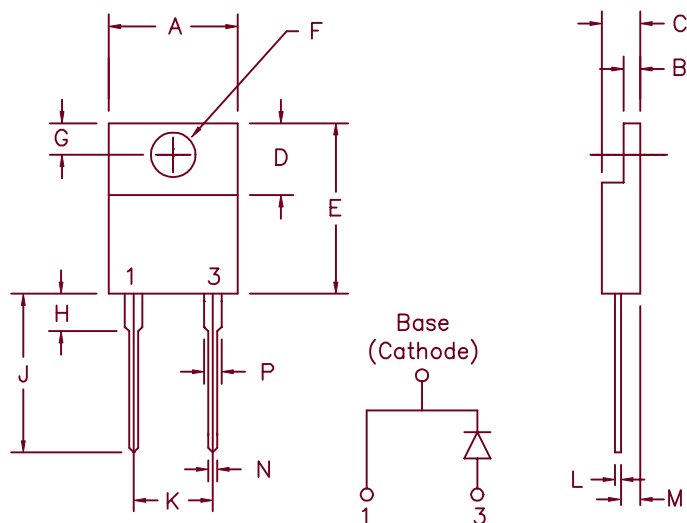


# Ultra Fast Recovery Rectifiers UF810 — UF820



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 TO-220AC

Microsemi Catalog Number	Industry Part Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
UF810	MUR805, MUR810 VHE1401, VHE1402	100V	100V
UF815	MUR815 VHE1403	150V	150V
UF820	MUR820 VHE1404	200V	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	$I_F(AV)$ 8 Amps	$T_C = 160^\circ C$ , Square wave, $R_{\theta JC} = 2^\circ C/W$
Maximum surge current	$I_{FSM}$ 150 Amps	8.3ms, half sine, $T_J = 175^\circ C$
Max peak forward voltage	$V_{FM}$ 1.0 Volts	$I_{FM} = 8A$ ; $T_J = 25^\circ C$ *
Max reverse recovery time	$t_{RR}$ 30 ns	1/2A, 1A, 1/4A, $T_J = 25^\circ C$
Max peak reverse current	$I_{RM}$ 1 mA	$V_{RRM}, T_J = 125^\circ C$
Max peak reverse current	$I_{RM}$ 10 $\mu A$	$V_{RRM}, T_J = 25^\circ C$
Typical junction capacitance	$C_J$ 56pF	$V_R = 10V, T_J = 25^\circ C$

\*Pulse test: Pulse width 300  $\mu$ sec, 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	$R_{\theta JC}$	2.0°C/W Junction to Case
Mounting torque		10-15 inch pounds
Weight		0.08 ounces (2.3 grams) typical

