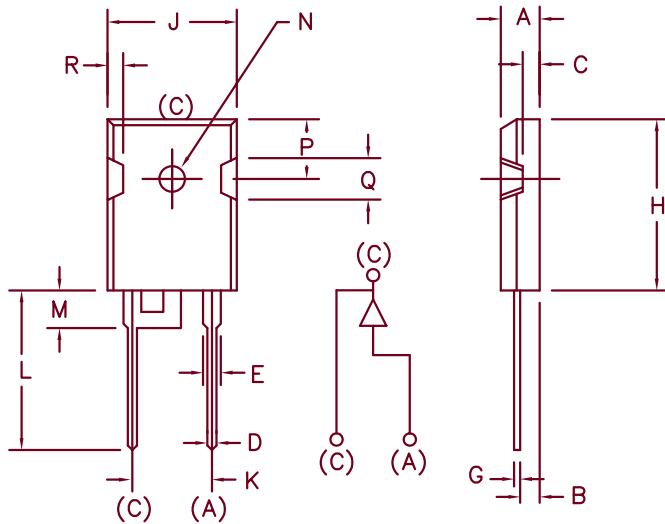


30 Amp Ultrafast Rectifier SSUM30120



Lead frame plating – 85%Sn/15%Pb, 300–800 micro inches
Leads solder dipped with 63%Sn/37%Pb solder.

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
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	

Microsemi Catalog
Number

SSUM30120

Industry
Part Number

Working Peak
Reverse Voltage

1200V

Repetitive Peak
Reverse Voltage

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
Maximum Surge Current
Max. Peak Forward Voltage
Typ. Peak Forward Voltage
Max. Peak Reverse Current
Typ. Peak Reverse Current
Max. Recovery Time
Typical Junction Capacitance

$I_F(AV)$ 30 Amps
 I_{FSM} 400 Amps
 V_{FM} 2.0 Volts
 V_{FM} 1.5 Volts
 I_{RM} 3uA
 I_{RM} 700uA
 t_{rr} 135ns
 C_J 100 pF

$T_C = 135^\circ C$
8.3ms, half sine $T_J = 175^\circ C$
 $I_{FM} = 30A$, $T_J = 25^\circ C^*$
 $I_{FM} = 30A$, $T_J = 125^\circ C^*$
 V_{RRM} , $T_J = 25^\circ C$
 V_{RRM} , $T_J = 150^\circ C^*$
1A, 30V, $di/dt = 50A/us$, $T_J = 25^\circ C$
 $V_R = 10.0V$, $T_J = 25^\circ C$

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

Thermal and Mechanical Characteristics

Storage temp range
Operating junction temp range
Max. thermal resistance
Typ. thermal resistance (greased)
Weight

T_{STG}
 T_J
 $R_{\theta JC}$
 $R_{\theta JS}$

$-55^\circ C$ to $175^\circ C$
 $-55^\circ C$ to $175^\circ C$
 $0.75^\circ C/W$ Junction to case
 $0.25^\circ C/W$ Case to sink
.22 ounces (6.2 grams) typical

