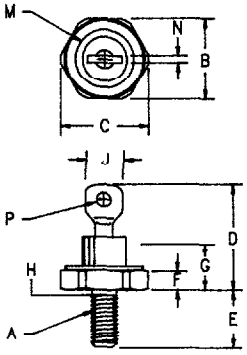
Silicon Power Rectifier
S/R20 Series



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	---	12.82	
D	.600	.800	15.24	20.32	
E	.422	.453	10.72	11.50	
F	.075	.175	1.91	4.44	
G	---	.405	---	10.29	
H	.163	.189	4.15	4.80	2
J	---	.310	---	7.87	
M	---	.350	---	8.89	Dia
N	.020	.065	.510	1.65	
P	.070	.100	1.78	2.54	Dia

DO203AA (DO4)

Microsemi Catalog Number Standard	JEDEC Numbers	Peak Reverse Voltage
*S2020		200V
*S2040	1N1126, 1N1346, 1N1346A, 1N1345B	400V
*S2060	1N1128, 1N1348, 1N1348A, 1N1348B, 1N1587, 1N1616, 1N2238, 1N2497	600V
*S2080	1N2240	800V
*S20100		1000V
*S20120		1200V

*Change S to R in part number for Reverse Polarity

- Glass Passivated Die
- Low Forward Voltage
- 200A Surge Rating
- Glass to metal construction
- V_{RRM} to 1200V
- Excellent reliability

Electrical Characteristics

Average forward current	$I_{F(AV)}$ 16 Amps	T_C = 153°C, half sine wave, $R_{\theta JC}$ = 2.5°C/W
Maximum surge current	I_{FSM} 200 Amps	8.3ms, half sine, T_J = 200°C
Max I^2t for fusing	I^2t 165 A^2s	
Max peak forward voltage	V_{FM} 1.3 Volts	I_{FM} = 30A; T_J = 25°C *
Max peak reverse current	I_{RM} 10 µA	V_{RRM}, T_J = 25°C
Max peak reverse current	I_{RM} 1.0 mA	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 junction temp range	T_J	-65°C to 200°C
Maximum thermal resistance	$R_{\theta JC}$	2.5°C/W Junction to Case
Typical thermal resistance	$R_{\theta JC}$	2.0°C/W Junction to Case
Mounting torque		30 inch pounds maximum
Weight		.16 ounces (5.0 grams) typical

Microsemi Corp.
Colorado

PH: 303-469-2161
FAX: 303-466-3775

S/R20

Figure 1
Typical Forward Characteristics

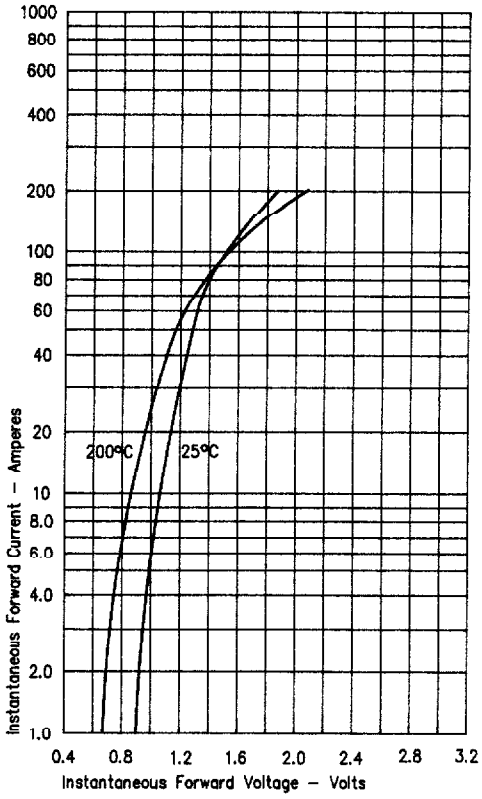


Figure 2
Typical Reverse Characteristics

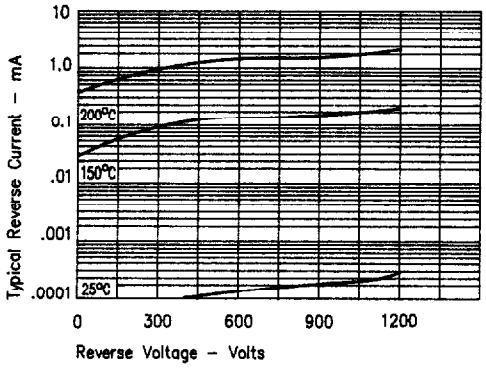


Figure 3
Forward Current Derating

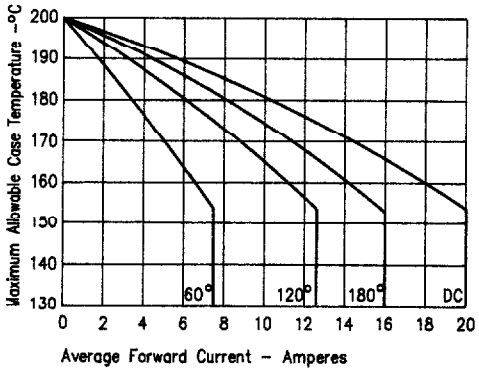


Figure 4
Maximum Forward Power Dissipation

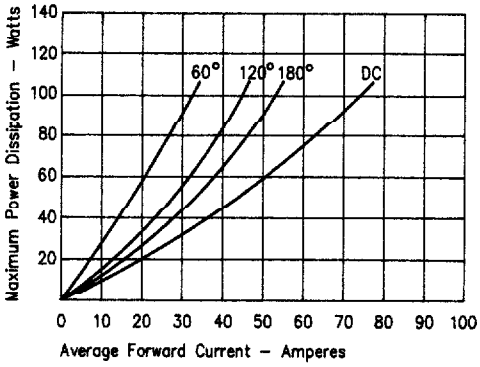
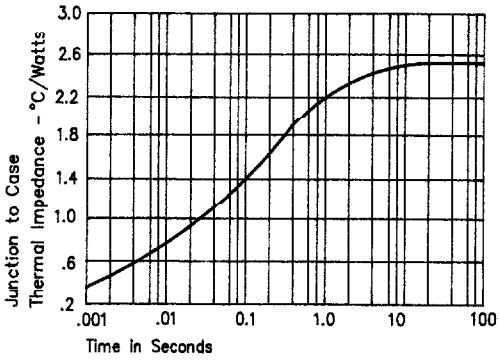


Figure 5
Transient Thermal Impedance



E

Figure 6
Maximum Nonrepetitive Surge Current

