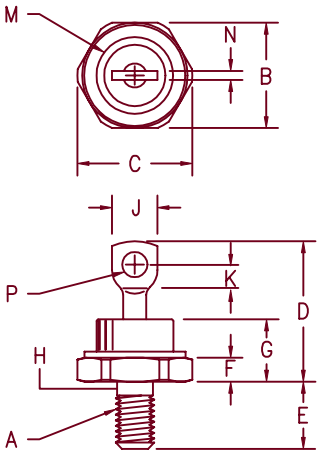
Silicon Power Rectifier
S/R306 Series



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)

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 seal construction
- V_{RRM} to 1200V

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} 25 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
Mounting torque		25–30 inch pounds
Weight		.6 ounces (17 grams) typical

12–5–00 Rev. 1

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www.microsemi.com

S/R306

Figure 1
Typical Forward Characteristics

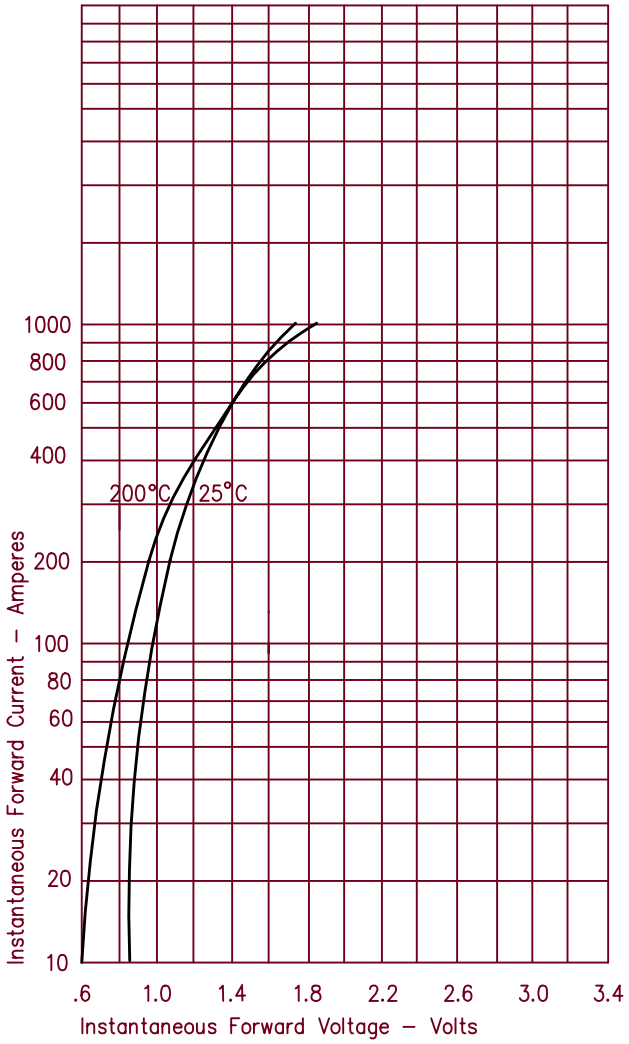


Figure 2
Typical Reverse Characteristics

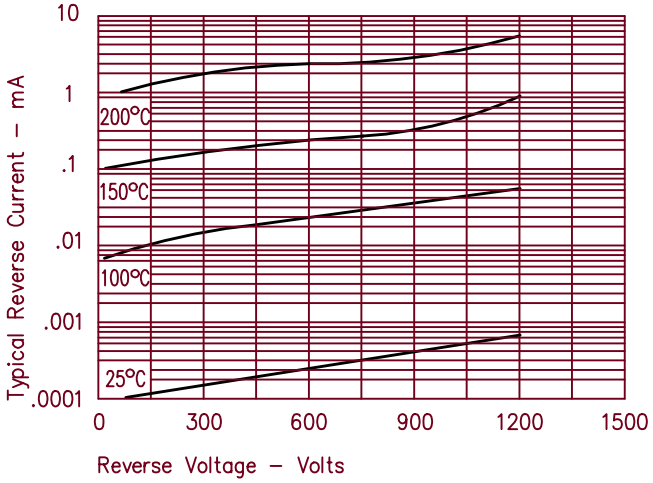


Figure 3
Forward Current Derating

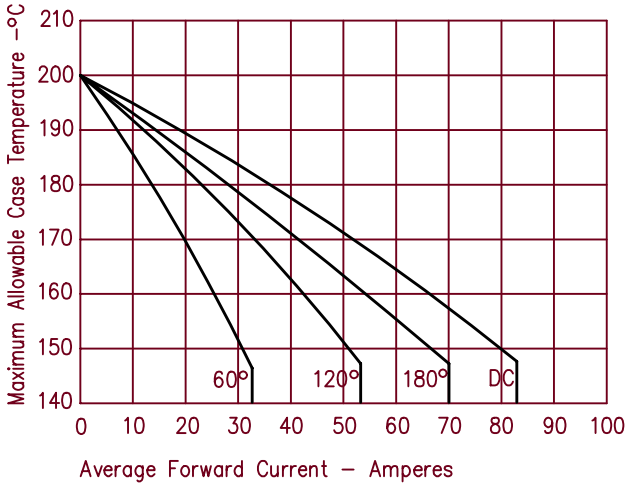


Figure 4
Maximum Forward Power Dissipation

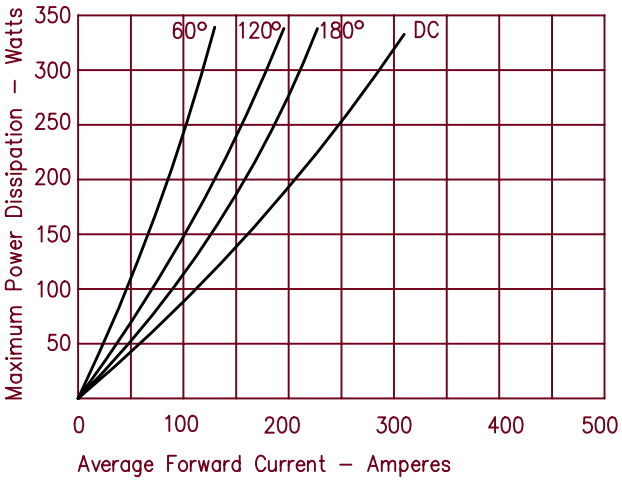
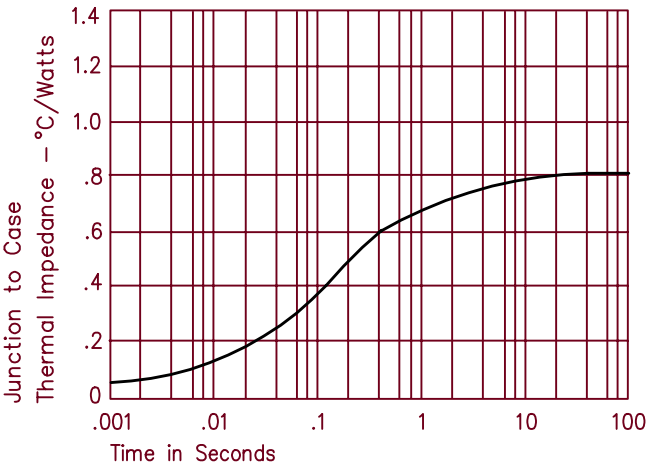


Figure 5
Transient Thermal Impedance



12–5–00 Rev. 1