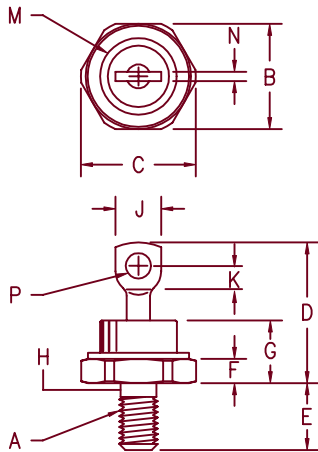


# SuperSoft™ Ultrafast Rectifiers SSUR70120



**Notes:**

1. Full threads within 2 1/2 threads
2. Standard Polarity: Stud is Cathode  
Reverse Polarity: Stud is Anode

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A		1/4-28 UNF 3A			1
B	.667	.687	16.94	17.45	
C	---	.793	---	20.14	
D	---	1.00	---	25.40	
E	.422	.453	10.72	11.51	
F	.115	.200	2.92	5.08	
G	---	.450	---	11.43	
H	.220	.249	5.59	6.32	2
J	.250	.375	6.35	9.52	
K	.140	---	3.56	---	
M	---	.667	---	16.94	Dia
N	---	.080	---	2.03	
P	.140	.175	3.56	4.44	Dia

## D0203AB (D05)

Microsemi Catalog Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
SSUR70120*	1200V	1200V

\*Add Suffix R For Reverse Polarity

- Soft Recovery Characteristics
- Ultrafast Rectifier
- 70 Amps current rating
- M.I.-PRF-19500 Equivalents Available
- 175°C Junction Temperature
- VRRM 1200 Volts

### Electrical Characteristics

Average forward current	I <sub>F(AV)</sub> 70 Amps	T <sub>C</sub> = 107°C, Square wave, R <sub>θJC</sub> = 0.7°C/W
Maximum surge current	I <sub>FSM</sub> 500 Amps	8.3 ms, half sine, T <sub>J</sub> = 175°C
Max peak forward voltage	V <sub>FM</sub> 2.30 Volts	I <sub>FM</sub> = 70A: T <sub>J</sub> = 25°C*
Max peak reverse current	I <sub>RM</sub> 3.0 mA	V <sub>RRM</sub> , T <sub>J</sub> = 125°C
Max peak reverse current	I <sub>RM</sub> 25 uA	V <sub>RRM</sub> , T <sub>J</sub> = 25°C
Typical junction capacitance	C <sub>J</sub> 150 pF	V <sub>R</sub> = 10.0V, T <sub>J</sub> = 25°C
Max reverse recovery time	t <sub>RR</sub> 120 nsec	I <sub>F</sub> = 1A, V <sub>R</sub> = 30V, di/dt=50A/uS
Typical reverse recovery time	t <sub>RR</sub> 35 nsec	1/2A, 1A, 1/4A, T <sub>J</sub> = 25°C

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

### Thermal and Mechanical Characteristics

Storage temp range	T <sub>STG</sub>	-65°C to 175°C
Operating junction temp range	T <sub>J</sub>	-65°C to 175°C
Max thermal resistance	R <sub>θJC</sub>	0.7°C/W Junction to case
Typical thermal resistance (greased)	R <sub>θCS</sub>	0.5°C/W Case to sink
Mounting torque		25-30 inch pounds
Weight		.54 ounces (15.3 grams) typical

