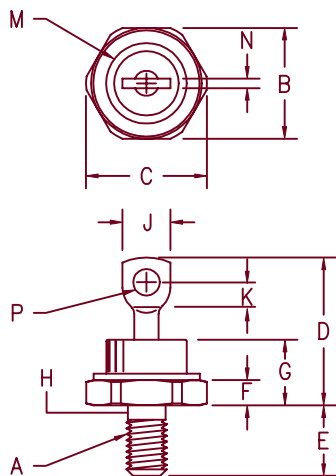


# Silicon Power Rectifier S/R37 Series



- Notes:
- 1/4-28 3A
  - Full threads within 2 1/2 threads
  - Standard polarity:  
Stud is cathode  
Reverse polarity:  
Stud is anode

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	---	---	---	---	1
B	.667	.687	16.95	17.44	
C	---	.793	---	20.14	
D	---	1.00	---	25.40	
E	.422	.453	10.72	11.50	
F	.115	.200	2.93	5.08	
G	---	.450	---	11.43	
H	.220	.249	5.59	6.32	2
J	.250	.375	6.35	9.52	
K	.156	---	3.97	---	
M	---	.667	---	16.94	Dia
N	---	.080	---	2.03	
P	.140	.175	3.56	4.44	Dia

D0203AB (D05)

Microsemi Catalog Number		Peak Reverse Voltage
Standard	Reverse	
S3720	R3720	200V
S3740	R3740	400V
S3760	R3760	600V
S3780	R3780	800V
S37100	R37100	1000V
S37120	R37120	1200V
S37140	R37140	1400V
S37160	R37160	1600V

- Glass Passivated Die
- 1500 Amps Surge Rating
- Glass to metal seal construction
- VRRM to 1600V
- Excellent reliability

## Electrical Characteristics

Average forward current	IF(AV) 85 Amps	TC = 147°C, Half_Sine Wave, <sup>R</sup> θJC = 0.6°C/W 8.3ms, half sine, TJ = 200°C
Maximum surge current	IFSM 1500 Amps	
Max I <sup>2</sup> t for fusing	I <sup>2</sup> t 9300 A <sup>2</sup> s	IFM = 200A: TJ = 25°C* VRRM, TJ = 25°C VRRM, TJ = 150°C
Max peak forward voltage	VFM 1.15 Volts	
Max peak reverse current	IRM 25 μA	
Max peak reverse current	IRM 2.0 mA	
Max Recommended Operating Frequency	10kHz	

\*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	0.6°C/W junction to case
Typical thermal resistance (greased)	RθCS	0.5°C/W case to sink
Mounting torque		25-30 inch pounds
Weight		.6 ounces (17 grams) typical

