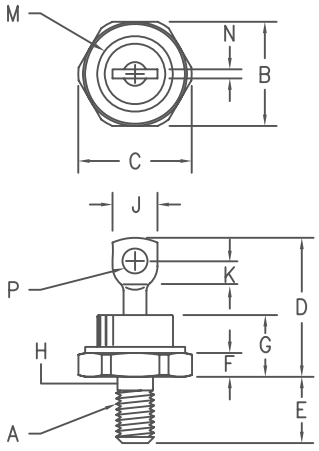
Silicon Power Rectifier
S/R304 Series



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

DO203AB (D05)

Microsemi Catalog Number Standard	JEDEC Numbers	Peak Reverse Voltage
* S30420	SEE PAGE 2 FOR	200V
* S30440	FULL LIST OF	400V
* S30460	JEDEC NUMBERS	600V
* S30480		800V
* S304100		1000V
* S304120		1200V

* Change S to R in Part Number for Reverse Polarity

- Glass Passivated Die
- 800A surge rating
- Glass to metal seal construction
- V_{RRM} to 1200V
- Low cost Non-RoHS package

Electrical Characteristics

Average forward current	$I_{F(AV)}$ 40 Amps	T_C = 146°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} 10 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		25 - 30 inch pounds
Weight		.5 ounces (14 grams) typical

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05-02-07 Rev. 5

S/R304

			JEDEC Numbers			Peak Reverse Voltage
1N1191,A	1N1301	1N1434		1N2154	1N2272	50V
1N1192,A	1N1302	1N1435		1N2155	1N2273	100V
1N1193,A			1N2021			150V
1N1194,A	1N1304	1N1436		1N2156	1N2274	200V
			1N2022			250V
1N1195,A	1N1306		1N2023	1N2157	1N2275	300V
			1N2024			350V
1N1196,A		1N1437	1N2025	1N2158	1N2276	400V
1N1197,A				1N2159	1N2277	500V
1N1198,A		1N1438		1N2160	1N2278	600V
					1N2279	800V
					1N2280	1000V
					1N2281	1200V

						Peak Reverse Voltage
	1N248,A–C		1N2793	1N3208		50V
	1N249,A–C		1N2794	1N3209		100V
			1N2795			150V
	1N250,A–C	1N2786	1N2796	1N3210	1N4525	200V
			1N2797			250V
1N2282			1N2798	1N3211		300V
			1N2799			350V
1N2283		1N2787	1N2800	1N3212	1N4526	400V
1N2284				1N3213		500V
1N2285				1N3214	1N4527	600V
1N2286					1N4528	800V
1N2287					1N4529	1000V
1N2288				1N5332	1N4530	1200V

