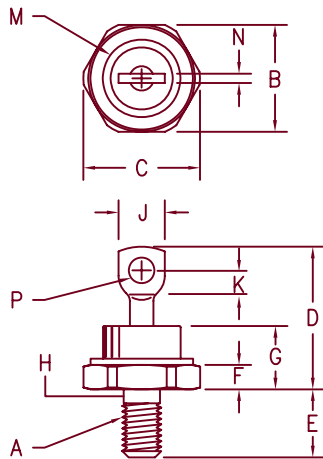


# SuperSoft™ Ultrafast Rectifiers SSUR70120



**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	16.94		1
B	.667	.687	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	Repetive 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
- $V_{RRM}$  1200 Volts

## Electrical Characteristics

Average forward current	$I_F(AV)$ 70 Amps	$T_C = 107^\circ C$ , Square wave, $R_{\theta JC} = 0.7^\circ C/W$
Maximum surge current	$I_{FSM}$ 500 Amps	8.3 ms, half sine, $T_J = 175^\circ C$
Max peak forward voltage	$V_{FM}$ 2.30 Volts	$I_{FM} = 70A: T_J = 25^\circ C^*$
Max peak reverse current	$I_{RM}$ 3.0 mA	$V_{RRM}, T_J = 125^\circ C$
Max peak reverse current	$I_{RM}$ 25 uA	$V_{RRM}, T_J = 25^\circ C$
Typical junction capacitance	$C_J$ 150 pF	$V_R = 10.0V, T_J = 25^\circ C$
Max reverse recovery time	$t_{RR}$ 120 nsec	$I_F = 1A, V_R = 30V, di/dt=50A/uS$

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

## Thermal and Mechanical Characteristics

Storage temp range	$T_{STG}$	-65°C to 175°C
Operating junction temp range	$T_J$	-65°C to 175°C
Max thermal resistance	$R_{\theta JC}$	0.7°C/W Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.5°C/W Case to sink
Mounting torque		25-30 inch pounds
Weight		.54 ounces (15.3 grams) typical



