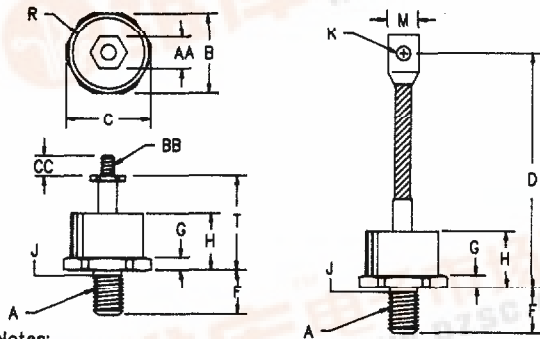


# Silicon Power Rectifier S/R42 Series



- Notes:  
 1. 3/8-24 UNF-3A  
 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	1.050	1.060	26.67	26.92	
C	---	1.166	---	29.61	
D	4.30	4.70	109.22	119.38	
F	.610	.640	15.49	16.25	
G	.213	.233	5.41	5.66	
H	---	.745	---	18.92	
J	.344	.373	8.74	9.47	2
K	.276	.286	7.01	7.26	
M	.465	.515	11.81	13.08	
R	---	.850	---	21.59	Dia
T	1.426	---	36.22	---	
AA	.427	.437	10.84	11.09	
BB	---	---	---	---	3
CC	.407	---	10.33	---	

## D0205AA (D08)

Microsemi Catalog Number	JEDEC Numbers			Peak Reverse Voltage
*S4210	1N4128, 1N3288, 1N4878	1N1397, 1N1399, 1N3972	1N2427, 1N2439, 1N3140, 1N2437, 1N3142, 1N3142	100V
*S4220	1N4135, 1N3289, 1N3972	1N1400, 1N2431, 1N3972	1N2441, 1N3290, 1N3921, 1N3973	200V
*S4230	1N1401, 1N1402, 1N1403	1N2433, 1N2434, 1N2435	1N2443, 1N2444, 1N2445, 1N3292, 1N3293, 1N3974	300V
*S4240	1N1401, 1N1402, 1N1403	1N2433, 1N2434, 1N2435	1N2443, 1N2444, 1N2445, 1N3292, 1N3293, 1N3974	400V
*S4250	1N1402, 1N1403	1N2434, 1N2435	1N2444, 1N2445, 1N3292, 1N3293, 1N3974	500V
*S4260	1N1403	1N2435	1N2445, 1N3293, 1N3974	600V
*S4280	1N3294, 1N3295	1N3975		800V
*S42100	1N3295			1000V
*S42120	1N3296			1200V
*S42140				1400V
*S42160				1600V

\*Change S to R in part number for Reverse Polarity  
 Add the suffix TS to the end of the part number if a Top Stud is desired

- Soft recovery
- Glass Passivated Die
- 2000 Amps Surge Rating
- Glass to metal construction
- VRRM to 1600V
- Excellent reliability

### Electrical Characteristics

Average forward current	IF(AV) 125 Amps	TC = 146°C, Half Sine Wave, RθJC = 0.40°C/W
Maximum surge current	IFSM 2000 Amps	8.3ms, half sine, TJ = 200°C
Max I <sup>2</sup> t for fusing	I <sup>2</sup> t 16800 A <sup>2</sup> s	
Max peak forward voltage	VFM 1.2 Volts	IFM = 200A; TJ = 25°C*
Max peak reverse voltage	VRM 200 μA	VRRM, TJ = 25°C
Max peak reverse current	IRM 5.0 mA	VRRM, TJ = 150°C
Max peak reverse current		
Max Recommended Operating Frequency	7.5kHz	

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

### Thermal and Mechanical Characteristics

Storage temperature range	TSTG	-65°C to 200°C
Operating junction temp range	TJ	-65°C to 200°C
Maximum thermal resistance	RθJC	0.40°C/W Junction to Case
Typical thermal resistance	RθJC	0.35°C/W Junction to Case
Mounting torque		100 Inch pounds maximum
Weight		2.75 ounces (78 grams) typical