For Reverse Polarity parts add an R suffix

S/R304

Figure 1
Typical Forward Characteristics

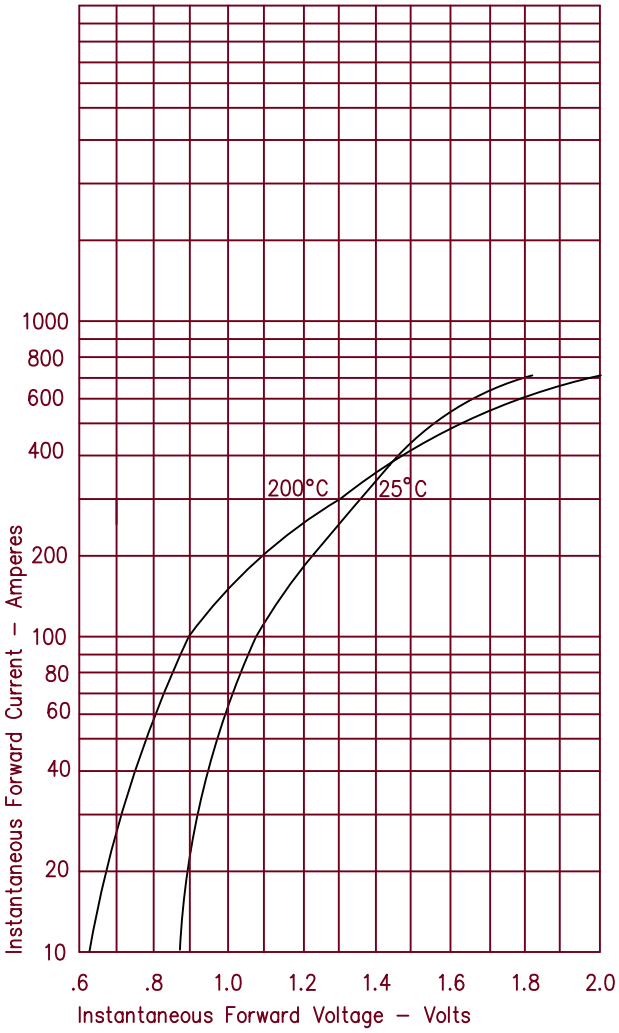


Figure 2
Typical Reverse Characteristics

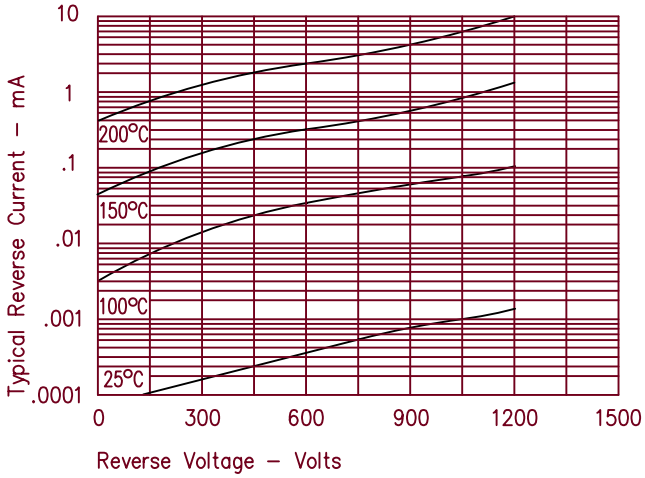


Figure 3
Forward Current Derating

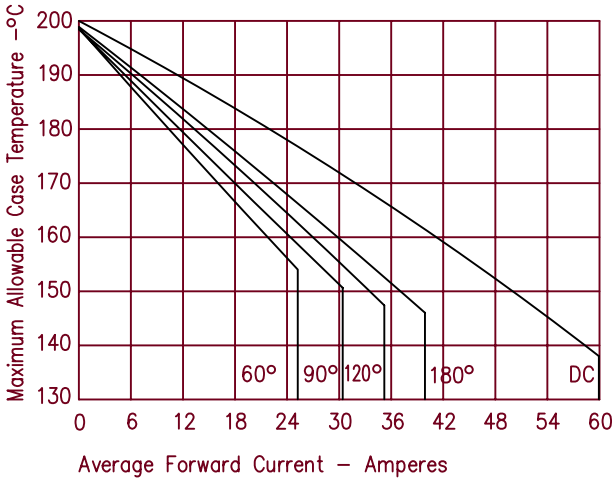


Figure 4
Maximum Forward Power Dissipation

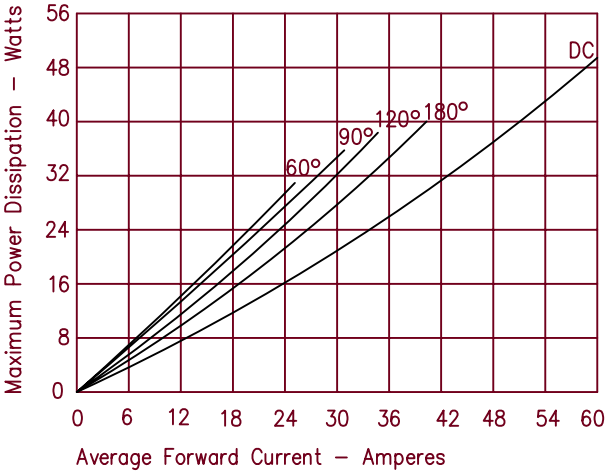


Figure 5
Transient Thermal Impedance

