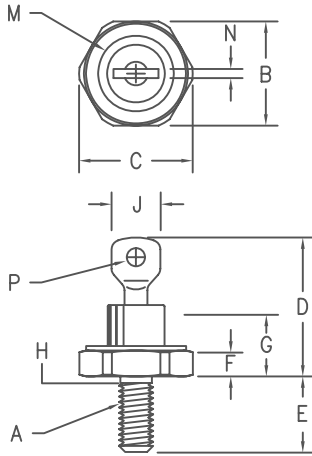


# Silicon Power Rectifier S/R21 Series



**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		Notes
	Minimum	Maximum	Minimum	Maximum	
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

## D0203AA (D04)

Microsemi Catalog Number	JEDEC Numbers	Peak Reverse Voltage
1N2246,A 1N2248,A	1N2598	50V 100V 150V
*S2120	1N2250,A 1N2252,A	200V 300V
*S2140	1N2254,A 1N2256,A	400V 500V
*S2160	1N2258,A	600V
*S2180	1N2260,A	700V
*S21100 *S21120 *S21140 *S21160	1N3670,A 1N3671,A 1N3672,A 1N3673, A 1N5331	800V 900V 1000V 1200V 1400V 1600V

\*Change S to R in part number for Reverse Polarity  
For 1N types, use an R suffix for Reverse Polarity

- Glass Passivated Die
- Low Forward Voltage
- 250A Surge Rating
- Glass to metal seal construction
- $V_{RRM}$  to 1600V
- Low cost Non-RoHS package

### Electrical Characteristics

Average forward current	$I_F(AV)$ 22 Amps	$T_C = 134^\circ C$ , half sine wave, $R_{\theta JC} = 2.5^\circ C/W$
Maximum surge current	$I_{FSM}$ 250 Amps	8.3ms, half sine, $T_J = 200^\circ C$
Max $I^2 t$ for fusing	$I^2 t$ 260 $A^2 s$	
Max peak forward voltage	$V_{FM}$ 1.2 Volts	$I_{FM} = 30A; T_J = 25^\circ C$ *
Max peak reverse current	$I_{RM}$ 10 $\mu A$	$V_{RRM}, T_J = 25^\circ C$
Max peak reverse current	$I_{RM}$ 1.0 mA	$V_{RRM}, T_J = 150^\circ C$
Max Recommended Operating Frequency	10kHz	

\*Pulse test: Pulse width 300  $\mu sec$ . Duty cycle 2%

### Thermal and Mechanical Characteristics

Storage temperature range	$T_{STG}$	$-65^\circ C$ to $200^\circ C$
Operating junction temp range	$T_J$	$-65^\circ C$ to $200^\circ C$
Maximum thermal resistance	$R_{\theta JC}$	$2.5^\circ C/W$ Junction to Case
Mounting torque		25–30 inch pounds
Weight		.16 ounces (5.0 grams) typical

