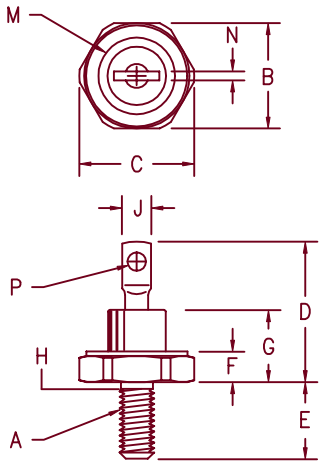
Military Silicon Power Rectifier
1N1614–1N1616, 1N4458–1N4459



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		
	Minimum	Maximum	Minimum	Maximum	Notes
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

DO203AA (DO4)

Microsemi Catalog Number		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	$I_{F(AV)}$ 5 Amps	T_C = 150°C, half sine wave, $R_{\theta JC}$ = 4.5°C/W
Maximum surge current	I_{FSM} 100 Amps	8.3ms, half sine, T_C = 150°C
Max I^2t for fusing	I^2t 42 A^2s	
Max peak forward voltage	V_{FM} 1.5 Volts	I_{FM} = 15A: T_J = 25°C*
Max peak reverse current	I_{RM} 50 µA	V_{RRM}, T_J = 25°C
Max peak reverse current	I_{RM} 500 µA	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 case temp range	T_C	–65°C to 150°C
Maximum thermal resistance	$R_{\theta JC}$	4.5°C/W Junction to Case
Typical thermal resistance	$R_{\theta JC}$	2.0°C/W Junction to Case
Mounting torque		15 inch pounds maximum
Weight		.16 ounces (5.0 grams) typical

11–21–00 Rev. 1

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www.microsemi.com

1N1614–1N1616, 1N4458–1N4459

Figure 1
Typical Forward Characteristics

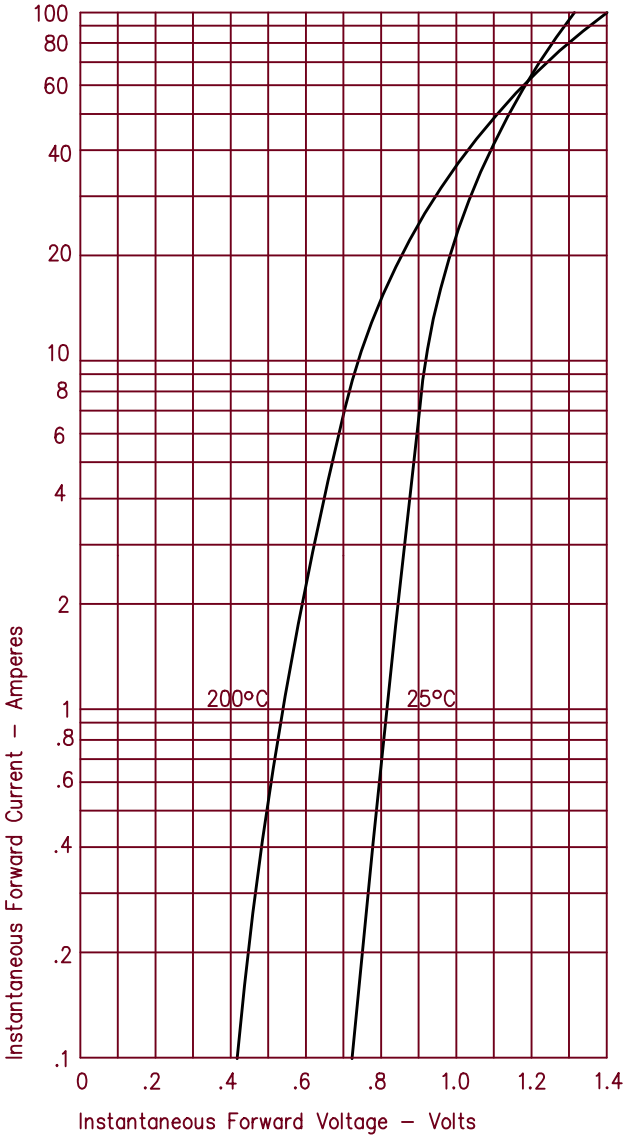


Figure 2
Typical Reverse Characteristics

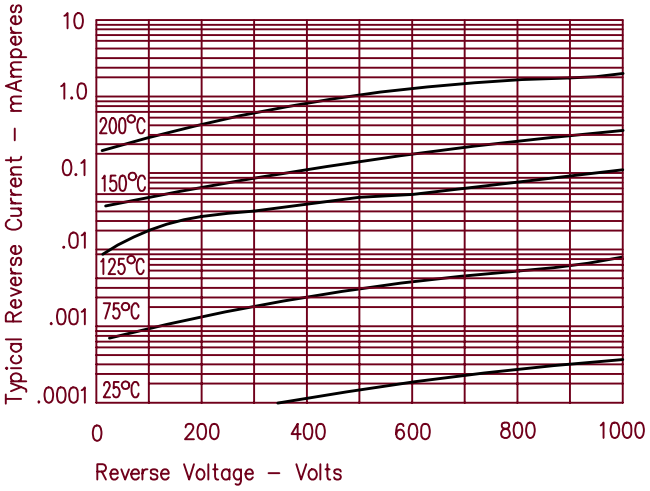


Figure 3
Forward Current Derating

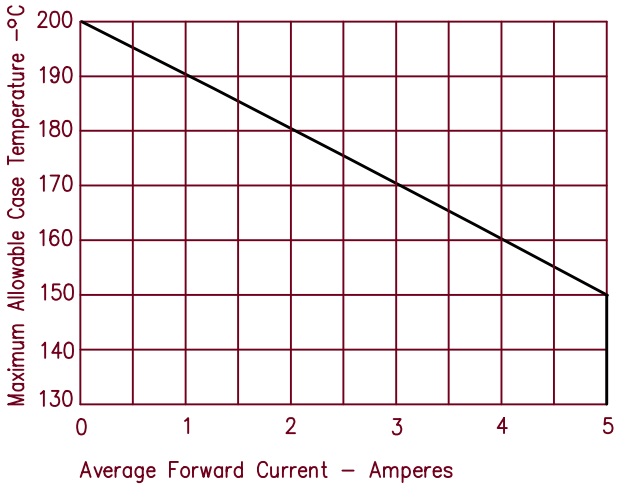


Figure 4
Transient Thermal Impedance

