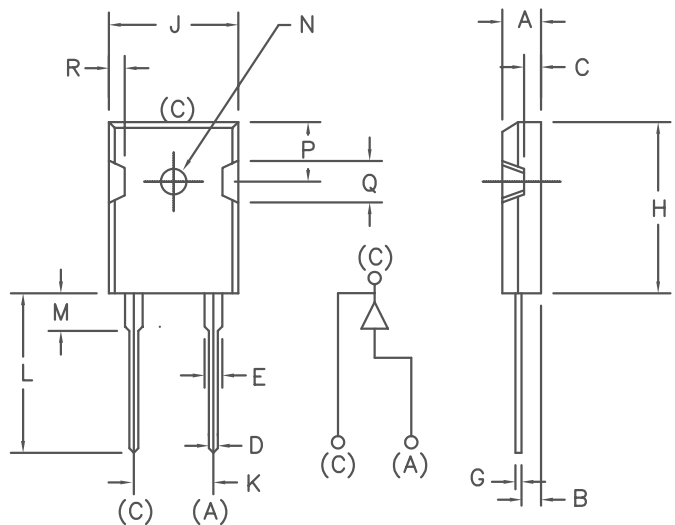


30 Amp Ultrafast Rectifier UFRG30120



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	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
UFRG30120		1200V	1200V

- Soft Recovery Ultrafast Rectifier
- 175°C Junction temperature
- V_{RRM} 1200V
- $t_{rr} = 110\text{ns}$ max.
- Low loss, Low noise

Electrical Characteristics

Average Forward Current	$I_{F(AV)}$ 30 Amps	$T_C = 141^\circ\text{C}$
Maximum Surge Current	I_{FSM} 400 Amps	8.3ms, half sine $T_J = 175^\circ\text{C}$
Max. Peak Forward Voltage	V_{FM} 1.8 Volts	$I_{FM} = 30\text{A}, T_J = 25^\circ\text{C}^*$
Typ. Peak Forward Voltage	V_{FM} 1.25 Volts	$I_{FM} = 30\text{A}, T_J = 125^\circ\text{C}^*$
Max. Peak Reverse Current	I_{RM} 50uA	$V_{RRM}, T_J = 25^\circ\text{C}$
Typ. Peak Reverse Current	I_{RM} 2.0mA	$V_{RRM}, T_J = 175^\circ\text{C}^*$
Max. Recovery Time	t_{rr} 110ns	1A, 30V, $di/dt = 50\text{A}/\mu\text{s}, T_J = 25^\circ\text{C}$
Typical Junction Capacitance	C_J 150 pF	$V_R = 10.0\text{V}, T_J = 25^\circ\text{C}$

*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	$R_{\theta JC}$	$0.8^\circ\text{C}/\text{W}$ Junction to case
Typ. thermal resistance (greased)	$R_{\theta JS}$	$0.25^\circ\text{C}/\text{W}$ Case to sink
Weight		.22 ounces (6.2 grams) typical

