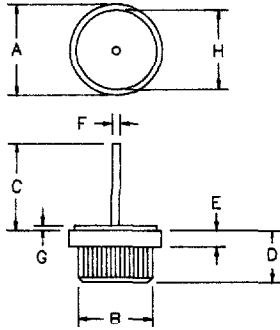


Silicon Power Rectifier S/R35PF Series



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	.045	.053	1.14	1.35	Dia.
G	.030	.035	.762	.900	
H	.500	.510	12.7	13.0	Dia.

Standard	Reverse	Repetitive Peak	Transient Peak
Microsemi	Catalog Number	Reverse Voltage	Reverse Voltage
S3520PF	R3520PF	200V	300V
S3540PF	R3540PF	400V	500V
S3560PF	R3560PF	600V	700V

- High Voltage, Low Leakage Current
- Glass Passivated Die
- Economical Design
- Soft Recovery
- 400 Amps Surge Rating
- V_{RRM} to 600V



Electrical Characteristics		
Average Forward Current (standard polarity)	$I_{F(AV)}$ 35 Amps	$T_C = 133^\circ\text{C}$, half sine wave, $R_{\theta JC} = 1.0^\circ\text{C/W}$
Average Forward Current (reverse polarity)	$I_{F(AV)}$ 35 Amps	$T_C = 92^\circ\text{C}$, half sine wave, $R_{\theta JC} = 2.0^\circ\text{C/W}$
Maximum Surge Current	I_{FSM} 400 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Maximum I^2t For Fusing	i^2t 665 A ² s	
Max. Peak Forward Voltage	V_{FM} 1.1 Volts	$I_{FM} = 35A$; $T_J = 25^\circ\text{C}$ *
Max. Peak Reverse Current	I_{RM} 10 μA	V_{RRM} , $T_J = 25^\circ\text{C}$
Max. Peak Reverse Current	I_{RM} 2.0 mA	V_{RRM} , $T_J = 150^\circ\text{C}$
Max. Recommended Operating Frequency	10kHz	

*Pulse test: Pulse width 300 μsec . Duty cycle 2%

Thermal and Mechanical Characteristics		
Storage temp range	T_{STG}	-40°C to 175°C
Operating junction temp range	T_J	-40°C to 175°C
Max thermal resistance (standard polarity)	$R_{\theta JC}$	1.0°C/W Junction to case
Max thermal resistance (reverse polarity)	$R_{\theta JC}$	2.0°C/W Junction to case
Typical thermal resistance	$R_{\theta CS}$	0.2°C/W Case to sink
Typical Weight		0.3 ounce (9.0 grams) typical

