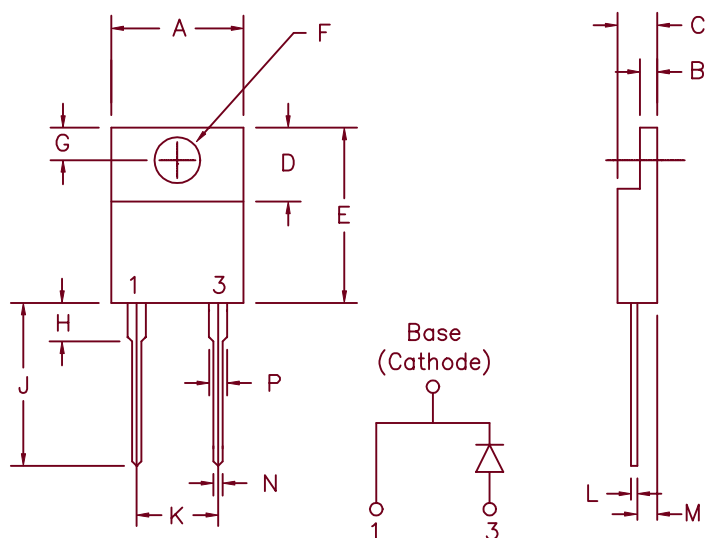


# Ultra Fast Recovery Rectifiers UF810 — UF820



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.390	.415	9.91	10.54	
B	.045	.055	1.14	1.40	
C	.180	.190	4.57	4.83	
D	.245	.260	6.22	6.60	
E	.550	.650	13.97	16.51	
F	.139	.155	3.53	3.94	Dia.
G	.100	.120	2.54	3.05	
H	---	.250	---	6.35	
J	.500	.580	12.70	14.73	
K	.190	.210	4.83	5.33	
L	.014	.025	0.35	0.63	
M	.080	.115	2.03	2.92	
N	.028	.038	0.71	0.96	
P	.045	.055	1.14	1.40	

Similar to T0-220AC

Microsemi Catalog  
Number

UF810  
UF815  
UF820

Repetitive Peak  
Reverse Voltage

100V  
150V  
200V

Transient Peak  
Reverse Voltage

100V  
150V  
200V

- Ultra Fast Recovery Rectifier
- 175°C Junction Temperature
- $V_{RRM}$  100 TO 200 Volts
- 8 Amps current rating
- $t_{RR}$  30 nsec maximum

## Electrical Characteristics

Average forward current  
Maximum surge current  
Max peak forward voltage  
Max reverse recovery time  
Max peak reverse current  
Max peak reverse current  
Typical junction capacitance

$I_F(AV)$  8 Amps  
 $I_{FSM}$  150 Amps  
 $V_{FM}$  1.0 Volts  
 $t_{RR}$  30 ns  
 $I_{RM}$  1 mA  
 $I_{RM}$  10  $\mu$ A  
 $C_J$  56pF

$T_C = 160^\circ\text{C}$ , Square wave,  $R_{\theta JC} = 2^\circ\text{C/W}$   
8.3ms, half sine,  $T_J = 175^\circ\text{C}$   
 $I_{FM} = 8A$ ;  $T_J = 25^\circ\text{C}$  \*  
1/2A, 1A, 1/4A,  $T_J = 25^\circ\text{C}$   
 $V_{RRM}$ ,  $T_J = 125^\circ\text{C}$   
 $V_{RRM}$ ,  $T_J = 25^\circ\text{C}$   
 $V_R = 10V$ ,  $T_J = 25^\circ\text{C}$

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

## Thermal and Mechanical Characteristics

Storage temp range  
Operating junction temp range  
Max thermal resistance  
Mounting torque  
Weight

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

-55°C to 175°C  
-55°C to 175°C  
2.0°C/W Junction to Case  
10-15 inch pounds  
0.08 ounces (2.3 grams) typical

