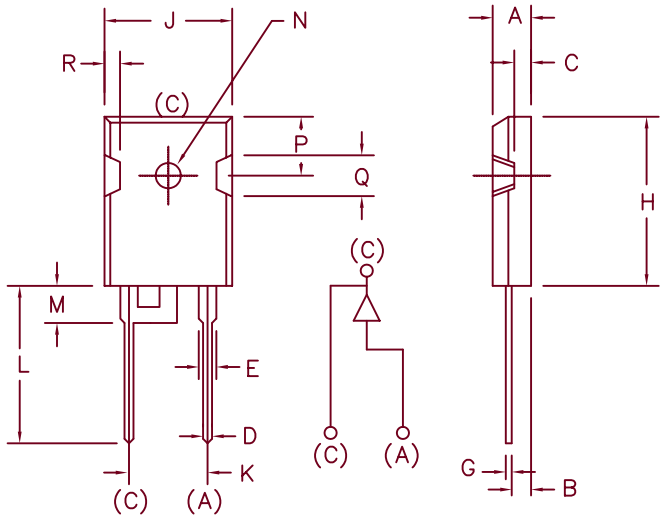
30 Amp Ultrasoft Rectifier

SSUM30120



Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
A	.185	.209	4.70	5.31	
B	.087	.102	2.21	2.59	
C	.059	.098	1.50	2.49	
D	.040	.055	1.02	1.40	
E	.079	.094	2.01	2.39	
F	---	---	---	---	
G	.016	.031	.410	0.78	
H	.819	.883	20.80	22.4	
J	.627	.650	15.93	16.5	
K	.430	---	10.92	---	
L	.790	.810	20.07	20.6	
M	.157	.180	3.99	4.57	
N	.139	.144	3.53	3.66	Dia.
P	.255	.300	6.48	7.62	
Q	.170	.210	4.32	5.33	
R	.080	.110	2.03	2.79	

Leads solder dipped with 96.5% SN / 3% Ag / 0.5% Cu Solder

Microsemi Catalog Number	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
SSUM30120		1200V	1200V

- Soft Recovery Ultrafast Rectifier
- 175°C Junction temperature
- V_{RRM} 1200V
- t_{rr} = 135ns max.
- Low loss, Low noise

Electrical Characteristics

Average Forward Current	$I_{F(AV)}$ 30 Amps	T_C = 135°C
Maximum Surge Current	I_{FSM} 400 Amps	8.3ms, half sine T_J = 175°C
Max. Peak Forward Voltage	V_{FM} 2.0 Volts	I_{FM} = 30A, T_J = 25°C*
Typ. Peak Forward Voltage	V_{FM} 1.5 Volts	I_{FM} = 30A, T_J = 125°C*
Max. Peak Reverse Current	I_{RM} 3uA	V_{RRM}, T_J = 25°C
Typ. Peak Reverse Current	I_{RM} 700uA	V_{RRM}, T_J = 150°C*
Max. Recovery Time	t_{rr} 135ns	1A, 30V, dI/dt = 50A/us, T_J = 25°C
Typical Junction Capacitance	C_J 100 pF	V_R = 10.0V, T_J = 25°C

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

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	−55°C to 175°C
Operating junction temp range	T_J	−55°C to 175°C
Max. thermal resistance	$R_{\Theta JC}$	0.75°C/W Junction to case
Typ. thermal resistance (greased)	$R_{\Theta JS}$	0.25°C/W Case to sink
Weight		.22 ounces (6.2 grams) typical

