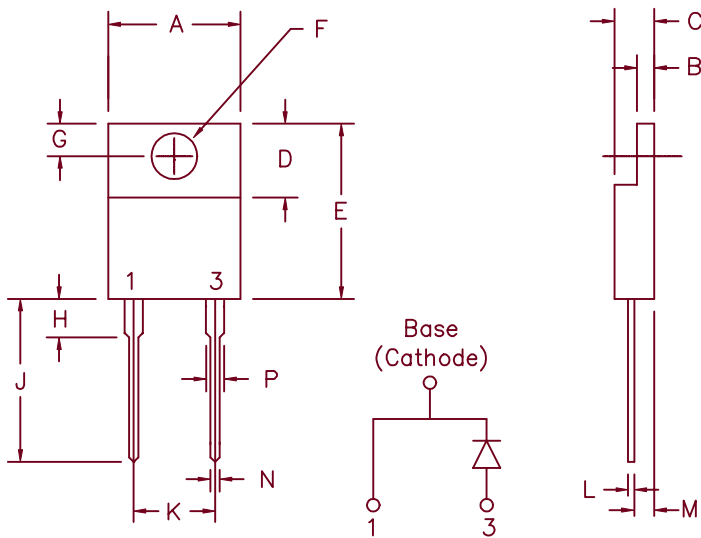


Ultra Fast Recovery Rectifiers UF1660 — UF1680



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	$I_F(AV)$ 16 Amps	$T_C = 137^\circ C$, Square wave, $R_{\theta JC} = 2.0^\circ C/W$ 8.3ms, half sine, $T_J = 175^\circ C$
Maximum Surge Current	I_{FSM} 175 Amps	
Max. Peak Forward Voltage	V_{FM} 1.3 Volts	$I_{FM} = 16A, T_J = 25^\circ C^*$
Max. Peak Reverse Current	I_{RM} 1 mA	$V_{RRM}, T_J = 125^\circ C$
Max. Peak Reverse Voltage	I_{RM} 10 μA	$V_{RRM}, T_J = 25^\circ C$
Max. Reverse Recovery Time	t_{rr} 70 ns	1/2A, 1A, 1/4A, $T_J = 25^\circ C$
Typical Junction Capacitance	C_J 45 pF	$V_R = 10V, T_J = 25^\circ C, f = 1MHz$

*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	$R_{\theta JC}$	2.0°C/W junction to case
Mounting torque		10-15 inch pounds
Weight		0.06 ounces (1.8 grams) typical