8-29-00 Rev. 1

# S/R37

Figure 1  
Typical Forward Characteristics

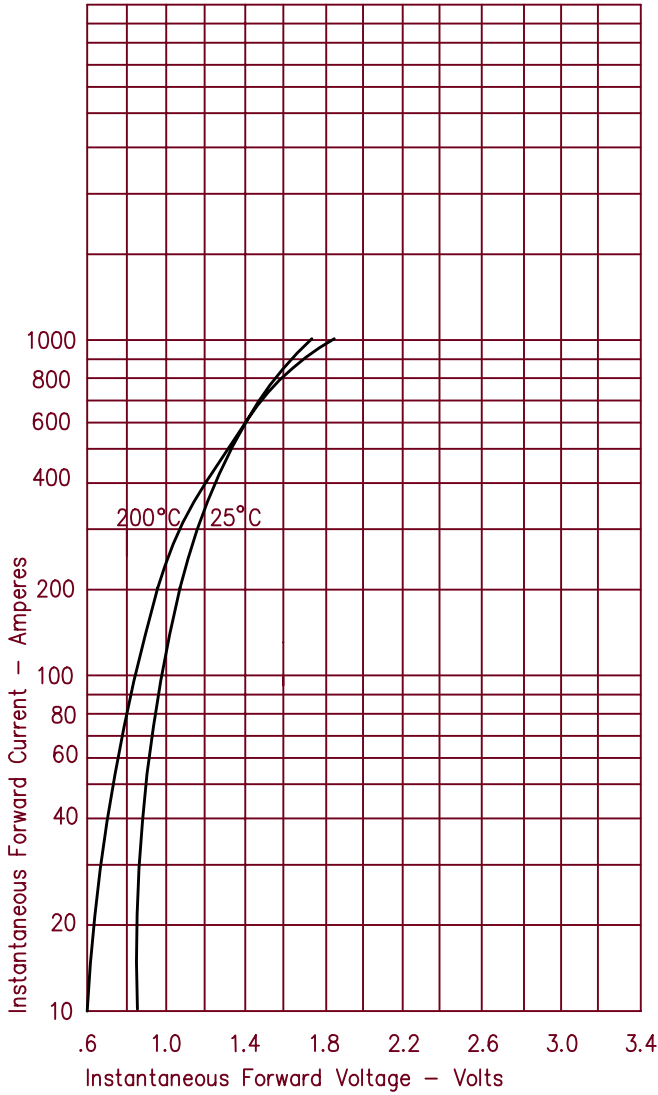


Figure 3  
Forward Current Derating

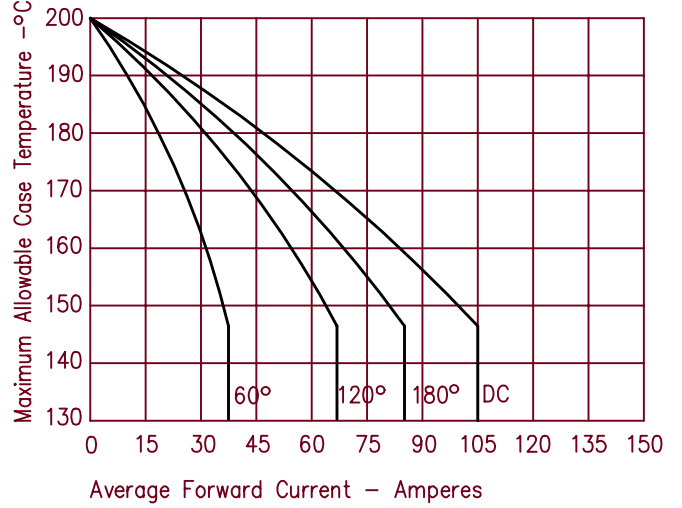


Figure 4  
Maximum Forward Power Dissipation

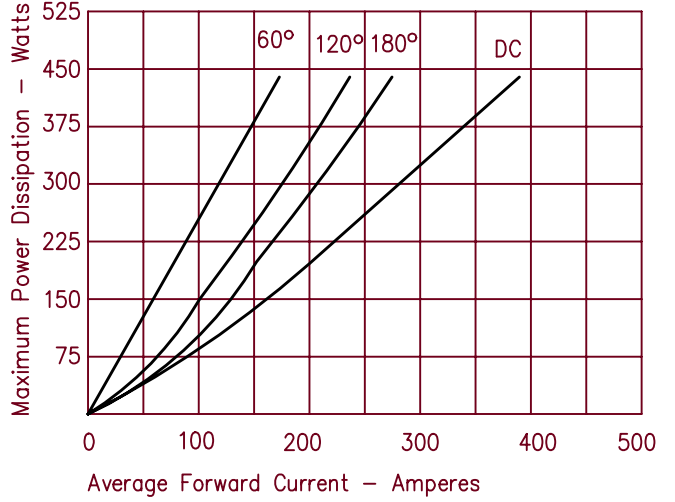


Figure 2  
Typical Reverse Characteristics

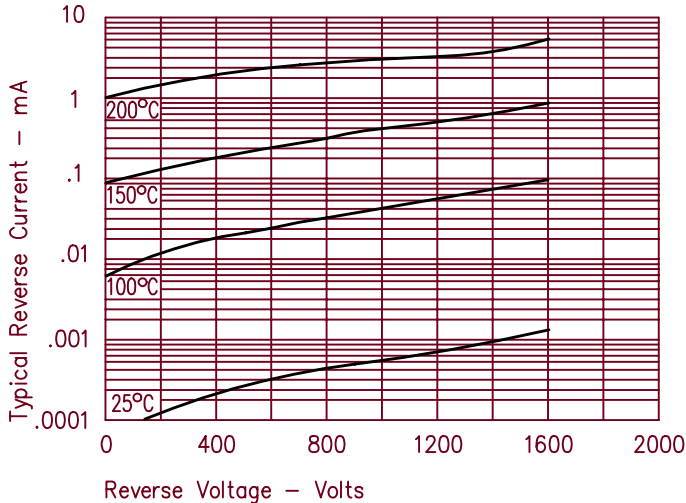
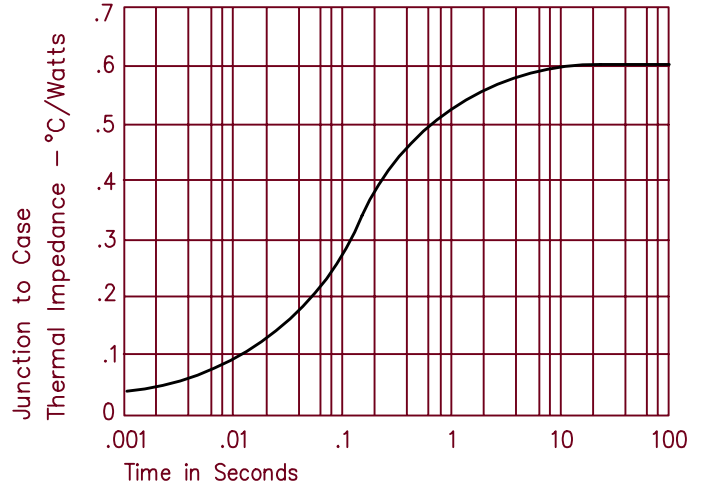


Figure 5  
Transient Thermal Impedance



# S/R37

Figure 6  
Maximum Nonrepetitive Surge Current