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07-16-08 Rev. 4

SSUM30120

Figure 1
Typical Forward Characteristics

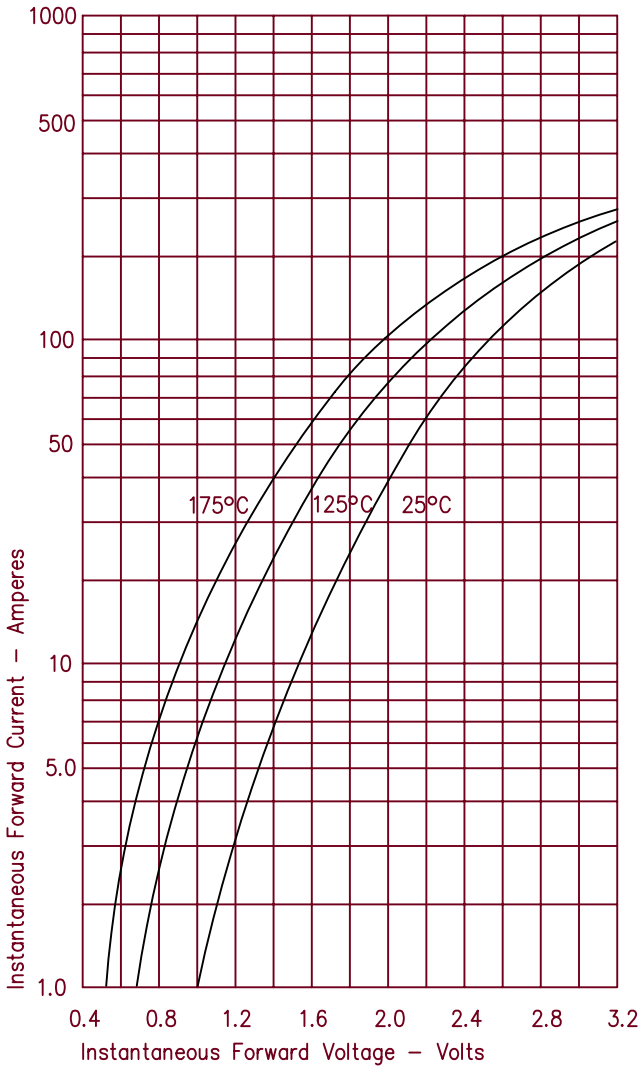

Figure 2
Typical Reverse Characteristics

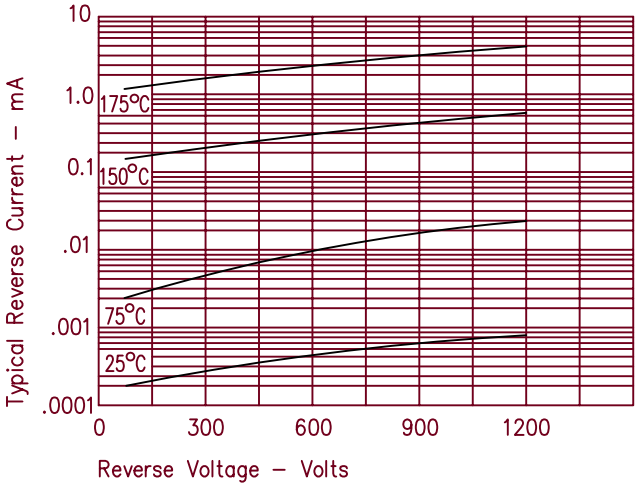

Figure 3
Typical Junction Capacitance

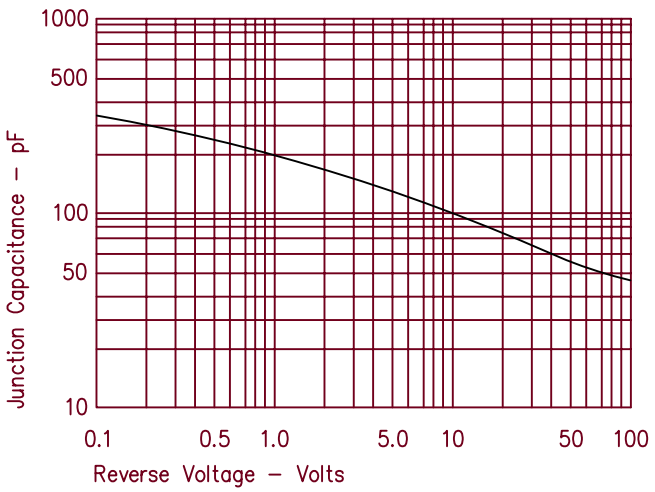

Figure 4
Forward Current Derating

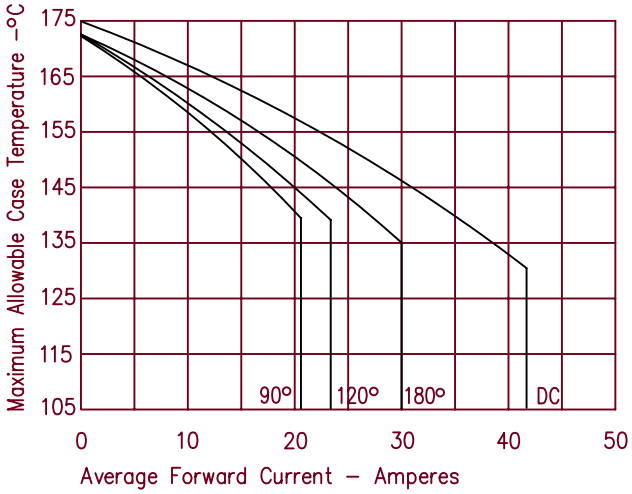

Figure 5
Maximum Forward Power Dissipation