UFRG30120

Figure 1
Typical Forward Characteristics

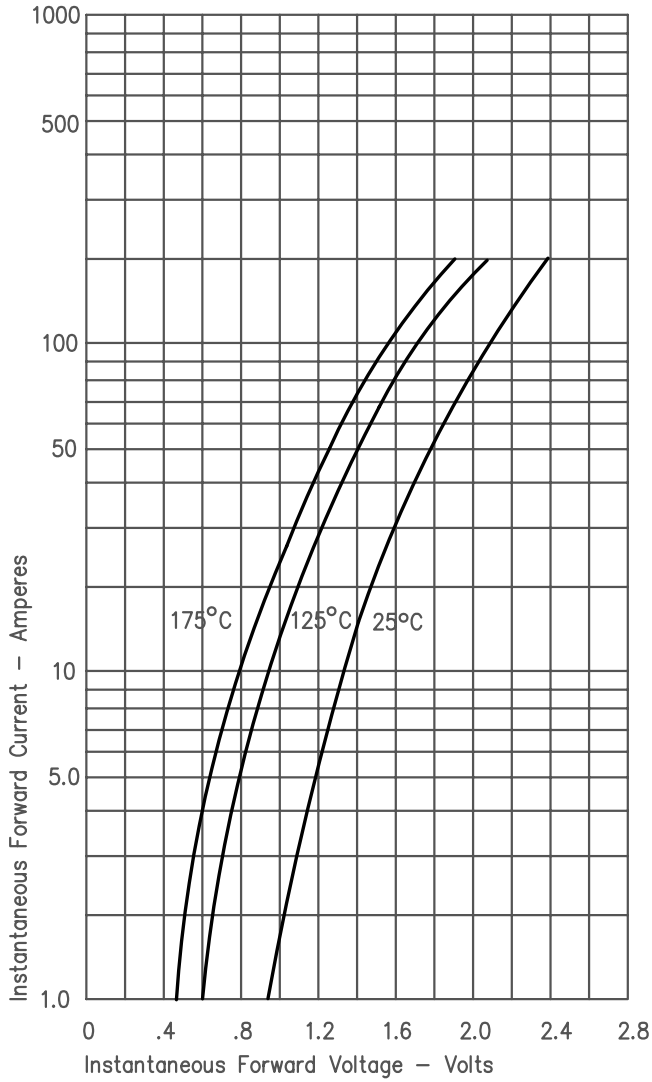


Figure 3
Typical Junction Capacitance

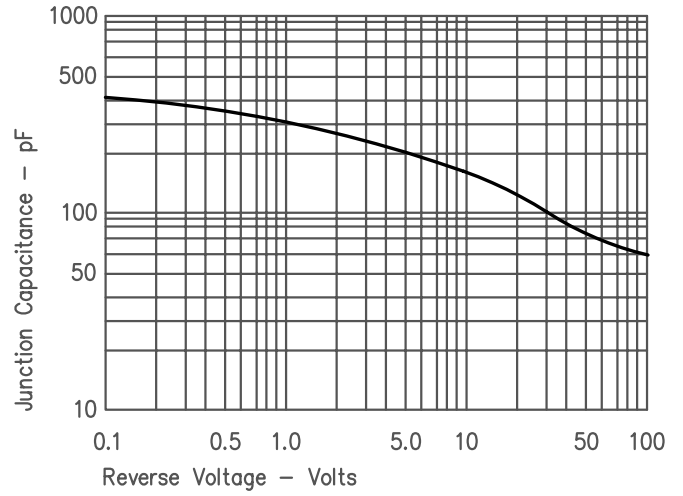


Figure 4
Forward Current Derating

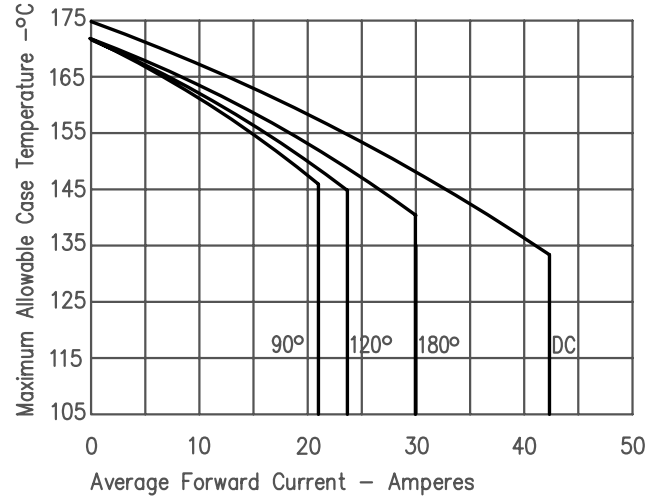


Figure 2
Typical Reverse Characteristics

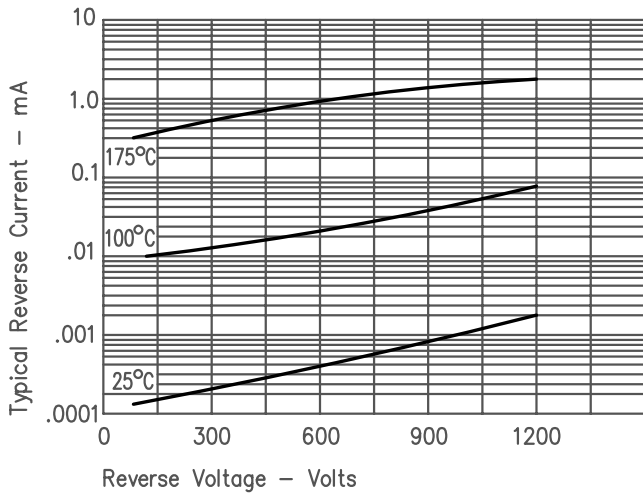


Figure 5
Maximum Forward Power Dissipation