SSUM30120

Figure 1
Typical Forward Characteristics

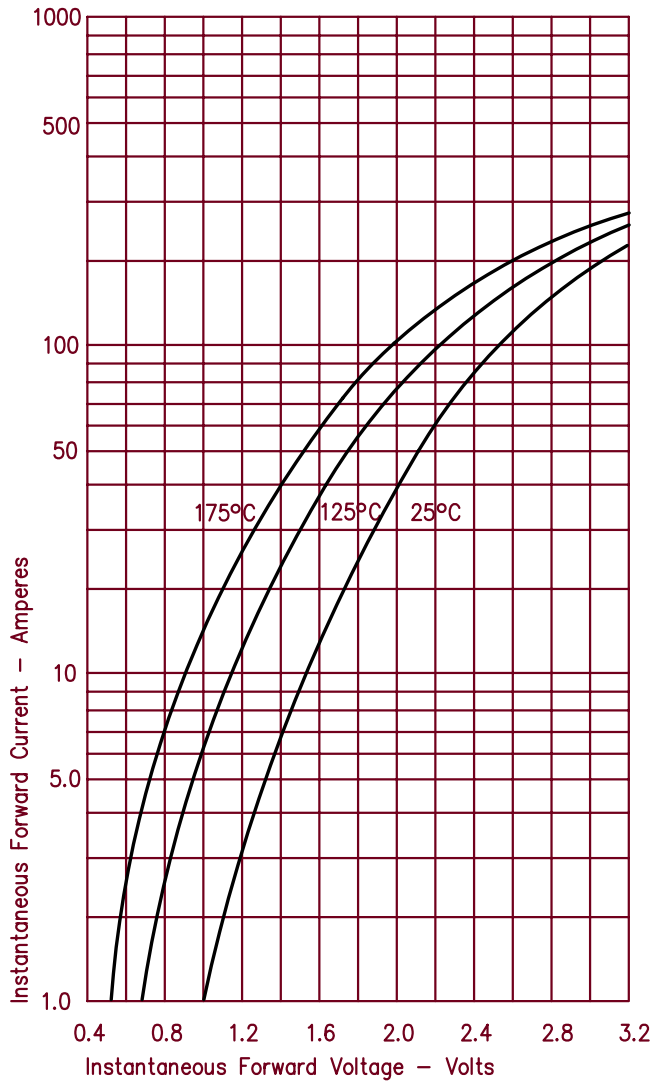


Figure 3
Typical Junction Capacitance

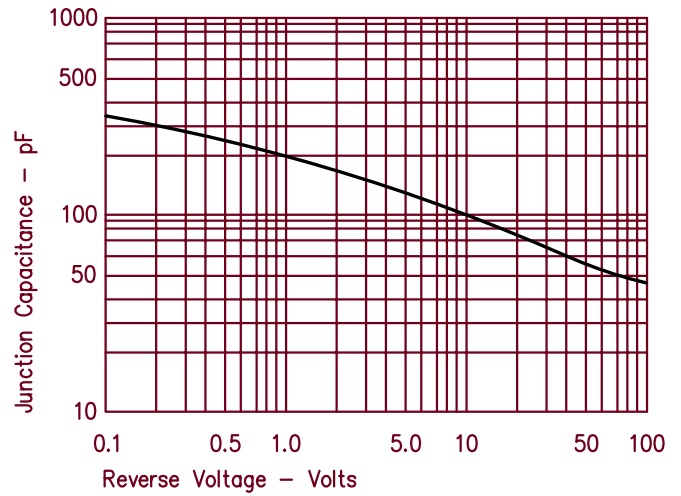


Figure 4
Forward Current Derating

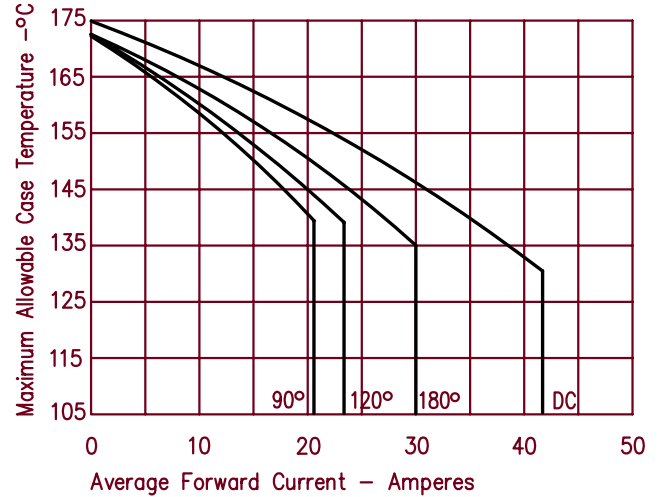


Figure 2
Typical Reverse Characteristics

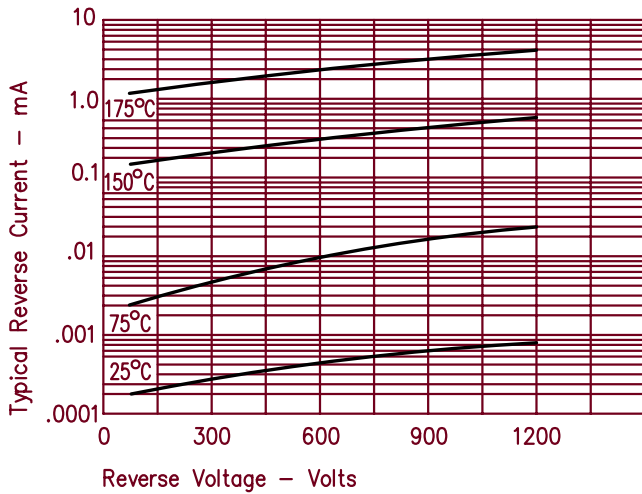


Figure 5
Maximum Forward Power Dissipation

