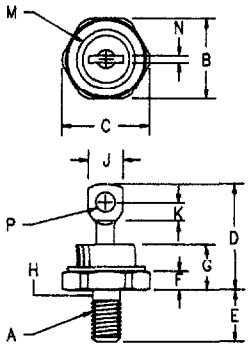
Silicon Power Rectifier
S/R304 Series



Notes:
1. Full threads within 2 1/2 threads
2. Standard Polarity: Stud is Cathode
   Reverse Polarity: Stud is Anode

Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
A	---	---	---	---	1/4-28
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	2.92	5.08	
G	---	.450	---	11.43	
H	.220	.249	5.59	6.32	1
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	JEDEC Numbers	Peak Reverse Voltage
* S30420	1N1186, 1N1186A	200V
* S30440	1N1188, 1N1188A	400V
* S30460	1N1190, 1N1190A	600V
* S304080		800V
* S304100		1000V
* S304120		1200V

* Change S to R in Part Number for Reverse Polarity

- Glass Passivated Die
- 800A surge rating
- Glass to metal construction
- V_{RRM} to 1200V
- Excellent reliability

Electrical Characteristics

Average forward current	$I_{F(AV)}$ 40 Amps	T_C = 152°C, half sine wave, $R_{\theta JC}$ = 1.25°C/W
Maximum surge current	I_{FSM} 800 Amps	8.3ms, half sine, T_J = 200°C
Max I^2t for fusing	I^2t 2600 A^2s	
Max peak forward voltage	V_{FM} 1.19 Volts	I_{FM} = 90A; 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 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	$R_{\theta JC}$	1.25°C/W Junction to Case
Typical thermal resistance	$R_{\theta JC}$	1.1°C/W Junction to Case
Mounting torque		30 inch pounds maximum
Weight		.5 ounces (14 grams) typical

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Colorado

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S/R304

Figure 1
Typical Forward Characteristics

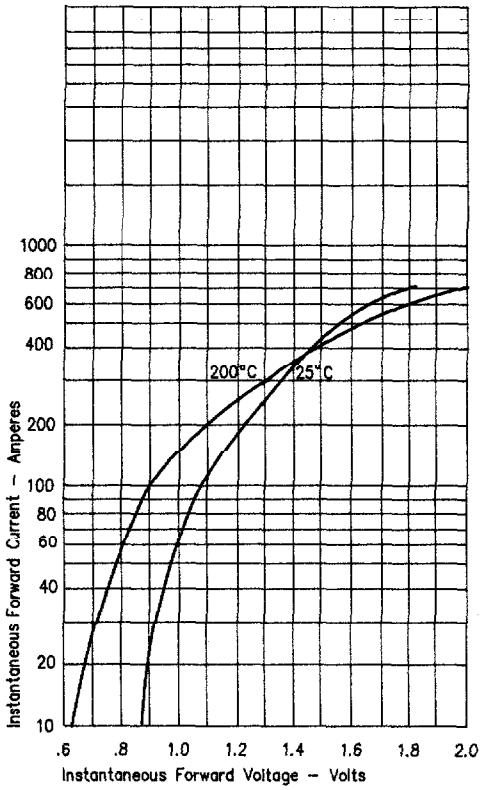


Figure 2
Typical Reverse Characteristics

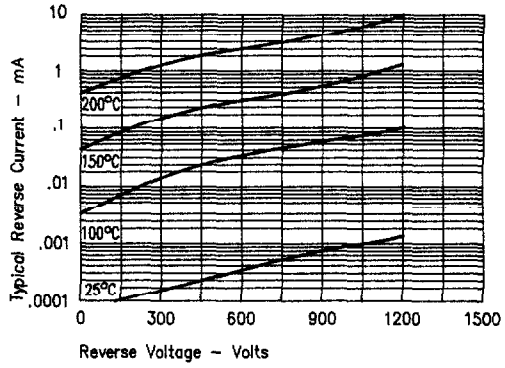


Figure 3
Forward Current Derating

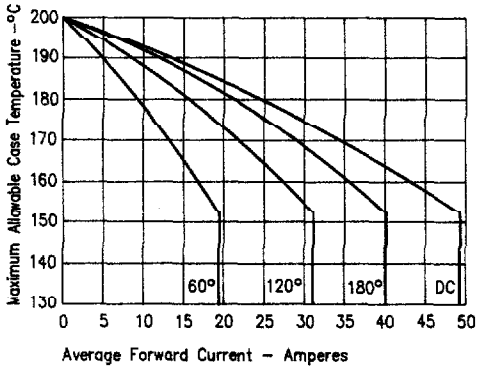


Figure 4
Maximum Forward Power Dissipation

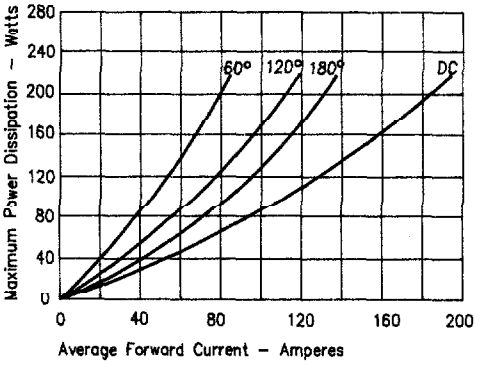
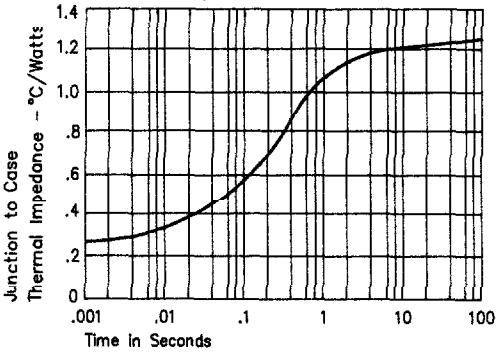


Figure 5
Transient Thermal Impedance



E

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Figure 6
Maximum Nonrepetitive Surge Current