# UF810 — UF820

Figure 1  
Typical Forward Characteristics

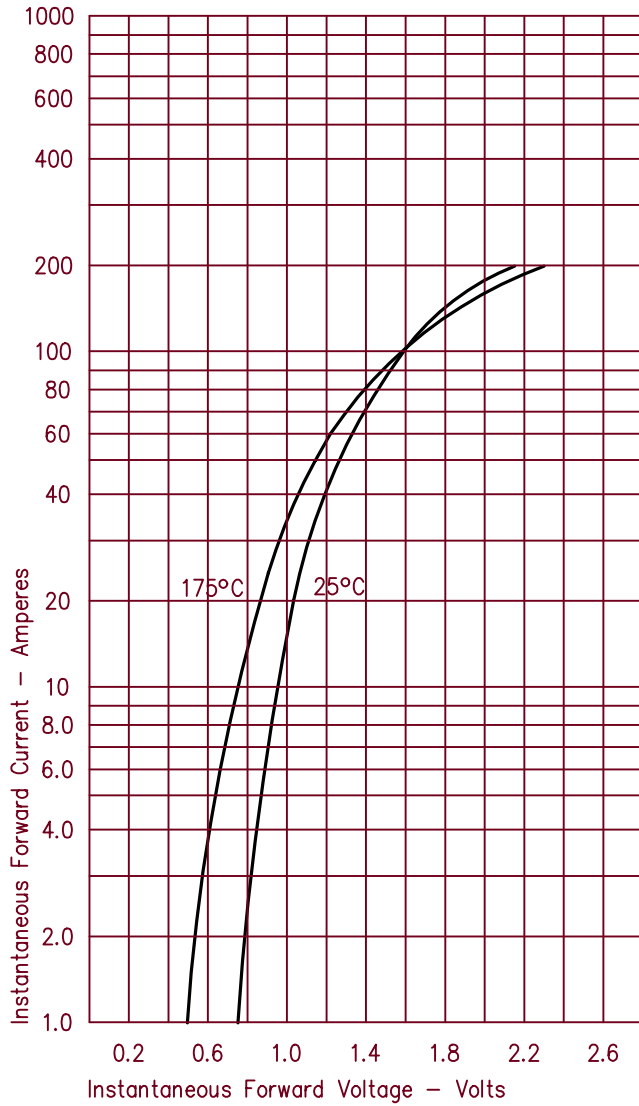


Figure 3  
Typical Junction Capacitance

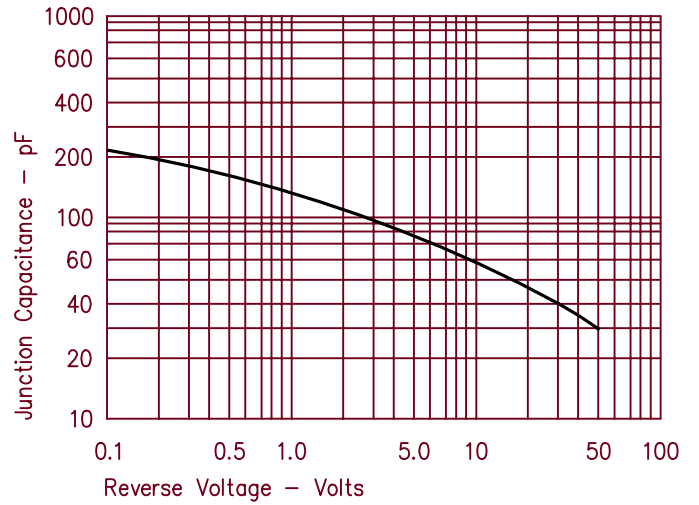


Figure 4  
Forward Current Derating

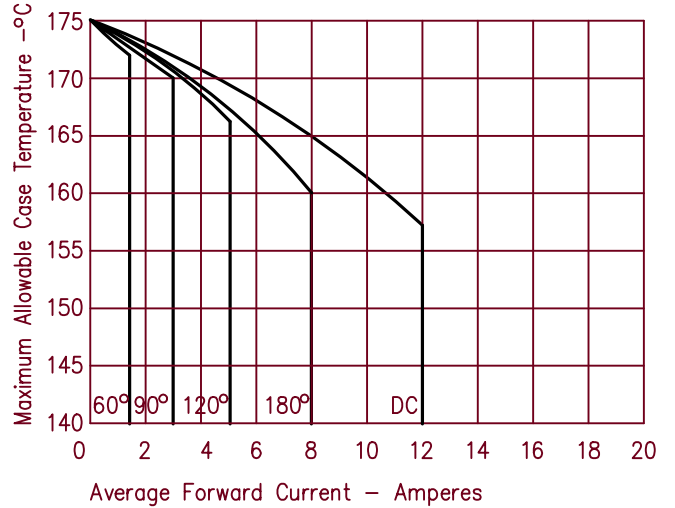


Figure 2  
Typical Reverse Characteristics

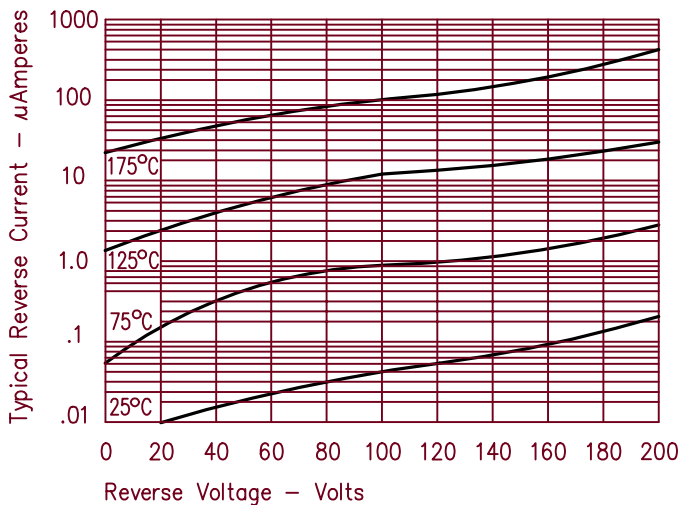


Figure 5  
Maximum Forward Power Dissipation — Per Leg