# S/R21

Figure 1  
Maximum Forward Characteristics

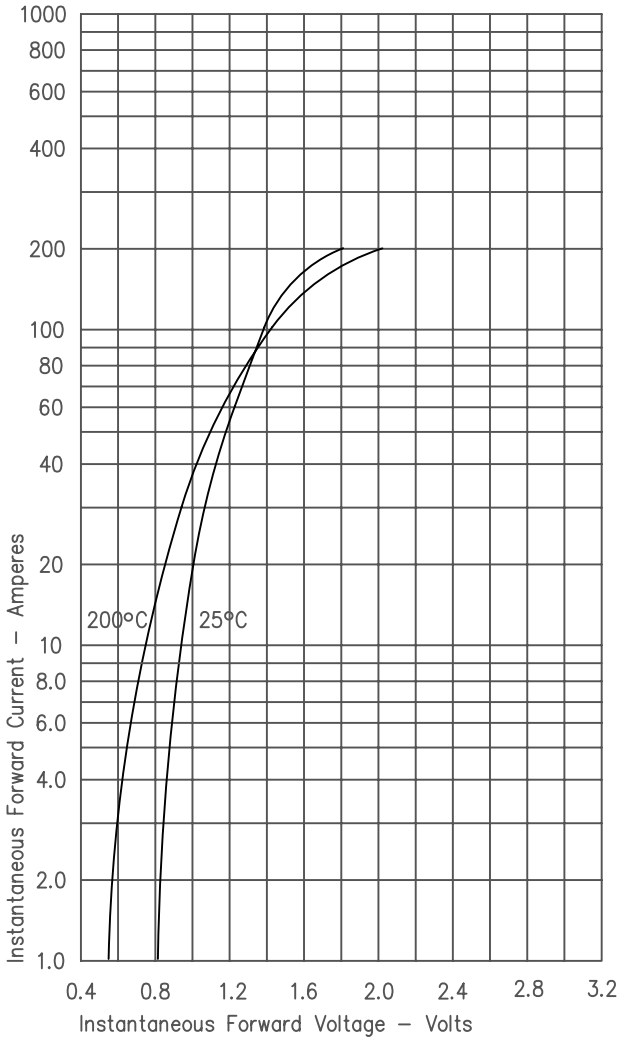


Figure 3  
Forward Current Derating

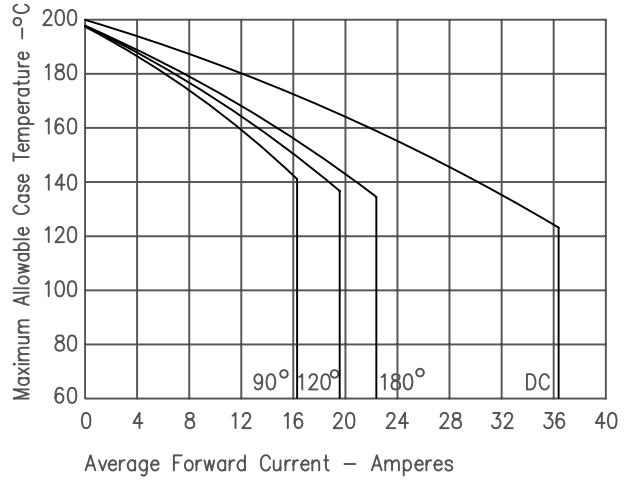


Figure 4  
Maximum Forward Power Dissipation

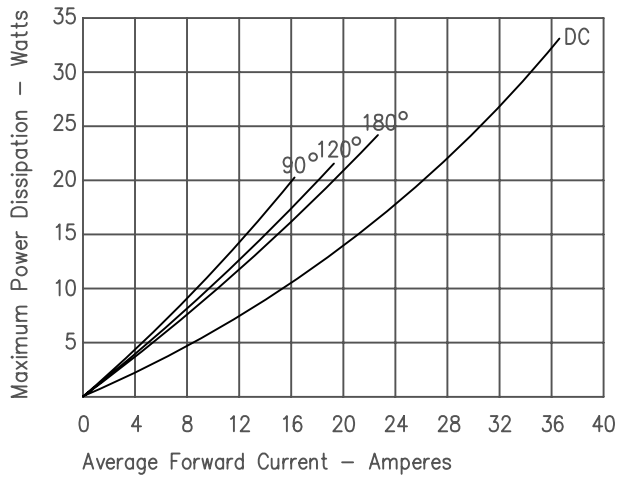


Figure 2  
Typical Reverse Characteristics

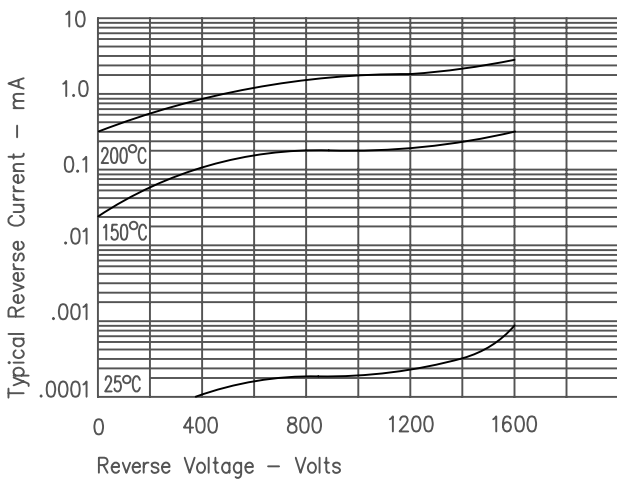


Figure 5  
Transient Thermal Impedance

