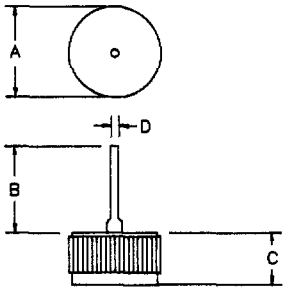
Silicon Power Rectifier
S/R50PF Series



Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
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		Repetitive Peak Reverse Voltage
Standard	Reverse	
S5020PF	R5020PF	200
S5040PF	R5040PF	400
S5060PF	R5060PF	600
S5080PF	R5080PF	800

- High Voltage, Low Leakage Current
- Glass Passivated Die
- Economical Design
- *700 Amps Surge Rating*
- V_{RRM} to 800V

E

Electrical Characteristics

Average Forward Current	$I_{F(AV)}$	50 Amps	T_C = 160°C, half sine wave, $R_{\theta JC}$ = 0.75°C/W
Maximum Surge Current	I_{FSM}	800 Amps	8.3ms, half sine, T_J = 175°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°C*
Max. Peak Reverse Current	I_{RM}	40 µA	V_{RRM}, T_J = 25°C
Max. Peak Reverse Current	I_{RM}	2.0 mA	V_{RRM}, T_J = 150°C
Max. Recommended Operating		10kHz	

Thermal and Mechanical Characteristics

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

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Microsemi Corp.
Colorado

S/R50PF

Figure 1
Typical Forward Characteristics

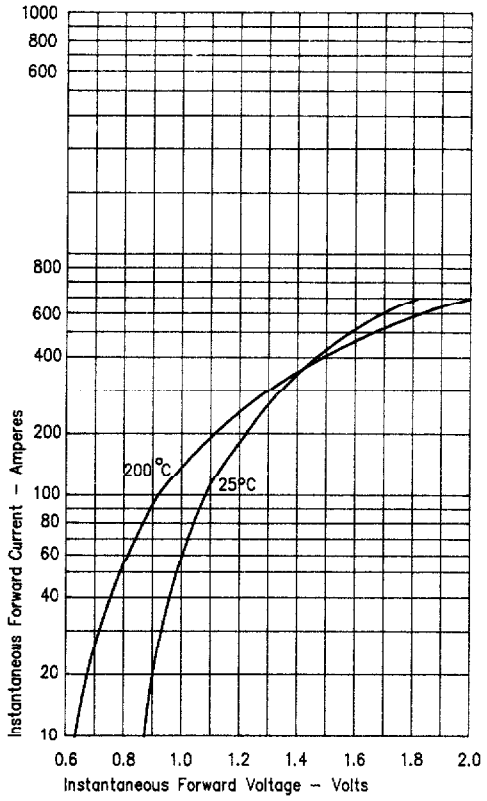

Figure 2
Typical Reverse Characteristics

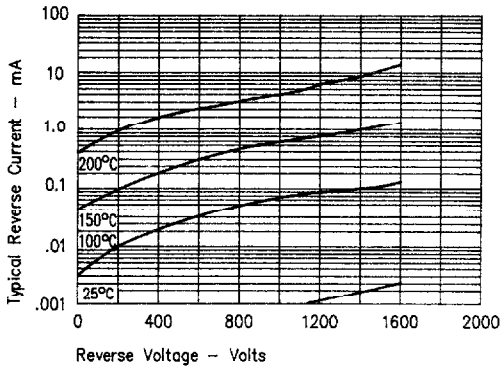

Figure 3
Forward Current Derating

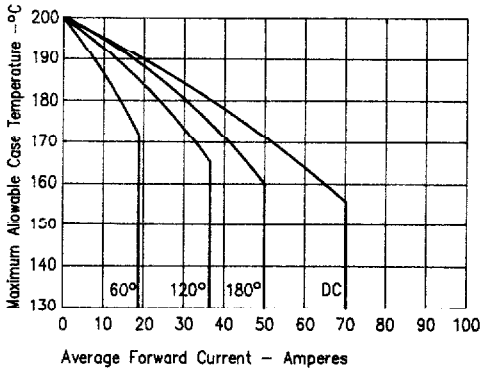

Figure 4
Maximum Forward Power Dissipation

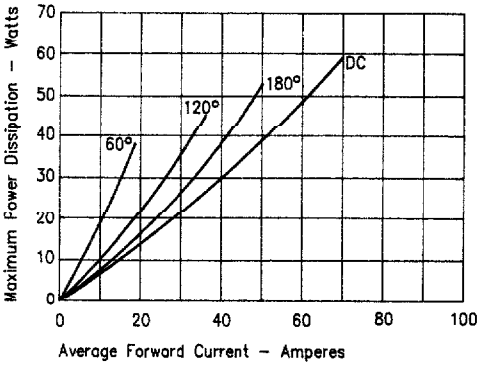

Figure 5
Transient Thermal Impedance

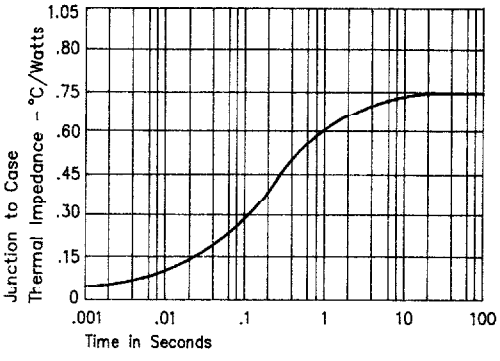

Figure 6
Maximum Nonrepetitive Surge Current