UF1660 — UF1680

Figure 1
Typical Forward Characteristics

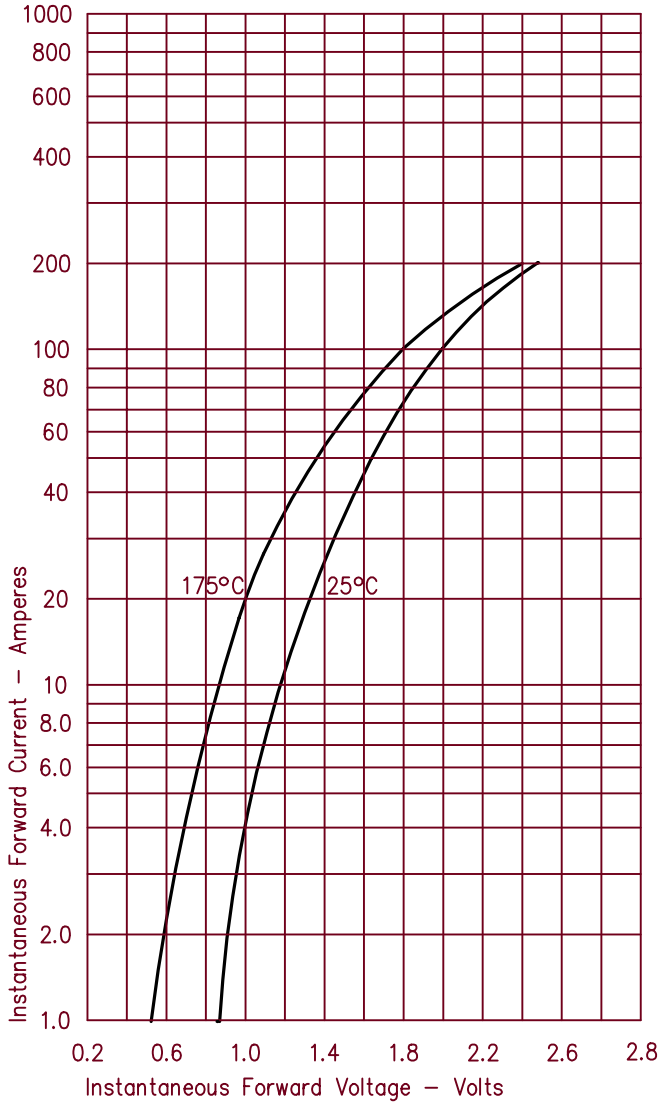


Figure 3
Typical Junction Capacitance

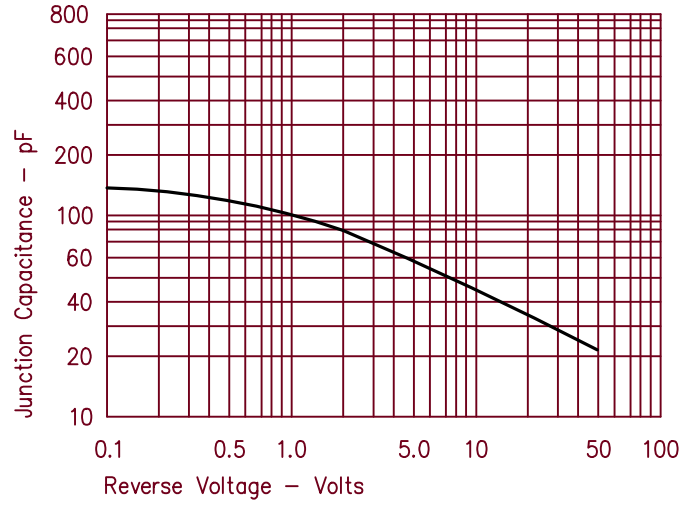


Figure 4
Forward Current Derating

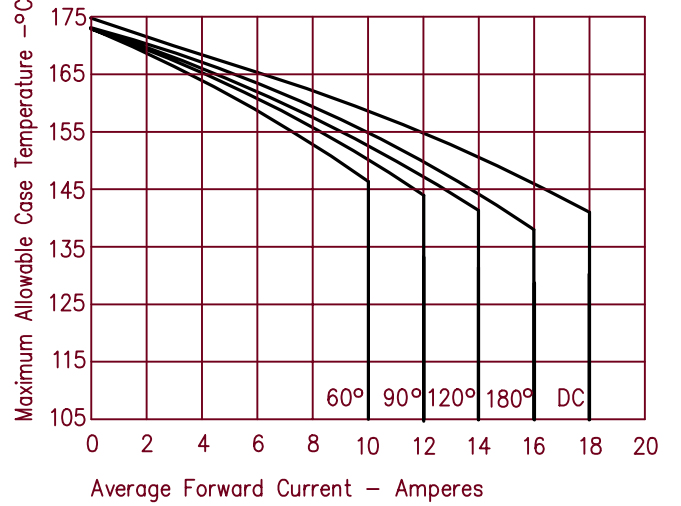


Figure 2
Typical Reverse Characteristics

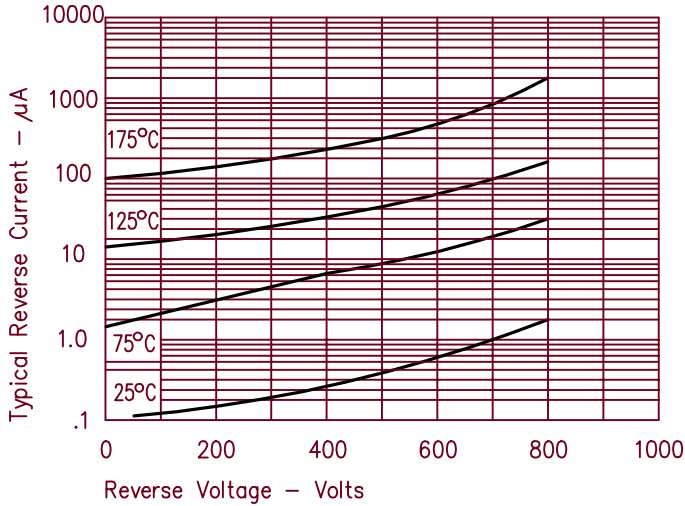


Figure 5
Maximum Forward Power Dissipation