**Microsemi Corp.**  
**Colorado**

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

# S/R42

Figure 1  
Typical Forward Characteristics

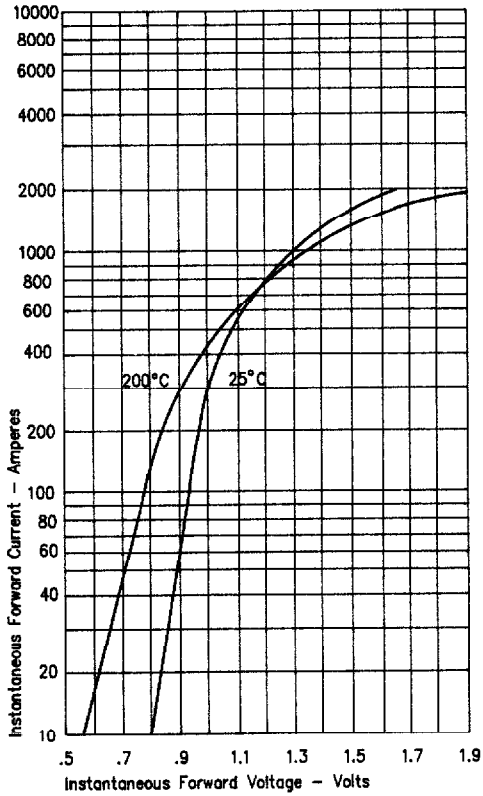


Figure 3  
Forward Current Derating

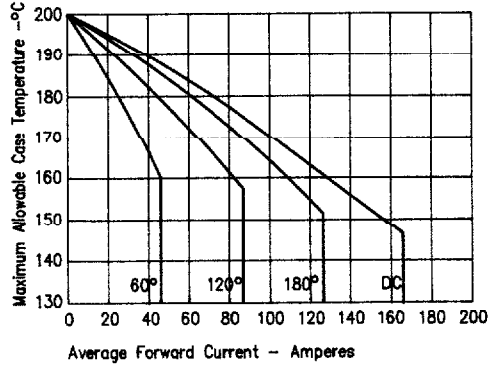


Figure 4  
Maximum Forward Power Dissipation

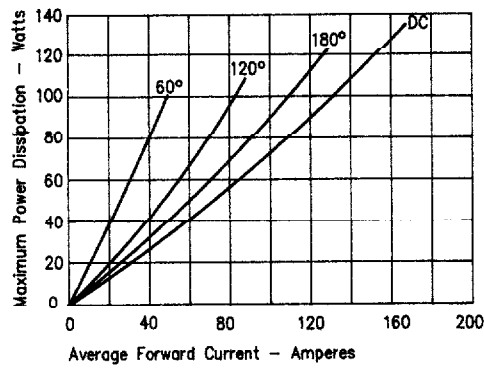


Figure 2  
Typical Reverse Characteristics

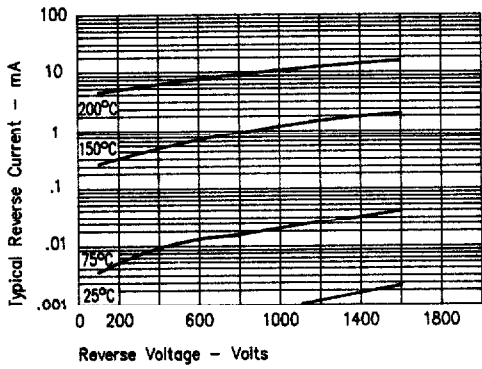
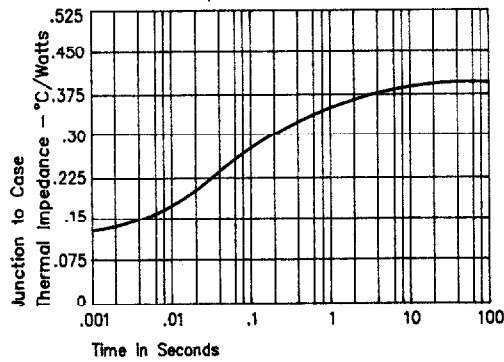


Figure 5  
Transient Thermal Impedance



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