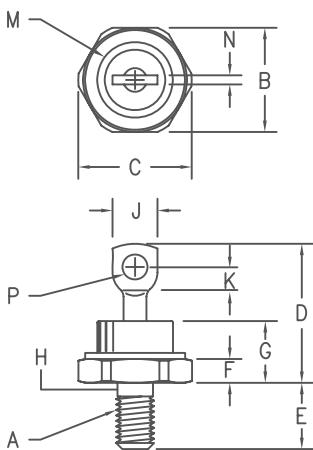


# Silicon Power Rectifier S/R306 Series



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.	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

D0203AB (D05)

Microsemi Catalog Number	Standard Reverse Voltage	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
- VRM to 1200V
- Low cost Non-RoHS package

## Electrical Characteristics

Average forward current	I <sub>F(AV)</sub> 70 Amps
Maximum surge current	I <sub>FSM</sub> 1200 Amps
Max $I^2 t$ for fusing	$I^2 t$ 5900 A <sup>2</sup> s
Max peak forward voltage	V <sub>FM</sub> 1.25 Volts
Max peak reverse current	I <sub>RM</sub> 25 $\mu$ A
Max peak reverse current	I <sub>RM</sub> 4.0 mA
Max Recommended Operating Frequency	10kHz

\*Pulse test: Pulse width 300  $\mu$ sec. Duty cycle 2%

T<sub>C</sub> = 146°C, Half Sine Wave, R<sub>θJC</sub> = 0.8°C/W  
 8.3ms, half sine, T<sub>J</sub> = 200°C  
 I<sub>FM</sub> = 200A: T<sub>J</sub> = 25°C\*  
 V<sub>RRM,TJ</sub> = 25°C  
 V<sub>RRM,TJ</sub> = 150°C

## Thermal and Mechanical Characteristics

Storage temperature range	T <sub>STG</sub>	-65°C to 200°C
Operating junction temp range	T <sub>J</sub>	-65°C to 200°C
Maximum thermal resistance	R <sub>θJC</sub>	0.8°C/W Junction to Case
Mounting torque		25–30 inch pounds
Weight		.6 ounces (17 grams) typical



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05-02-07 Rev. 3

# S/R 306

Figure 1  
Typical Forward Characteristics

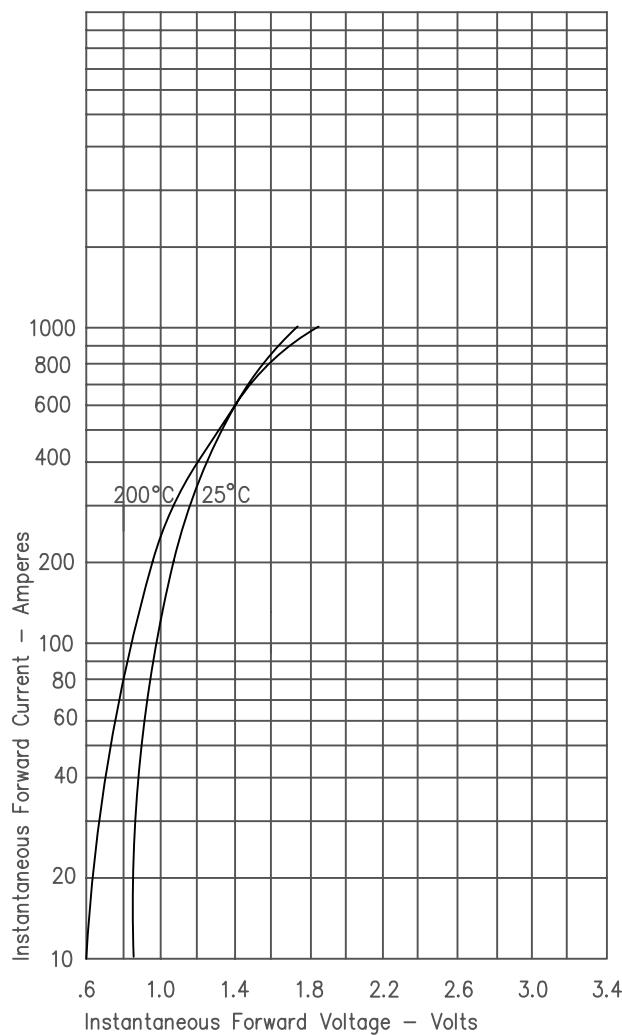


Figure 2  
Typical Reverse Characteristics

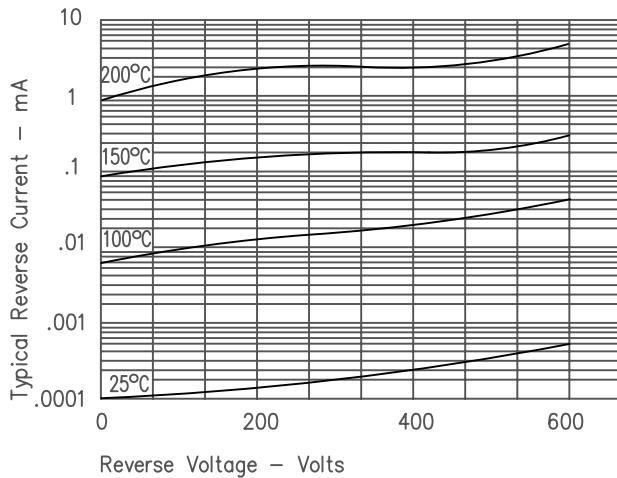


Figure 3  
Forward Current Derating

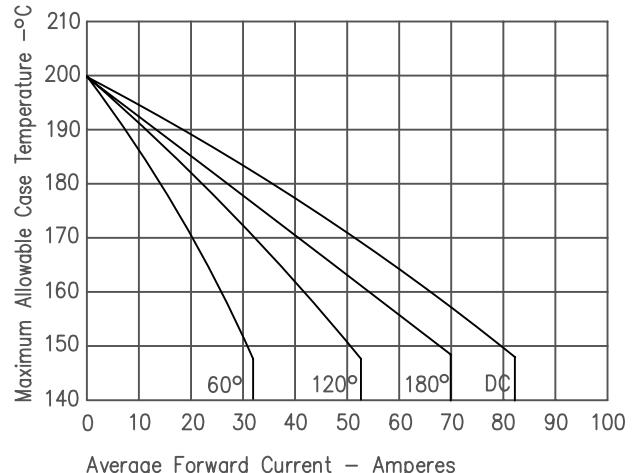


Figure 4  
Maximum Forward Power Dissipation

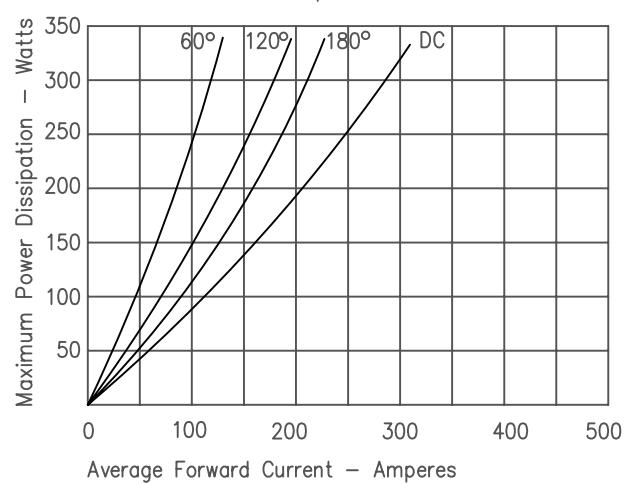


Figure 5  
Transient Thermal Impedance

