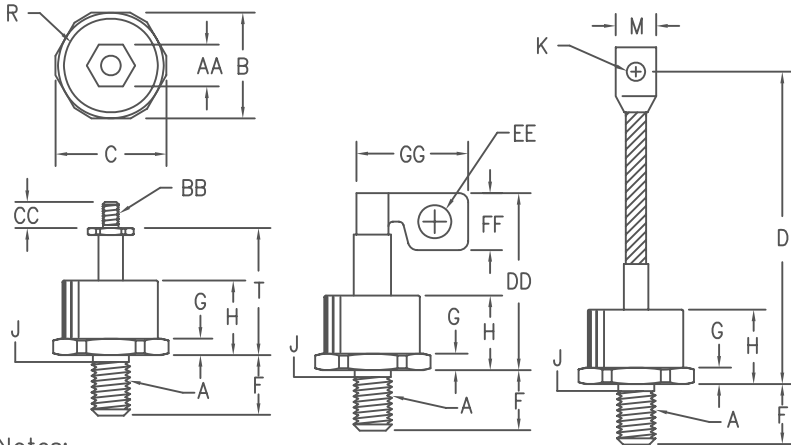


Silicon Power Rectifier S/R42 Series



Notes:

1. 3/8-24 UNF-3A
2. Full threads within 2 1/2 threads
3. 1/4-28 UNF-2B
4. Reverse polarity: Stud is Anode

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	----	----	----	----	1
B	1.040	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	.670	11.81	17.78	
R	----	.850	----	21.59	Dia
T	1.426	----	36.22	----	
AA	.422	.453	10.84	11.09	
BB	----	----	----	----	3
CC	.407	----	10.33	----	
DD	----	1.75	----	44.45	
EE	.215	.225	5.46	5.72	Dia
FF	.360	.390	9.14	9.91	
GG	.740	.750	18.80	19.05	

Microsemi
Catalog Number

Peak Reverse
Voltage

*S4210	100V
*S4220	200V
*S4230	300V
*S4240	400V
*S4250	500V
*S4260	600V
*S4280	800V
*S42100	1000V
*S42120	1200V
*S42140	1400V
*S42160	1600V

*Change S to R in part number for Reverse Polarity
Add the suffix TS for Top Stud; F for flag

D0205AA (D08)

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

Electrical Characteristics

Average forward current	IF(AV) 125 Amps	TC = 146°C, Half Sine Wave, RθJC = 0.40°C/W 8.3ms, half sine, TJ = 200°C
Maximum surge current	IFSM 2000 Amps	
Max I ² t for fusing	I ² t 16600 A ² s	
Max peak forward voltage	VFM 1.2 Volts	IFM = 200A: TJ = 25°C*
Max peak reverse current	IRM 50 μA	VRRM, TJ = 25°C
Max peak reverse current	IRM 5.0 mA	VRRM, TJ = 150°C
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
Mounting torque		80-100 inch pounds
Weight		2.75 ounces (78 grams) typical

