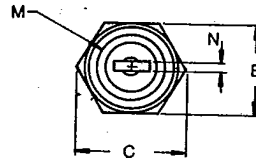


Silicon Power Rectifier
40 AMP Avg; V_{RRM} to 600 Volts

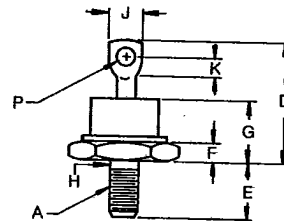
82D 00044

DT-01-19 Series 304

- Glass to metal construction
- Economical, general purpose rectifier
- High surge current capability
- Excellent reliability



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	---	---	---	---	1
B	.677	.687	17.19	17.44	
C	---	.793	---	20.14	
D	---	1.000	---	25.40	
E	.427	.447	10.84	11.35	
F	.125	.142	3.17	3.60	
G	---	.450	---	11.43	
H	.220	.249	5.59	6.32	2
J	---	.375	---	9.52	
K	.156	---	3.97	---	
M	---	.590	---	14.98	Dia.
N	---	.080	---	2.03	
P	.140	.175	3.56	4.44	Dia.



**DO-203AB
(DO-5)**

Note 1: Standard polarity: Stud is cathode
 1/4-28 UNF-2A Reverse polarity: Stud is anode
 Note 2: Full threads within 2 1/2 threads

Catalog Number		JEDEC Numbers	Peak Reverse Voltage
Standard	Reverse		
S30410	R30410	1N1184, 1N1184A	100
S30420	R30420	1N1186, 1N1186A	200
S30440	R30440	1N1188, 1N1188A	400
S30460	R30460	1N1190, 1N1190A	600

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Silicon Power Rectifier

Series 304

Electrical Characteristics**Reverse Blocking**

Repetitive peak reverse voltage	V_{RRM}	100V to 600V	
Maximum peak reverse current	I_{RRM}	2.0mA	$T_C = 150^\circ\text{C}$

Forward Direction

		1N1184A- 1N1190A	1N1184- 1N1190	
Maximum average forward current	$I_{F(AV)}$	40 Amps $T_C = 155^\circ\text{C}$	35 Amps $T_C = 144^\circ\text{C}$	Single phase, half-wave
Maximum surge current	I_{FSM}	800 Amps	500 Amps	One cycle of 60HZ sine wave
Maximum peak forward voltage	V_{FM}	1.19V max.	1.45V max.	$I_F = 90\text{A}; T_C = 25^\circ\text{C}$
Maximum I^2t	I^2t	2600 A ² S	1000A ² S	less than 8.33 ms
Maximum recommended operating frequency		10kHz	10kHz	

Thermal values

Storage temp range	T_{stg}	-65°C to +200°C
Operating junction temp range	T_J	-65°C to +190°C
Maximum thermal resistance junction to case	$R_{\theta JC}$	1.0°C/W

Mechanical Characteristics

Base	Steel stud and base with a #10-32 UNF-2A thread for through mounting on a heat sink. Nickel plating prevents corrosion.
Header	Glass to metal construction.
Weight	Approximately 0.5 ounce (14 grams)
Mounting Position	May be mounted in any position
Mounting Torque	30 Inch pounds maximum
Dimensions	In accordance with JEDEC DO-203A ₆ (DO-5) outline

