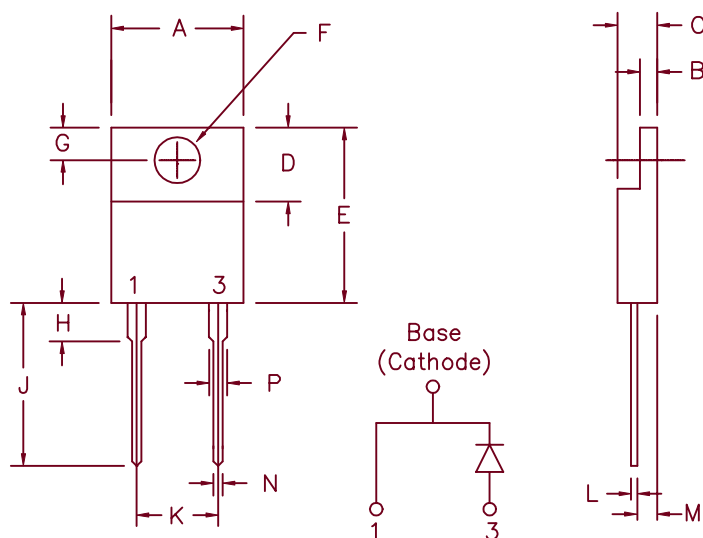


Ultra Fast Recovery Rectifiers UF1660 — UF1680



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

Repetitive Peak
Reverse Voltage

Transient Peak
Reverse Voltage

UF1660

600V

600V

UF1670

700V

700V

UF1680

800V

800V

- Ultra Fast Recovery Rectifier
- 175°C Junction Temperature
- 16 Amp current rating
- V_{RRM} 600 to 800 Volts
- t_{rr} 70ns maximum

Electrical Characteristics

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

$I_F(AV)$ 16 Amps
 I_{FSM} 175 Amps
 V_{FM} 1.3 Volts
 I_{RM} 1 mA
 I_{RM} 10 μ A
 t_{rr} 70 ns
 C_J 45 pF

$T_C = 137^\circ\text{C}$, Square wave, $R_{\theta JC} = 2.0^\circ\text{C/W}$
8.3ms, half sine, $T_J = 175^\circ\text{C}$
 $I_{FM} = 16\text{A}$, $T_J = 25^\circ\text{C}$ *
 V_{RRM} , $T_J = 125^\circ\text{C}$
 V_{RRM} , $T_J = 25^\circ\text{C}$
1/2A, 1A, 1/4A, $T_J = 25^\circ\text{C}$
 $V_R = 10\text{V}$, $T_J = 25^\circ\text{C}$, $f = 1\text{MHz}$

*Pulse test: Pulse width 300 μ 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 $+175^\circ\text{C}$
 -55°C to $+175^\circ\text{C}$
 2.0°C/W junction to case
10-15 inch pounds
0.06 ounces (1.8 grams) typical



