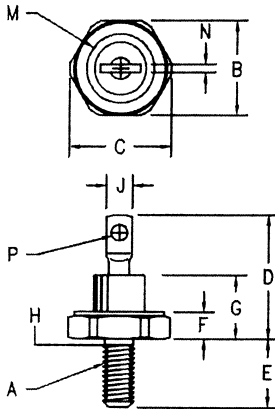


# Military Silicon Power Rectifier

## 1N1614-1N1616, 1N4458-1N4459



- Notes:
1. 10-32 UNF3A
  2. Full threads within 2 1/2 threads
  3. Standard Polarity: Stud is Cathode  
Reverse Polarity: Stud is Anode

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	---	---	---	---	1
B	.424	.437	10.77	11.10	
C	---	.505	---	12.83	
D	---	.800	---	20.32	
E	.422	.453	10.72	11.51	
F	.075	.175	1.91	4.44	
G	---	.405	---	10.29	
H	.163	.189	4.15	4.80	2
J	---	.250	---	6.35	
M	---	.424	---	10.77	Dia
N	.020	.065	.510	1.65	
P	.060	---	1.52	---	Dia

### D0203AA (D04)

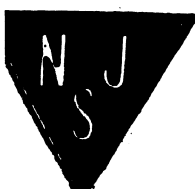
Microsemi Catalog Number	Reverse	Peak Reverse Voltage
Standard	Reverse	
1N1614	1N1614R	200V
1N1615	1N1615R	400V
1N1616	1N1616R	600V
1N4458	1N4458R	800V
1N4459	1N4459R	1000V

- Available in JAN and JANTX quality levels
- MIL-PRF-19500/162
- Glass passivated die
- Glass to metal seal construction
- $V_{RRM}$  - 200 to 1000 volts

Electrical Characteristics		
Average forward current	IF(AV) 5 Amps	$T_C = 150^\circ\text{C}$ , half sine wave, $R_{\theta JC} = 4.5^\circ\text{C/W}$
Maximum surge current	IFSM 100 Amps	8.3ms, half sine, $T_C = 150^\circ\text{C}$
Max $I^2t$ for fusing	$I^2t$ 42 A <sup>2</sup> s	
Max peak forward voltage	V <sub>FM</sub> 1.5 Volts	IFM = 15A: T <sub>J</sub> = 25°C*
Max peak reverse current	I <sub>RM</sub> 50 μA	V <sub>RRM, T<sub>J</sub></sub> = 25°C
Max peak reverse current	I <sub>RM</sub> 500 μA	V <sub>RRM, T<sub>J</sub></sub> = 150°C
Max Recommended Operating Frequency	10kHz	

\*Pulse test: Pulse width 300 μsec. Duty cycle 2%

Thermal and Mechanical Characteristics		
Storage temperature range	T <sub>STG</sub>	-65°C to 200°C
Operating case temp range	T <sub>C</sub>	-65°C to 150°C
Maximum thermal resistance	R <sub>θJC</sub>	4.5°C/W Junction to Case
Typical thermal resistance	R <sub>θJC</sub>	2.0°C/W Junction to Case
Mounting torque		15 inch pounds maximum
Weight		.16 ounces (5.0 grams) typical



# 1N1614-1N1616, 1N4458-1N4459

Figure 1  
Typical Forward Characteristics

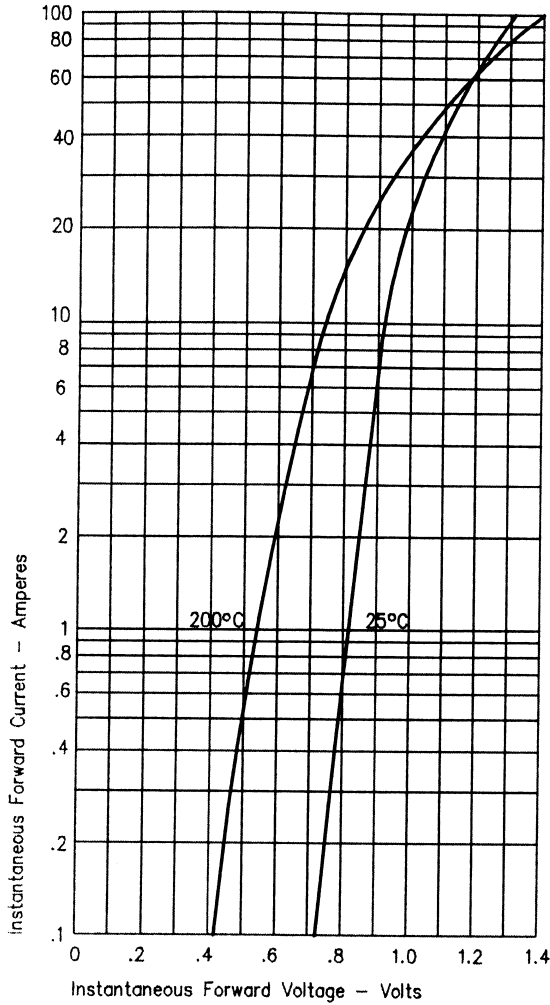


Figure 3  
Forward Current Derating

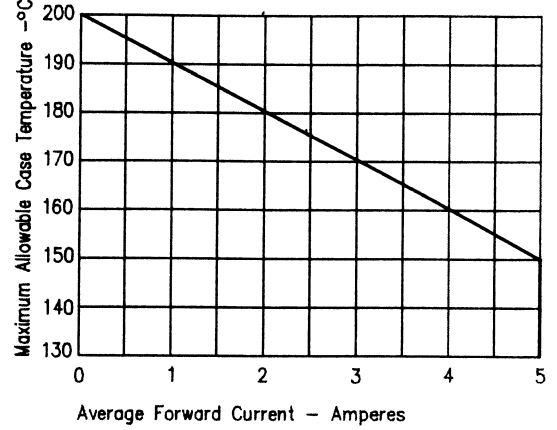


Figure 4  
Transient Thermal Impedance

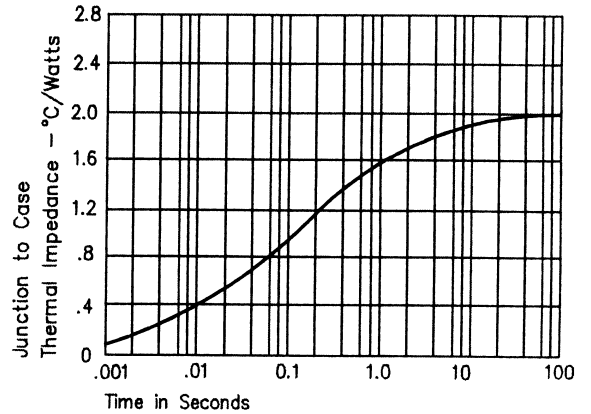


Figure 2  
Typical Reverse Characteristics

