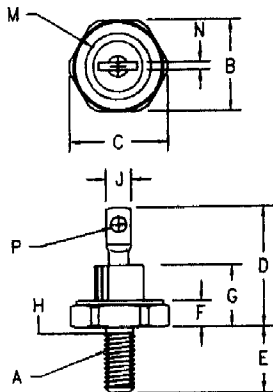


Silicon Power Rectifier

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

DO203AA (D04)

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

- Glass passivated die
- Glass to metal seal construction
- V_{RRM} - 200 to 1000 volts

Electrical Characteristics		
Average forward current	$I_F(AV)$ 5 Amps	$T_C = 150^\circ C$, half sine wave, $R_{\theta JC} = 4.5^\circ C/W$
Maximum surge current	I_{FSM} 100 Amps	8.3ms, half sine, $T_C = 150^\circ C$
Max $I^2 t$ for fusing	$I^2 t$ 42 A ² s	
Max peak forward voltage	V_{FM} 1.5 Volts	$I_{FM} = 15A; T_J = 25^\circ C^*$
Max peak reverse current	I_{RM} 50 μA	$V_{RRM, T_J} = 25^\circ C$
Max peak reverse current	I_{RM} 500 μA	$V_{RRM, T_J} = 150^\circ C$
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



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

1N1614-1N1616, 1N4458-1N4459

Figure 1
Typical Forward Characteristics

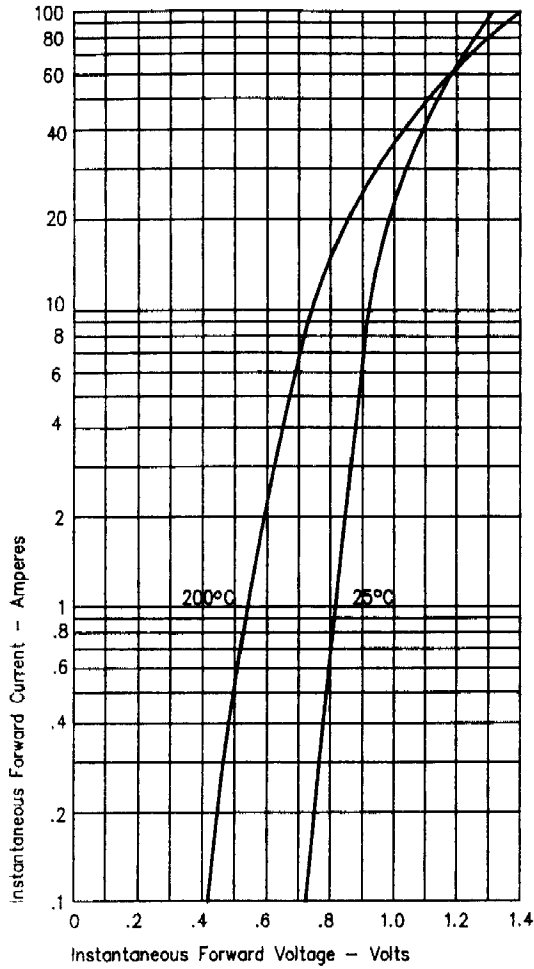


Figure 3
Forward Current Derating

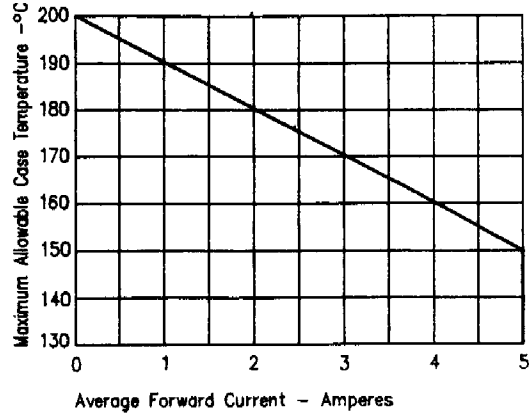


Figure 4
Transient Thermal Impedance

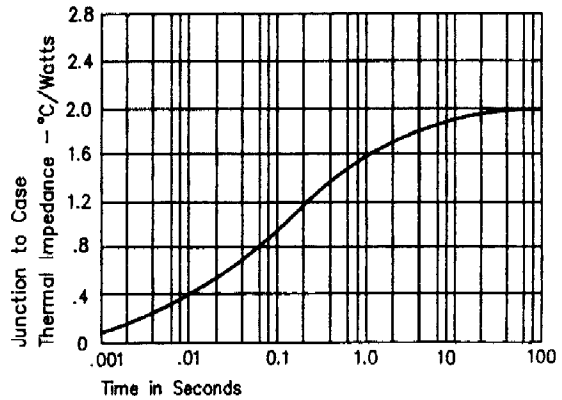


Figure 2
Typical Reverse Characteristics