S/R42

Figure 1
Typical Forward Characteristics

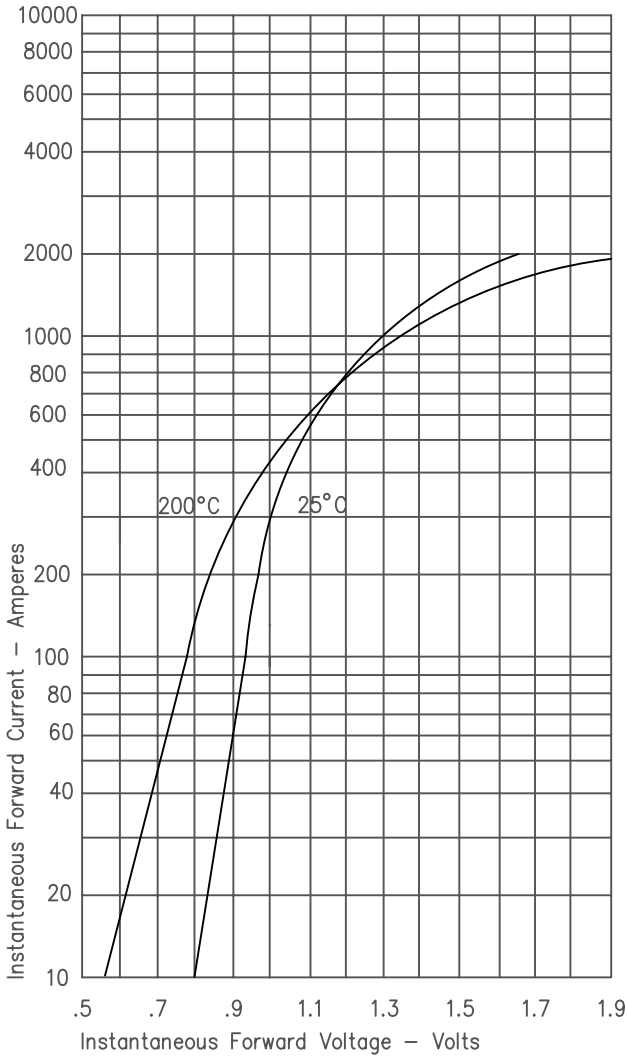


Figure 3
Forward Current Derating

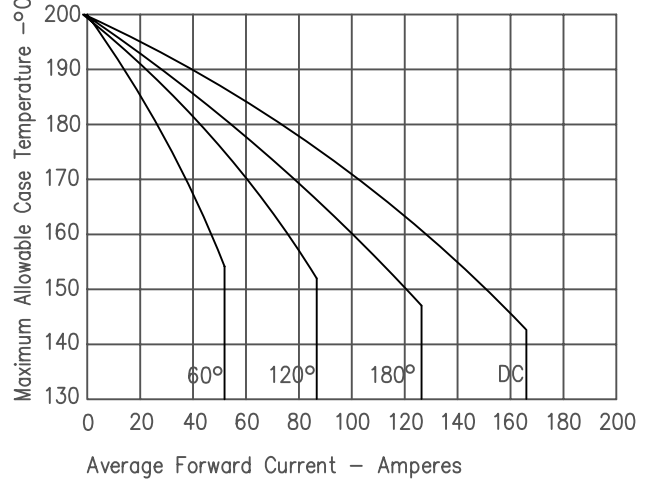


Figure 4
Maximum Forward Power Dissipation

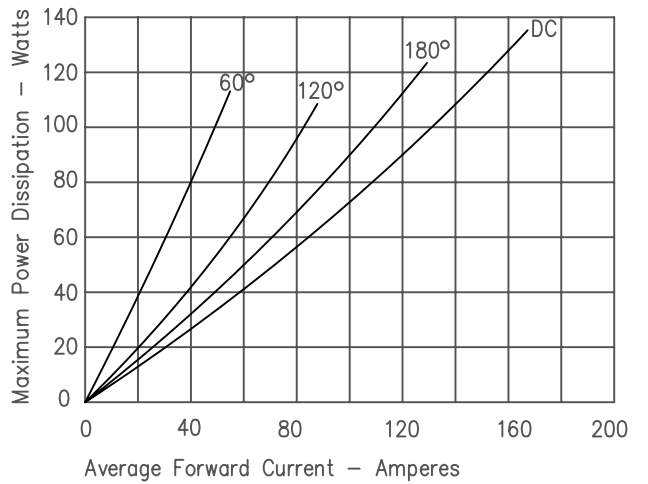


Figure 2
Typical Reverse Characteristics

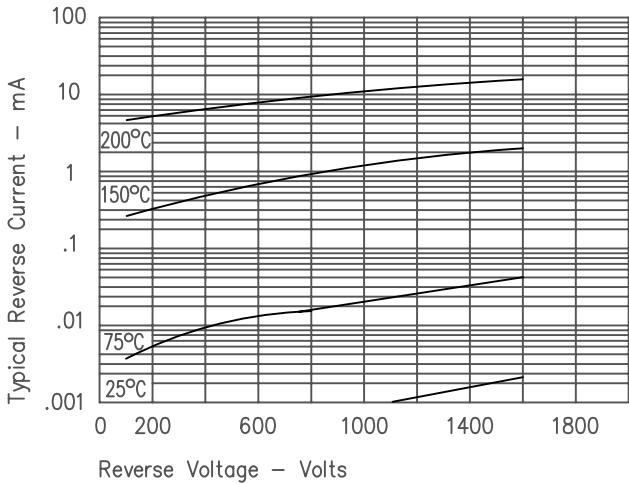


Figure 5
Transient Thermal Impedance