Figure 1
Maximum load current versus case temperature

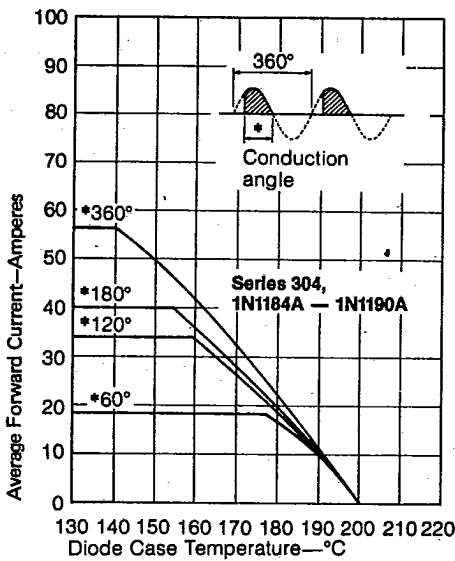


Figure 2
Maximum power dissipation versus forward current

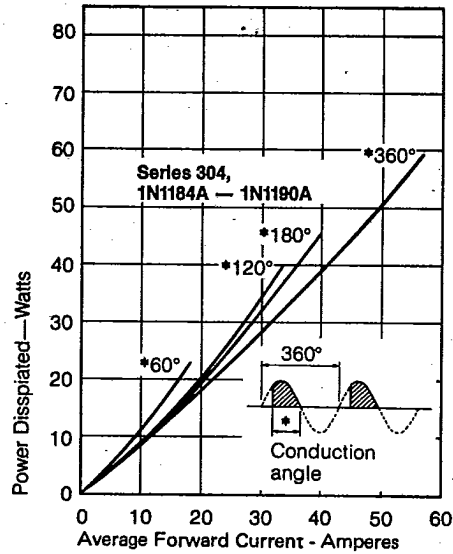


Figure 3
Maximum forward characteristics

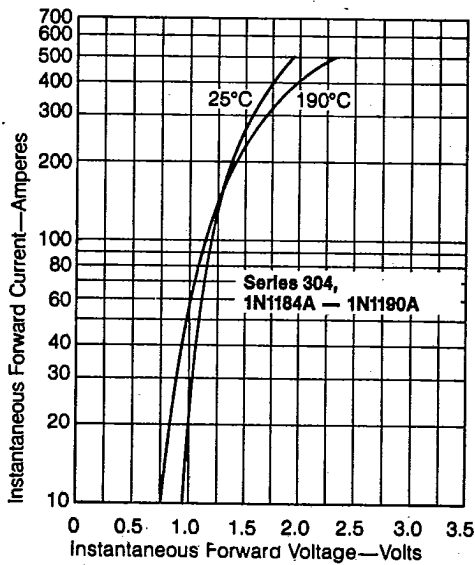
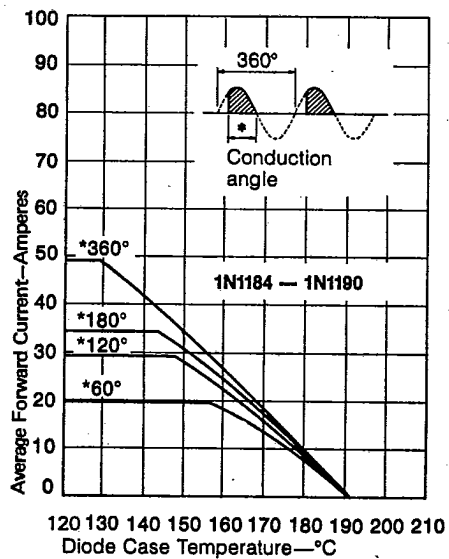


Figure 4
Maximum load current versus case temperature



Silicon Power Rectifier

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Figure 5
Maximum power dissipation versus forward current.

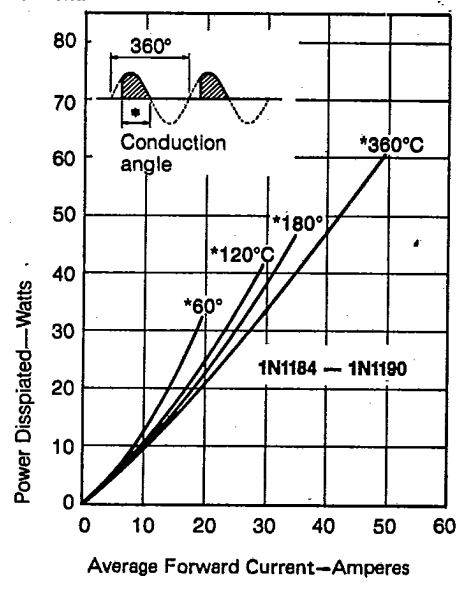
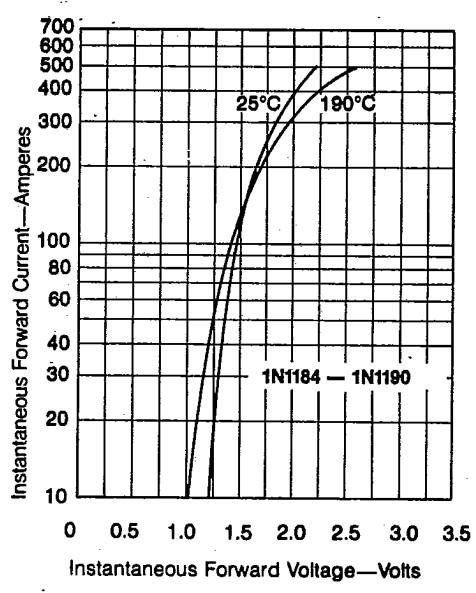


Figure 6
Maximum forward characteristics



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Figure 7
Transient thermal impedance

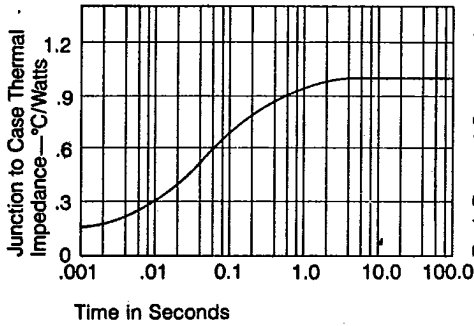


Figure 8
Maximum surge current at 25°C

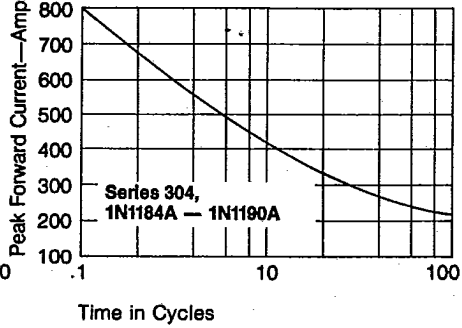


Figure 9
Maximum surge current

