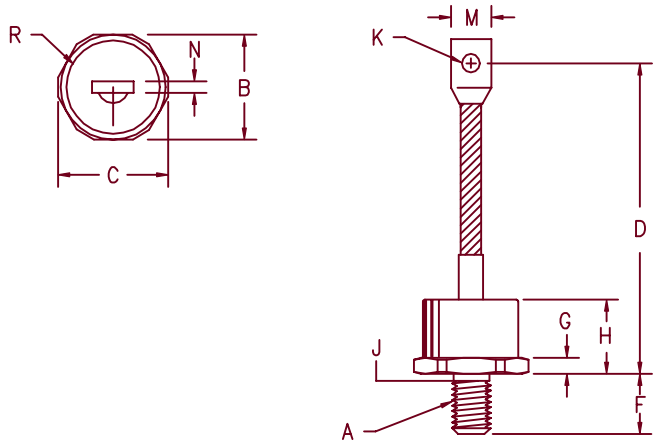
Military Silicon Power Rectifier
1N3164 – 1N3174



Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
A	3/4–16 UNF		---	---	1
B	1.218	1.250	30.93	31.75	
C	1.350	1.375	34.29	34.93	
D	5.30	5.90	134.62	149.86	
F	.793	.828	20.14	21.03	
G	.300	.325	7.62	8.25	
H	---	.900	---	22.86	
J	.660	.745	16.76	19.02	2
K	.338	.348	8.58	8.84	Dia.
M	.665	.755	16.89	19.17	
N	.125	.172	3.18	4.37	
R	---	1.10	---	27.94	Dia.

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

DO205AB (DO9)

Microsemi Catalog Number		Peak Reverse Voltage
Standard	Reverse	
1N3164	1N3164R	200
1N3168	1N3168R	400
1N3170	1N3170R	600
1N3172	1N3172R	800
1N3174	1N3174R	1000

- MIL–PRF–19500/211B
- Available in JAN, JANTX and JANTXV
- Glass to metal header construction
- High surge current capability
- Glass Passivated Die
- Rugged construction

Electrical Characteristics

Max average forward current	$I_{F(AV)}$ 200 Amps	T_C = 150°C, Half sine wave, $R_{\theta JC}$ = 0.20°C/W
Max average forward current	$I_{F(AV)}$ 300 Amps	T_C = 120°C, Half sine wave, $R_{\theta JC}$ = 0.20°C/W
Max surge current	I_{FSM} 5000 Amps	8.3ms, half sine, T_J = 200°C
Max. I^2t capability for fusing	I^2t 104160A^2S	less than 8.33ms
Max peak forward voltage	V_{FM} 1.55 Volts	IF = 940A: T_C = 25°C
Max peak reverse current	I_{RRM} 30mA	V_{RRM}, T_C = 175°C
Max peak reverse current	I_{RRM} 10 mA	V_{RRM}, T_C = 25°C
Max recommended operating frequency	7.5 kHz	

Thermal and Mechanical Characteristics

Operating junction temp range	T_J	–65°C to 200°C
Storage temperature range	T_{STG}	–65°C to 200°C
Maximum thermal resistance	$R_{\theta JC}$	0.20°C/W Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	.08°C/W Case to sink
Max mounting torque		325 inch pounds maximum
Weight		8.5 ounces (240 grams) typical

1–22–01 Rev. 1

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Figure 1
Typical Forward Characteristics

