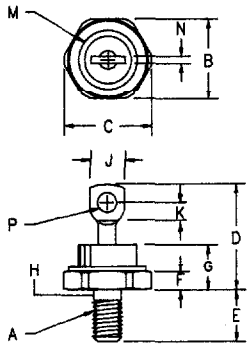
Silicon Power Rectifier
S/R306 Series



Notes:
1. 1/4-28
2. Full threads within 2 1/2 threads
3. Standard polarity: Stud is cathode
   Reverse polarity: Stud is anode

Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
A	---	---	---	---	1
B	.667	.687	16.95	17.44	
C	---	.793	---	20.14	
D	---	1.00	---	25.40	
E	.422	.453	10.72	11.50	
F	.115	.200	2.93	5.08	
G	---	.450	---	11.43	
H	.220	.249	5.59	6.32	2
J	.250	.375	6.35	9.52	
K	.156	---	3.97	---	
M	---	.667	---	16.94	Dia
N	---	.080	---	2.03	
P	.140	.175	3.56	4.44	Dia

DO203AB (D05)

E

Microsemi Catalog Number Standard	Reverse	Peak Reverse Voltage
S30620	R30620	200V
S30640	R30640	400V
S30660	R30660	600V
S30680	R30680	800V
S306100	R306100	1000V
S306120	R306120	1200V

- Glass Passivated Die
- 1200 Amps Surge Rating
- Glass to metal construction
- V_{RRM} to 1200V
- Excellent reliability

Electrical Characteristics

Average forward current	$I_{F(AV)}$ 70 Amps	T_C = 146°C, Half Sine Wave, $R_{\theta JC}$ = 0.8°C/W
Maximum surge current	I_{FSM} 1200 Amps	8.3ms, half sine, T_J = 200°C
Max I^2t for fusing	I^2t 5900 A^2s	
Max peak forward voltage	V_{FM} 1.25 Volts	I_{FM} = 200A; T_J = 25°C*
Max peak reverse current	I_{RM} 50 µA	V_{RRM}, T_J = 25°C
Max peak reverse current	I_{RM} 4.0 mA	V_{RRM}, T_J = 150°C
Max Recommended Operating Frequency	10kHz	

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

Thermal and Mechanical Characteristics

Storage temperature range	T_{STG}	-65°C to 200°C
Operating junction temp range	T_J	-65°C to 200°C
Maximum thermal resistance	$R_{\theta JC}$	0.8°C/W Junction to Case
Typical thermal resistance	$R_{\theta JC}$	0.72°C/W Junction to Case
Mounting torque		30 inch pounds maximum
Weight		.6 ounces (17 grams) typical

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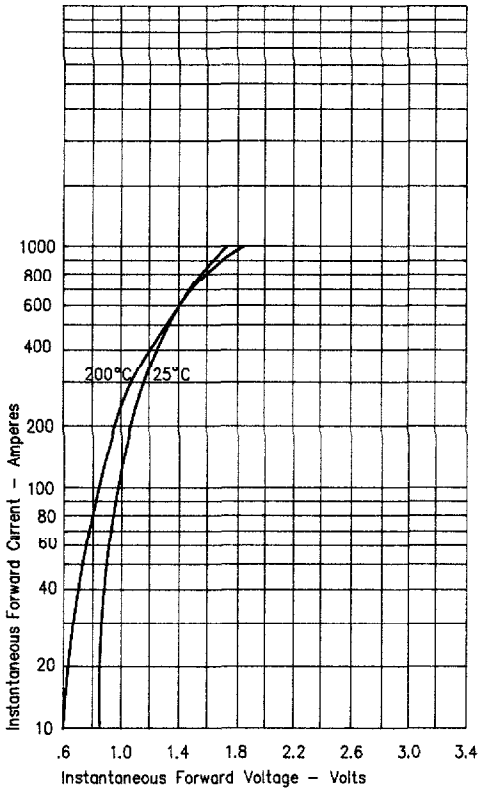
Microsemi Corp.
Colorado

S/R306

Figure 1
Typical Forward Characteristics



Typical Reverse Characteristics

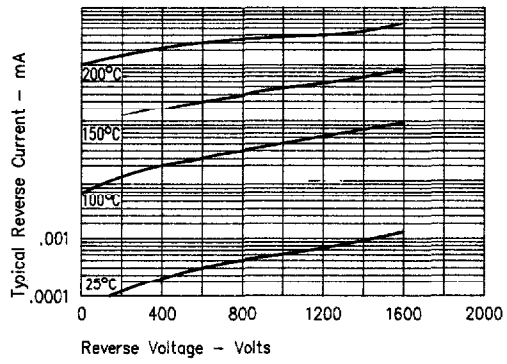


Figure 3
Forward Current Derating

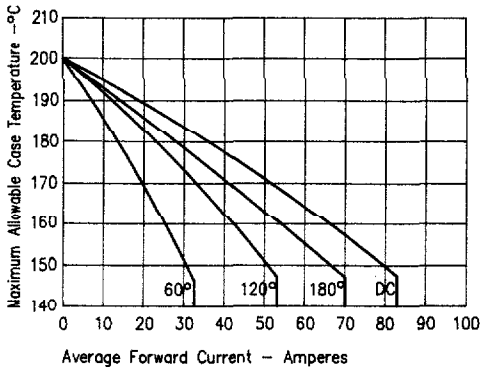


Figure 4
Maximum Forward Power Dissipation

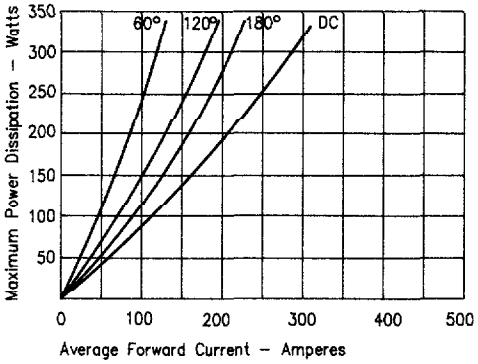


Figure 5
Transient Thermal Impedance

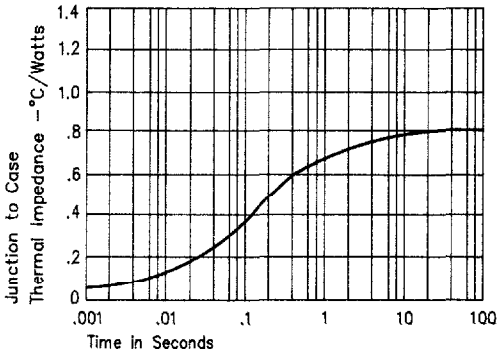


Figure 6
Maximum Nonrepetitive Surge Current