COLORADO

Microsemi

800 Hoyt Street
Broomfield, CO. 80020
PH: (303) 469-2161
FAX: (303) 466-3775
www.microsemi.com

7-27-00 Rev. 1

UF1660 — UF1680

Figure 1
Typical Forward Characteristics

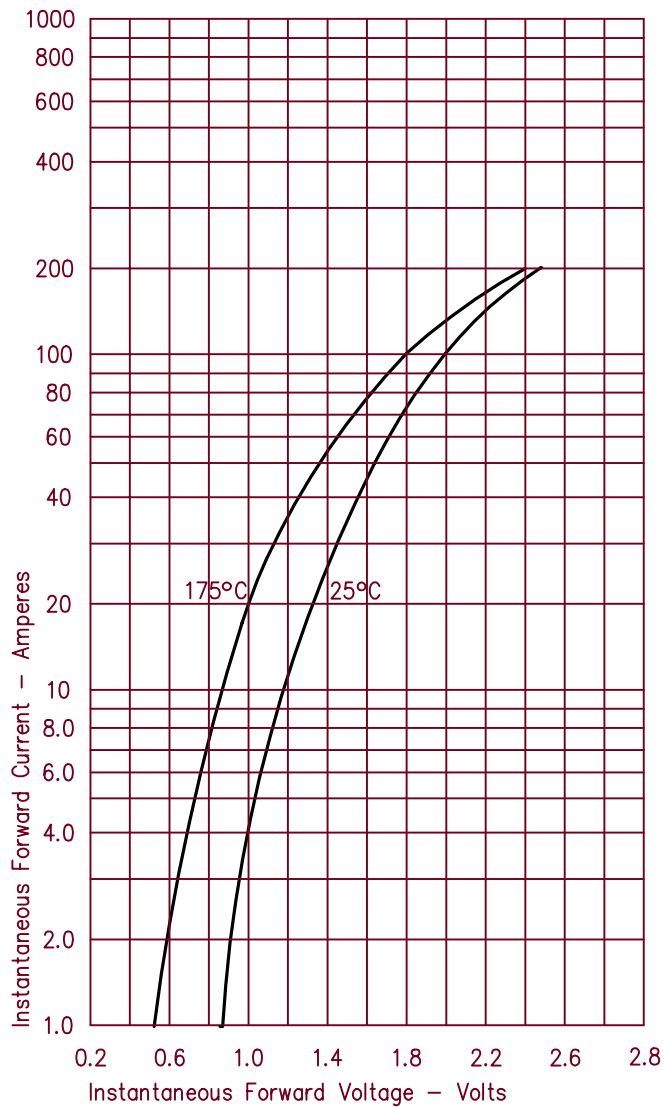


Figure 2
Typical Reverse Characteristics

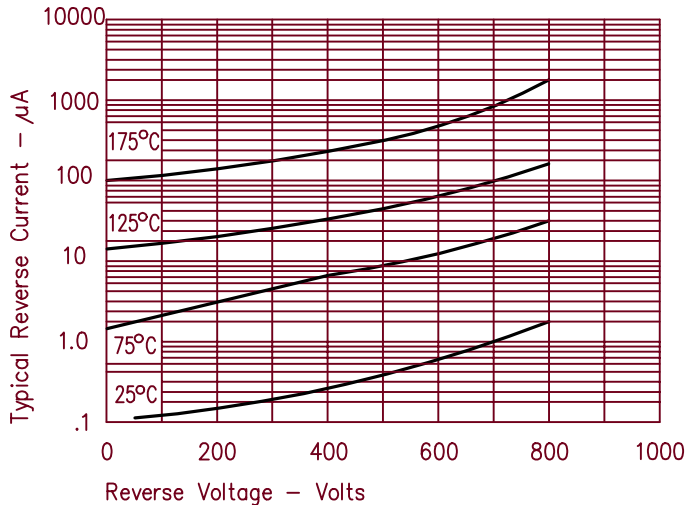


Figure 3
Typical Junction Capacitance

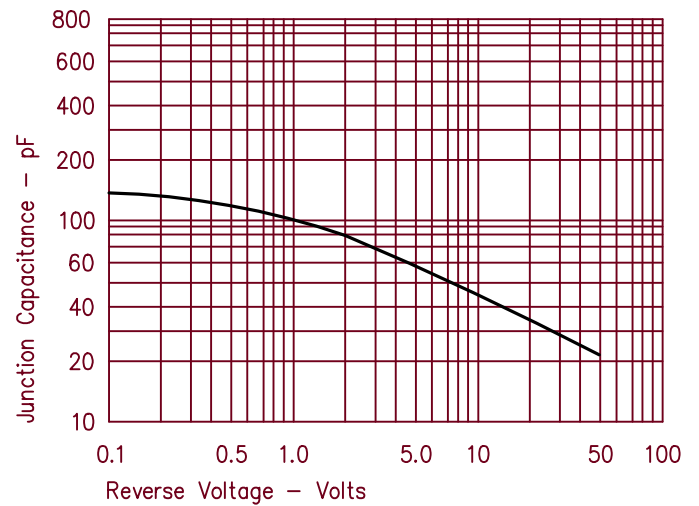


Figure 4
Forward Current Derating

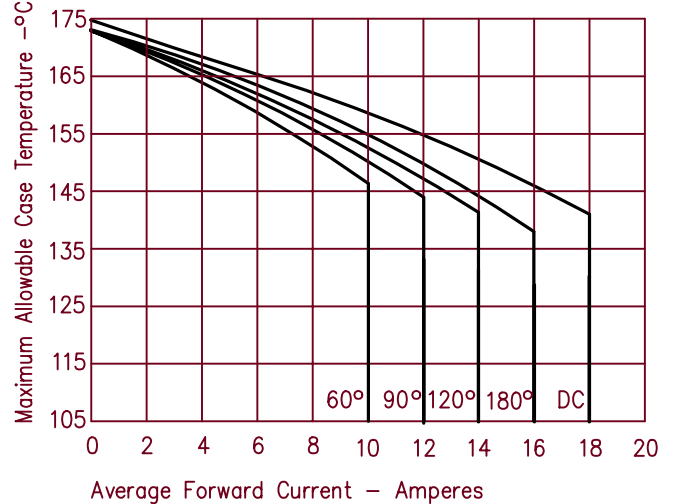


Figure 5
Maximum Forward Power Dissipation