6 Lake Street  
Lawrence, MA 01841  
PH: (978) 620-2600  
FAX: (978) 689-0803  
www.microsemi.com

05-04-07 Rev. 2

# SSUR70120

Figure 1  
Typical Forward Characteristics

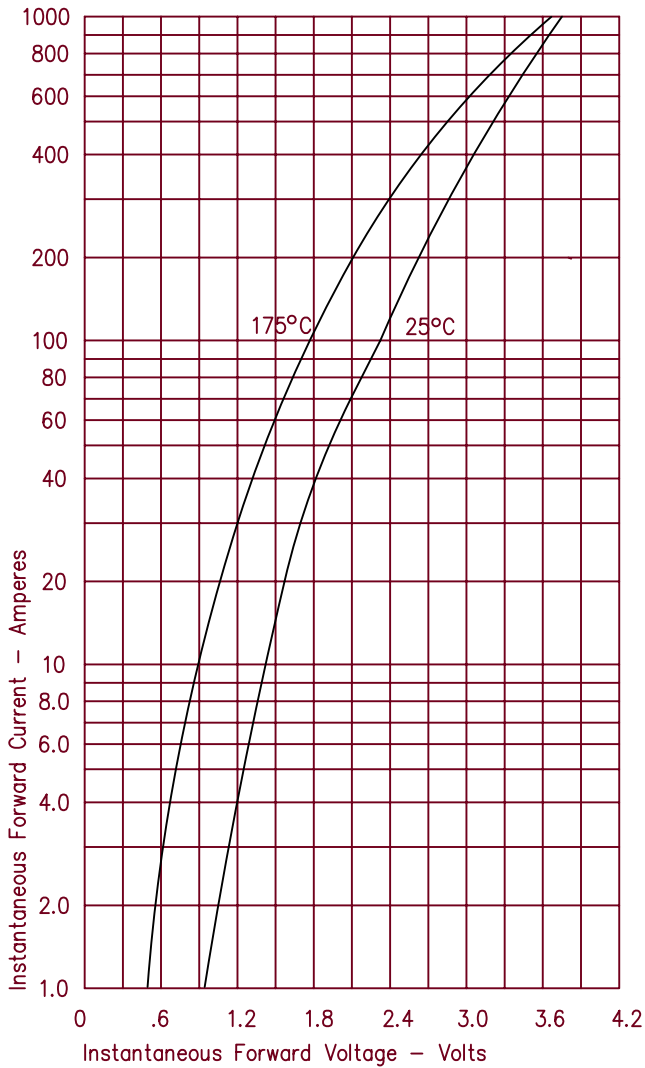


Figure 3  
Typical Junction Capacitance

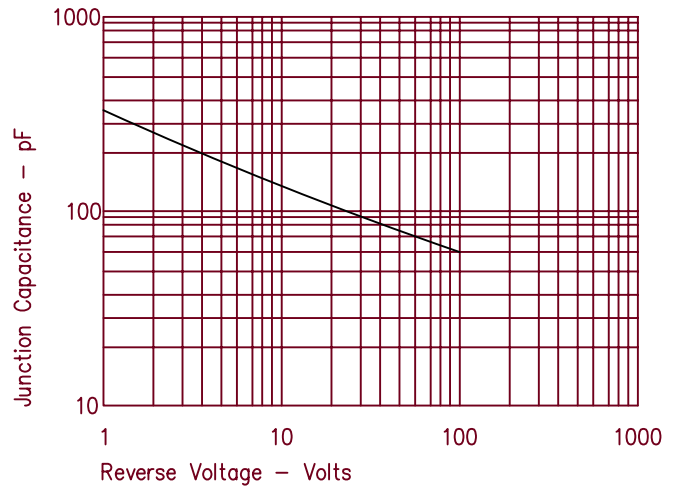


Figure 4  
Forward Current Derating

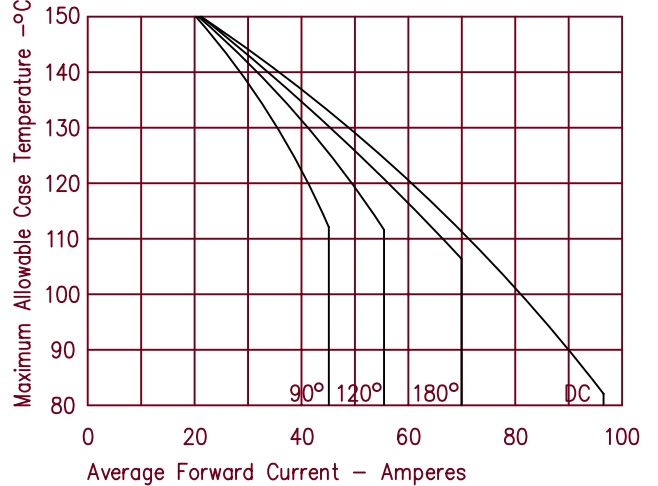


Figure 2  
Typical Reverse Characteristics

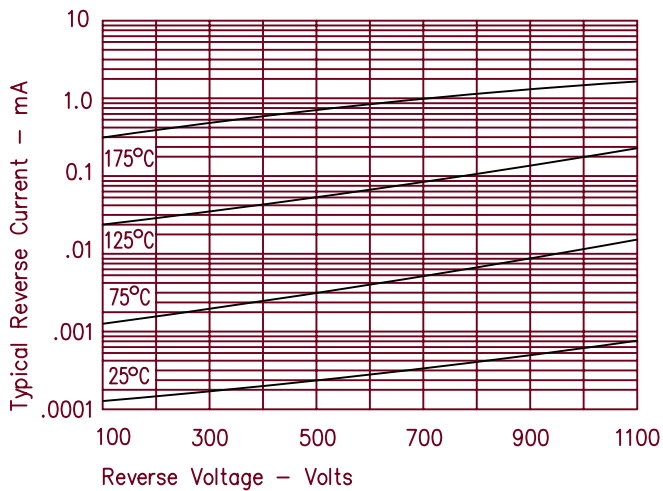


Figure 5  
Maximum Forward Power Dissipation

