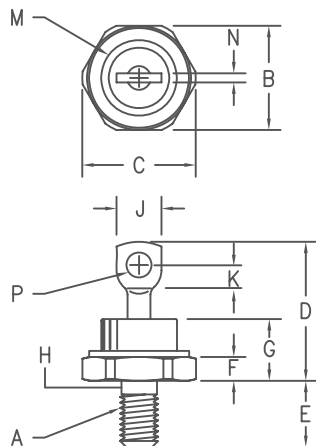


Silicon Power Rectifier S/R304 Series



Notes:

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

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
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	1
F	.115	.200	2.92	5.08	
G	---	.450	---	11.43	
H	.220	.249	5.59	6.32	
J	.250	.375	6.35	9.52	Dia
K	.156	---	3.97	---	
M	---	.667	---	16.94	
N	---	.080	---	2.03	
P	.140	.175	3.56	4.44	Dia

D0203AB (D05)

Microsemi Catalog Number Standard	JEDEC Numbers	Peak Reverse Voltage
* S30420	SEE PAGE 2 FOR FULL LIST OF JEDEC NUMBERS	200V
* S30440		400V
* S30460		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	IF(AV) 40 Amps	$T_C = 146^\circ\text{C}$, half sine wave, $R_{\theta JC} = 1.25^\circ\text{C/W}$ 8.3ms, half sine, $T_J = 200^\circ\text{C}$
Maximum surge current	IFSM 800 Amps	
Max $I^2 t$ for fusing	$I^2 t$ 2600 A ² s	
Max peak forward voltage	V_{FM} 1.19 Volts	$I_{FM} = 90\text{A}; T_J = 25^\circ\text{C}^*$
Max peak reverse current	IRM 10 μA	$V_{RRM}, T_J = 25^\circ\text{C}$
Max peak reverse current	IRM 2.0 mA	$V_{RRM}, T_J = 150^\circ\text{C}$
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 $^\circ\text{C/W}$ Junction to Case
Typical thermal resistance	$R_{\theta JC}$	1.1 $^\circ\text{C/W}$ Junction to Case
Mounting torque		25 - 30 inch pounds
Weight		.5 ounces (14 grams) typical

S/R304

JEDEC Numbers					Peak Reverse Voltage
1N1191,A	1N1301	1N1434		1N2154	50V
1N1192,A	1N1302	1N1435		1N2155	100V
1N1193,A			1N2021		150V
1N1194,A	1N1304	1N1436		1N2156	200V
			1N2022		250V
1N1195,A	1N1306		1N2023	1N2157	300V
			1N2024		350V
1N1196,A		1N1437	1N2025	1N2158	400V
1N1197,A				1N2159	500V
1N1198,A		1N1438		1N2160	600V
					800V
					1000V
					1200V
					Peak Reverse Voltage
	1N248,A-C		1N2793	1N3208	50V
	1N249,A-C		1N2794	1N3209	100V
			1N2795		150V
	1N250,A-C	1N2786	1N2796	1N3210	200V
			1N2797		250V
1N2282			1N2798	1N3211	300V
			1N2799		350V
1N2283		1N2787	1N2800	1N3212	400V
1N2284				1N3213	500V
1N2285				1N3214	600V
1N2286					800V
1N2287					1000V
1N2288				1N5332	1200V

