J} = 25^\circ C$
Max. Peak Reverse Current	I_{RM} 2.0 mA	$V_{RRM, T_J} = 150^\circ C$
Max. Recommended Operating	10kHz	

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	$-65^\circ C$ to $200^\circ C$
Operating junction temp range	T_J	$-65^\circ C$ to $200^\circ C$
Max thermal resistance	$R_{\theta JC}$	$0.75^\circ C/W$ Junction to case
Typical thermal resistance	$R_{\theta CS}$	$0.2^\circ C/W$ Case to sink
Typical Weight		.27 ounce (7.2 grams) typical

PH: 303-469-2161
FAX: 303-466-3775

Microsemi Corp.
Colorado

E-41

S/R50PF

Figure 1
Typical Forward Characteristics

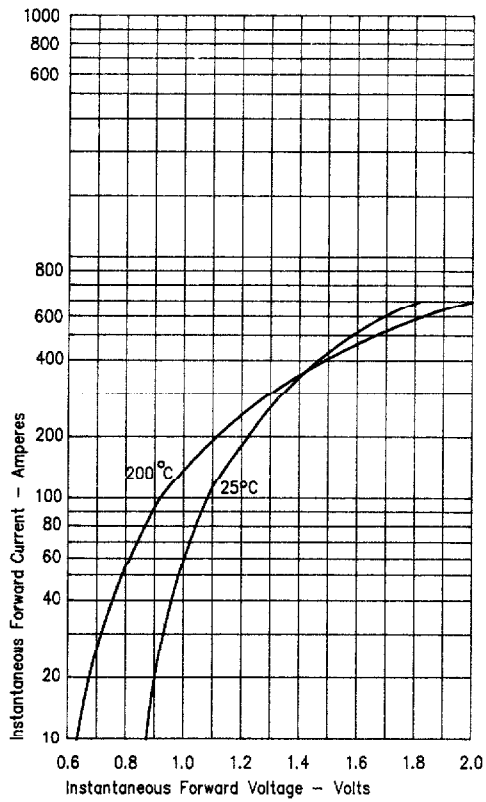


Figure 3
Forward Current Derating

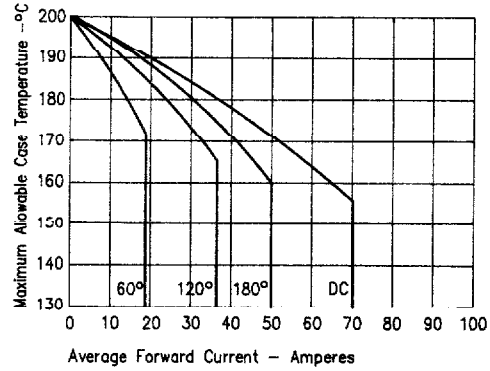


Figure 4
Maximum Forward Power Dissipation

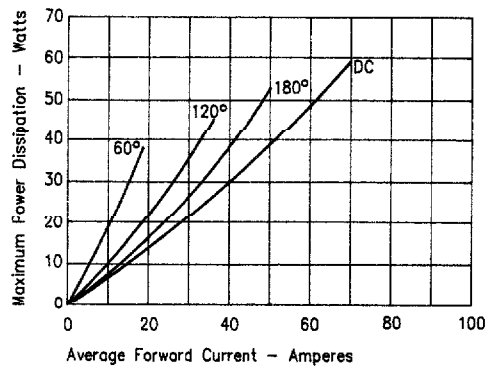


Figure 2
Typical Reverse Characteristics

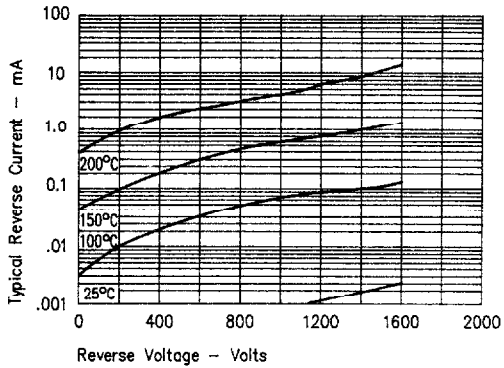
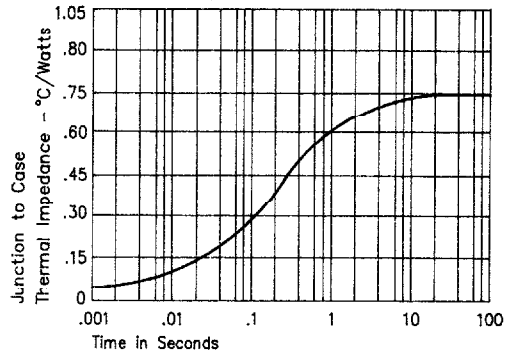
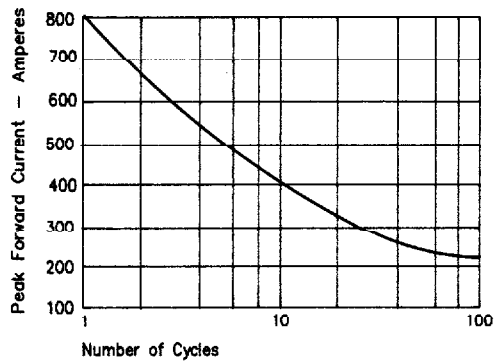


Figure 5
Transient Thermal Impedance



S/R50PF

Figure 6
Maximum Nonrepetitive Surge Current



E