# SSUR70120

Figure 1  
Typical Forward Characteristics

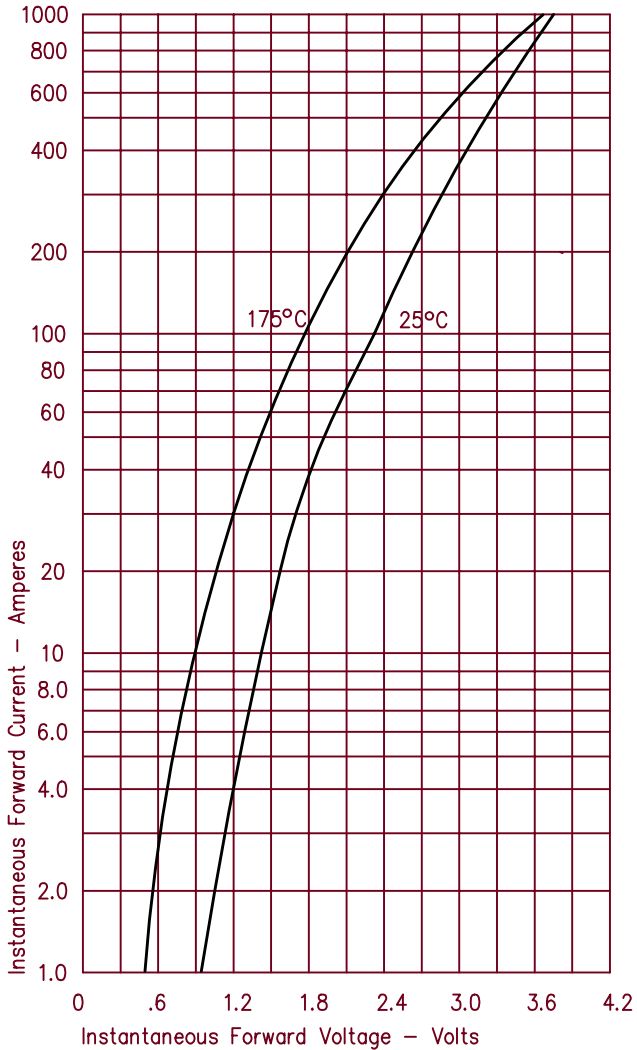


Figure 3  
Typical Junction Capacitance

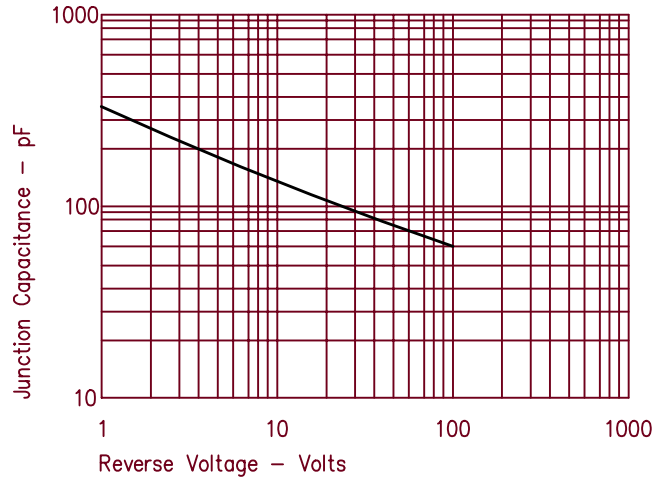


Figure 4  
Forward Current Derating

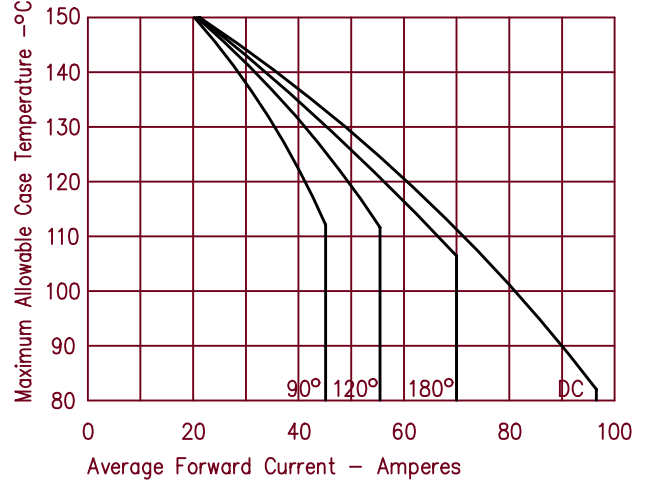


Figure 2  
Typical Reverse Characteristics

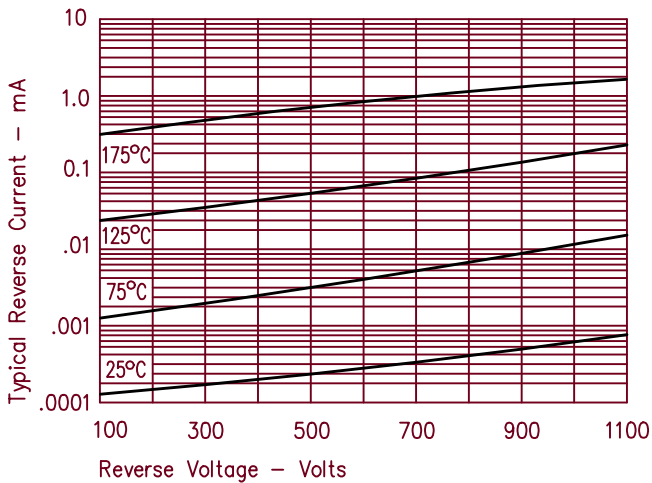


Figure 5  
Maximum Forward Power Dissipation