Microsemi Corp.
Colorado

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

B-15

S/R35PF

Figure 1
Typical Forward Characteristics

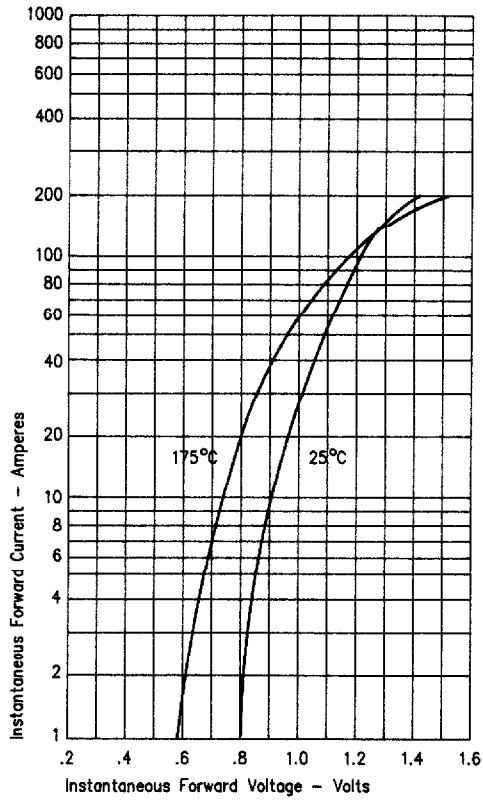


Figure 3
Forward Current Derating - Standard Polarity

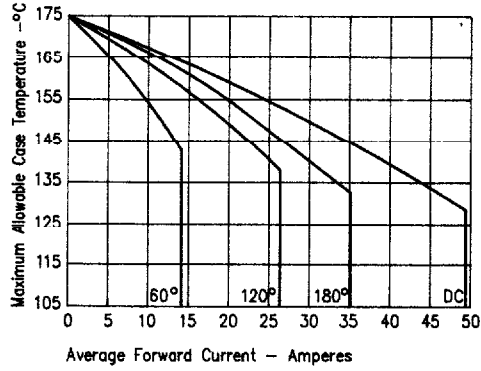


Figure 4
Maximum Forward Power Dissipation - Standard Polarity

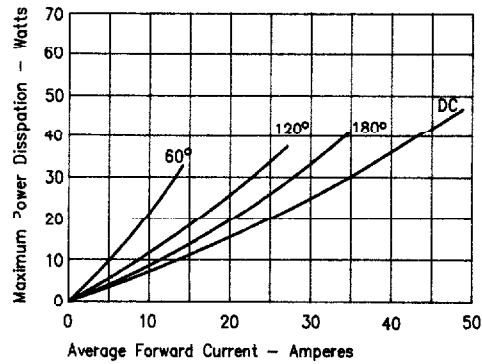


Figure 2
Typical Reverse Characteristics

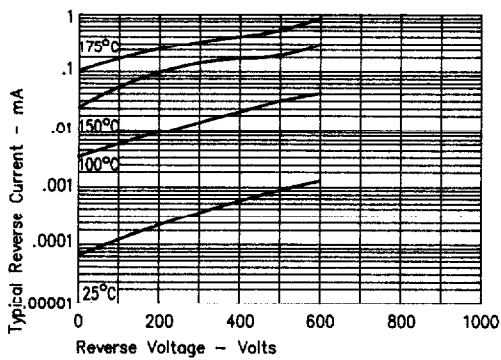
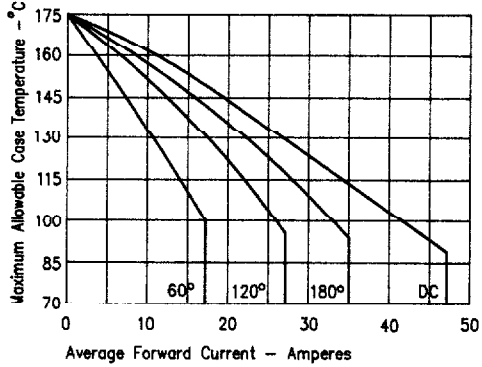


Figure 5
Forward Current Derating - Reverse Polarity



S/R35PF

Figure 6
Maximum Forward Power Dissipation - Reverse Polarity

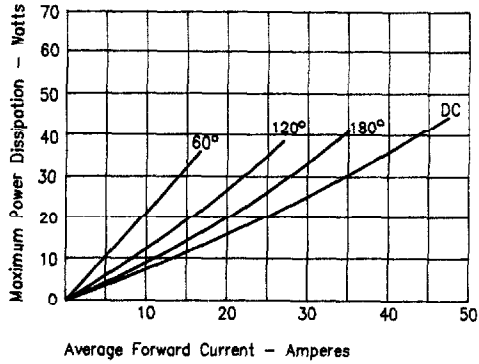


Figure 8
Transient Thermal Impedance - Reverse Polarity

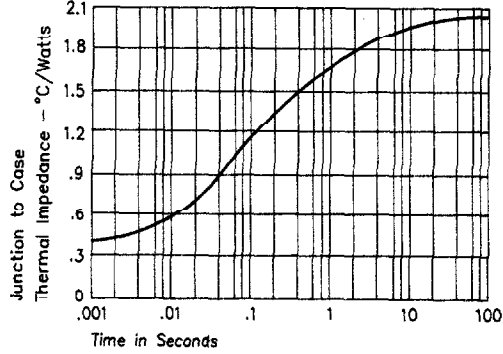


Figure 7
Transient Thermal Impedance - Standard Polarity

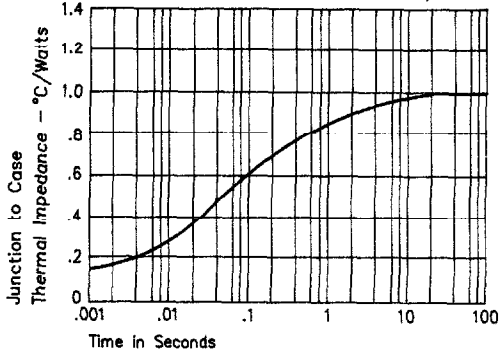


Figure 9
Maximum Nonrepetitive Surge Current