# UF810 — UF820

Figure 1  
Typical Forward Characteristics

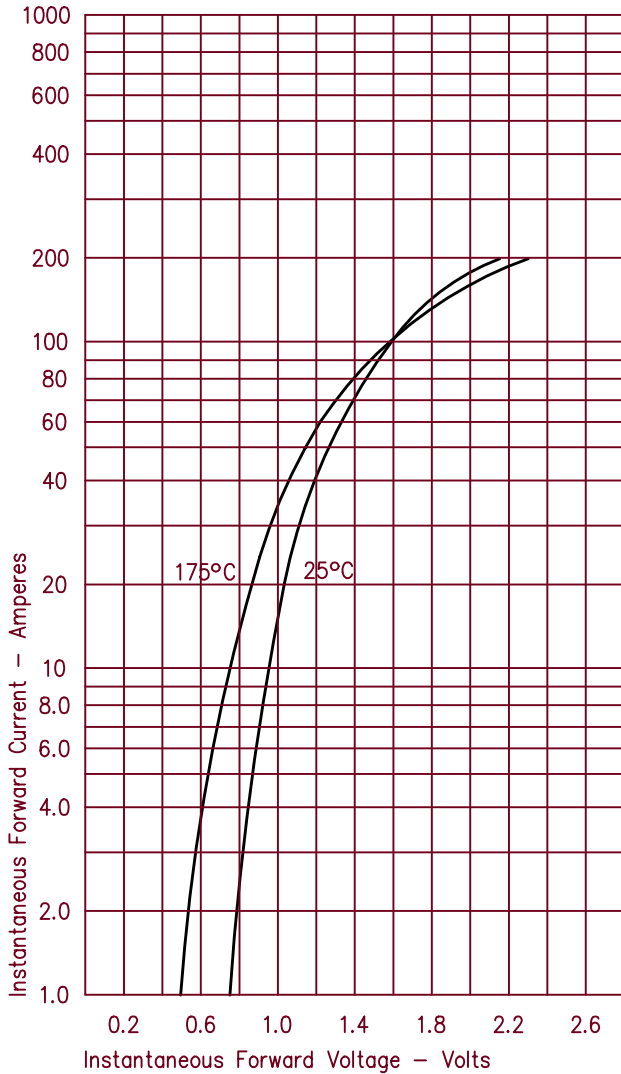


Figure 3  
Typical Junction Capacitance

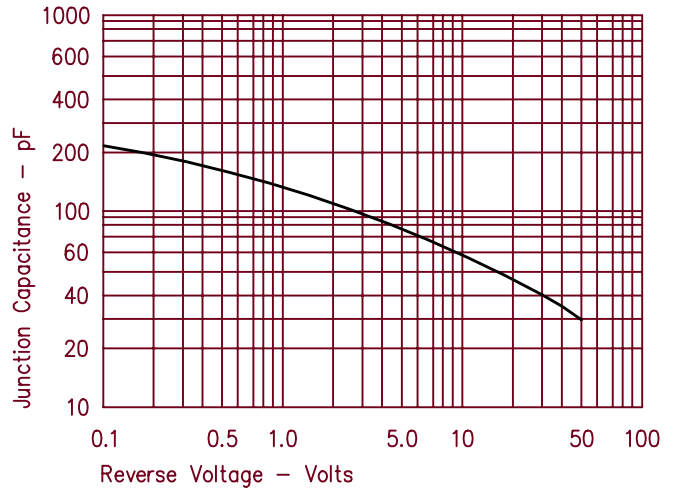


Figure 4  
Forward Current Derating

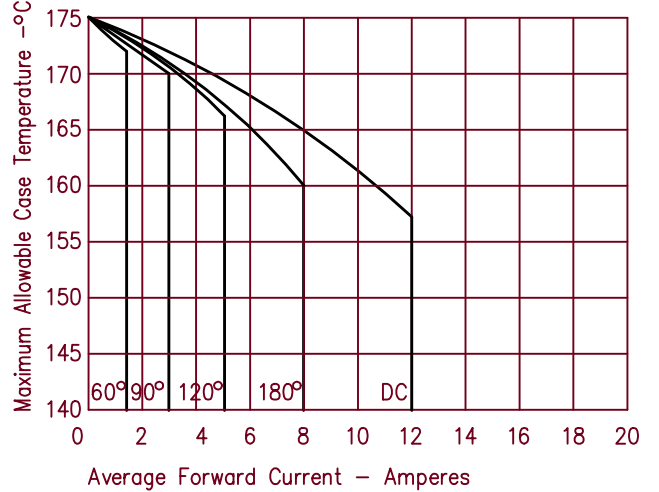


Figure 2  
Typical Reverse Characteristics

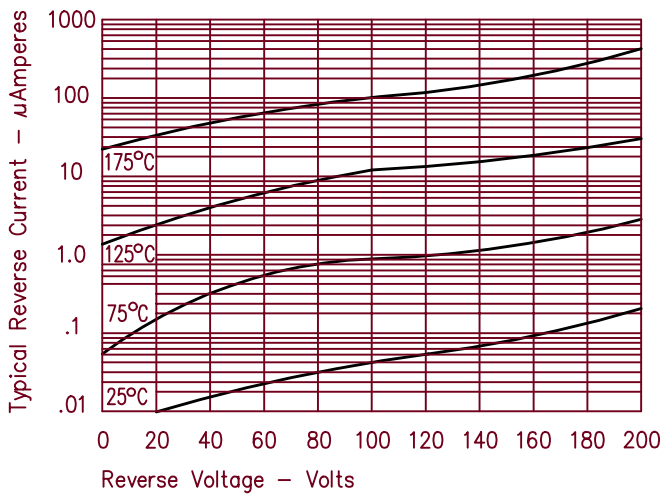


Figure 5  
Maximum Forward Power Dissipation — Per Leg