For Reverse Polarity parts add an R suffix

S/R304

Figure 1
Typical Forward Characteristics

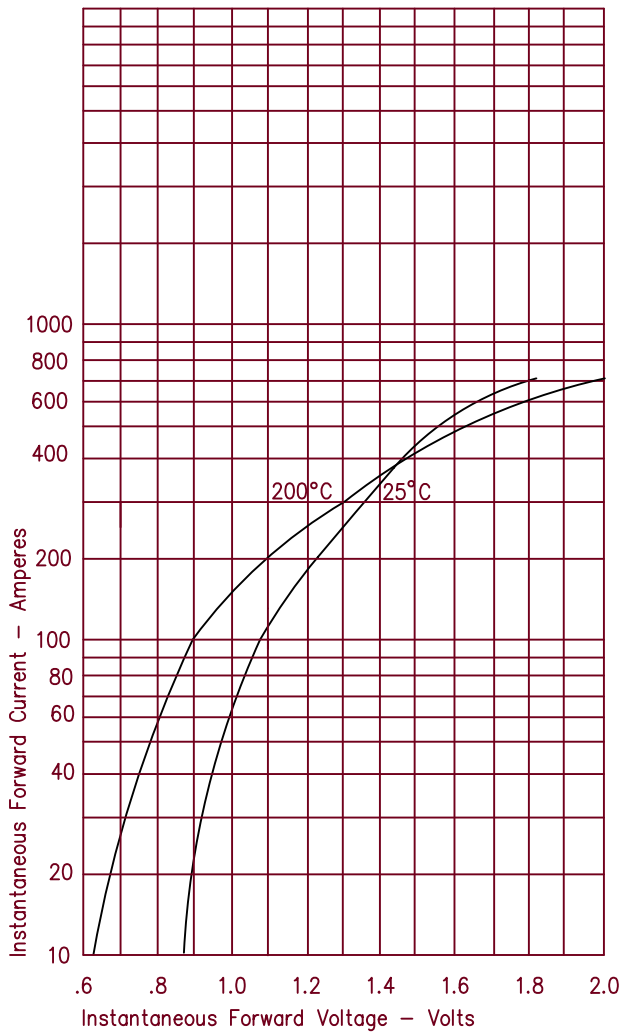


Figure 2
Typical Reverse Characteristics

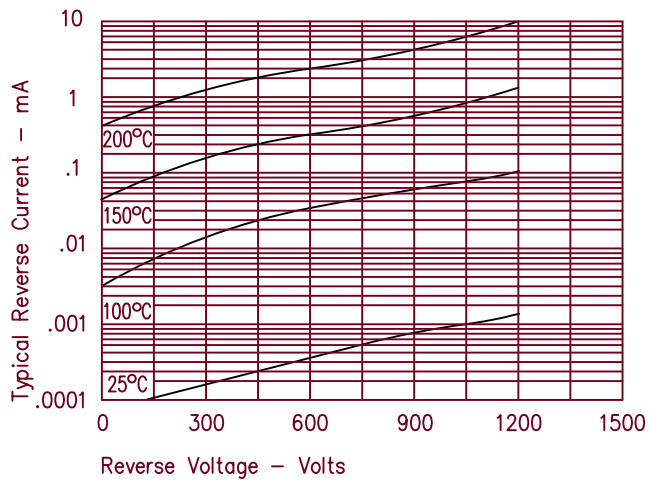


Figure 3
Forward Current Derating

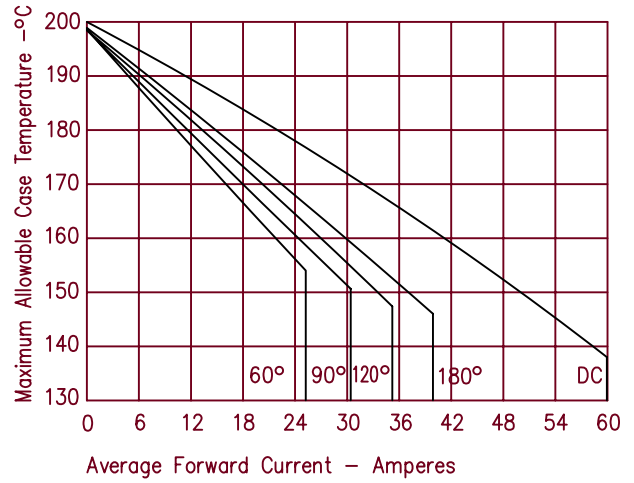


Figure 4
Maximum Forward Power Dissipation

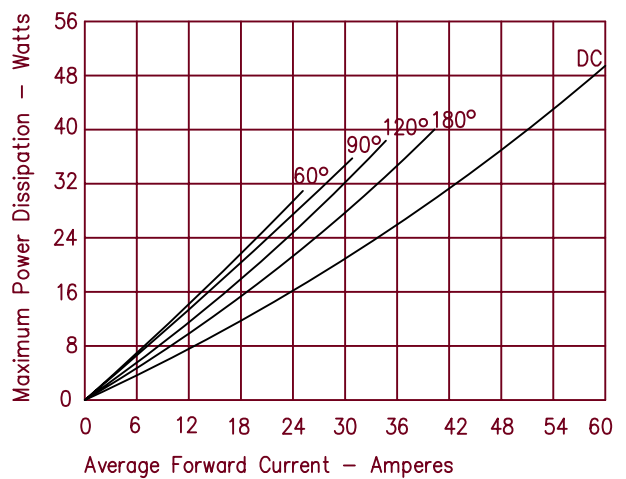
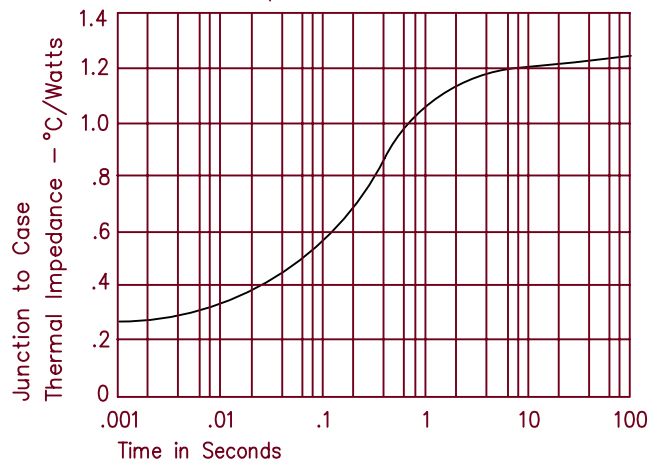


Figure 5
Transient Thermal Impedance



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[S30480](#)