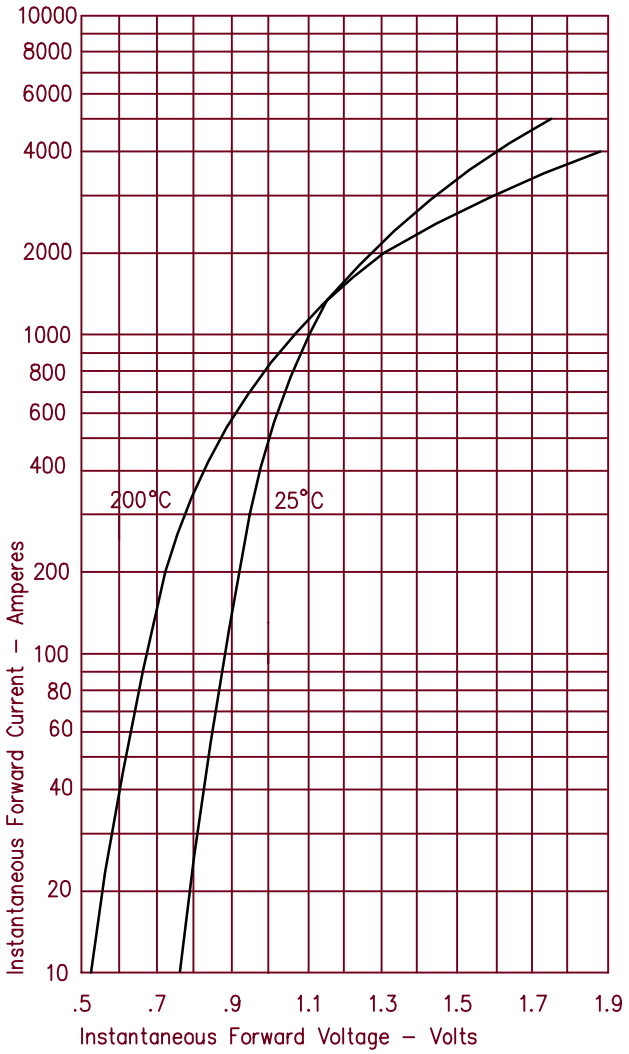

Figure 2
Typical Reverse Characteristics

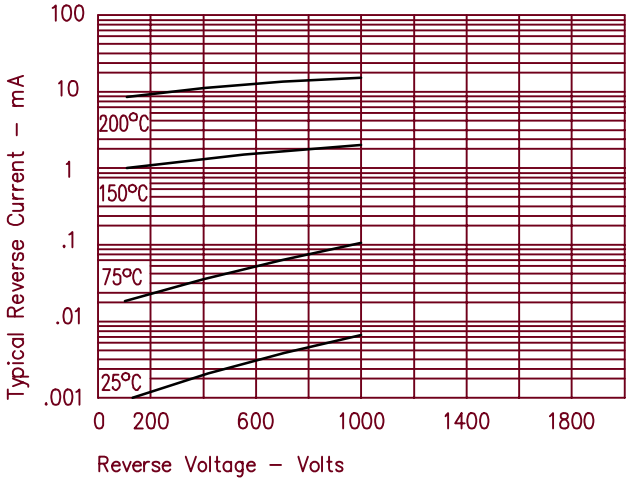

Figure 3
Forward Current Derating

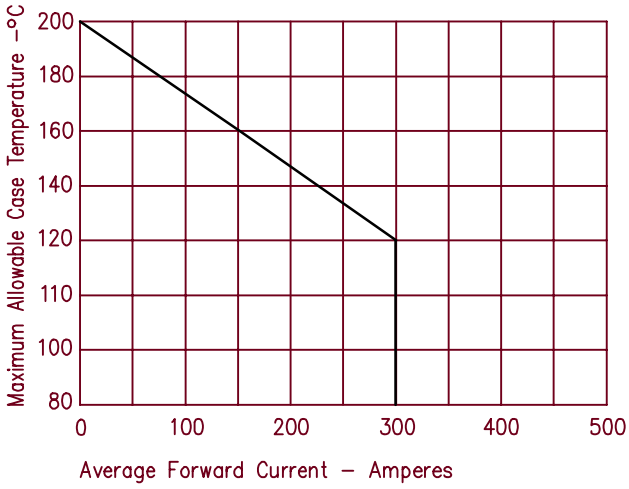

Figure 4
Maximum Nonrepetitive Multi-Cycle Surge Current