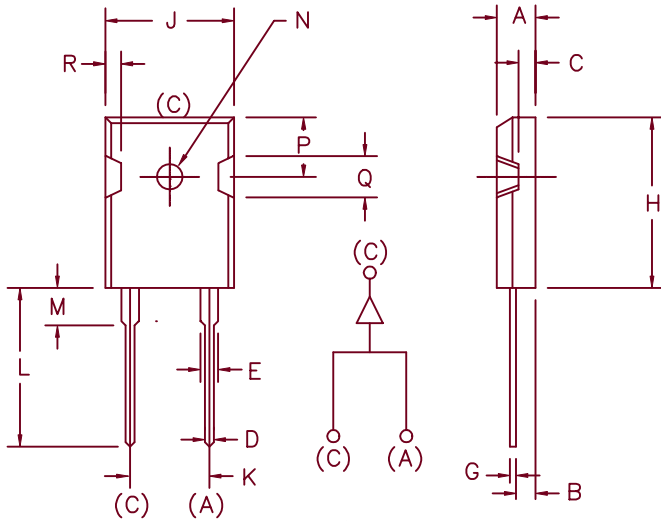


# 80 Amp Ultrafast Rectifier UF8025



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	

Lead frame plating – 85%Sn/15%Pb, 300–800 micro inches  
Leads solder dipped with 63%Sn/37%Pb solder.

Microsemi Catalog Number	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
UF8025		250V	250V

- Ultrafast Recovery
- V<sub>RRM</sub> 250V
- 80 Amperes Avg.
- 175°C Junction temperature
- t<sub>rr</sub> = 55ns max.

## Electrical Characteristics

Average Forward Current	I <sub>F(AV)</sub> 80 Amps	T <sub>C</sub> = 125°C, square wave
Maximum Surge Current	I <sub>FSM</sub> 700 Amps	8.3ms, half sine T <sub>J</sub> = 175°C
Max. Peak Forward Voltage	V <sub>FM</sub> 1.30 Volts	I <sub>FM</sub> = 80A, T <sub>J</sub> = 25°C
Typ. Peak Forward Voltage	V <sub>FM</sub> 1.10 Volts	I <sub>FM</sub> = 80A, T <sub>J</sub> = 175°C
Typ. Peak Reverse Current	I <sub>RM</sub> 150uA	V <sub>RRM</sub> , T <sub>J</sub> = 125°C
Max. Peak Reverse Current	I <sub>RM</sub> 5uA	V <sub>RRM</sub> , T <sub>J</sub> = 25°C
Max. Reverse Recovery Time	t <sub>rr</sub> 55ns	1/2A, 1A, 1/4A, T <sub>J</sub> = 25°C
Typical Junction Capacitance	C <sub>J</sub> 90 pF	V <sub>R</sub> = 10.0V, T <sub>J</sub> = 25°C

\*Pulse test: Pulse width 300 μsec Duty cycle 2%

## Thermal and Mechanical Characteristics

Storage temp range	T <sub>STG</sub>	-55°C to 175°C
Operating junction temp range	T <sub>J</sub>	-55°C to 175°C
Max. thermal resistance per leg	R <sub>θJC</sub>	0.45°C/W Junction to case
Max. thermal resistance per pkg	R <sub>θJS</sub>	0.25°C/W Junction to sink
Mounting torque		8–10 inch pounds maximum (6–32 screw)
Weight		.22 ounces (6.2 grams) typical

# UF8025

Figure 1  
Typical Forward Characteristics

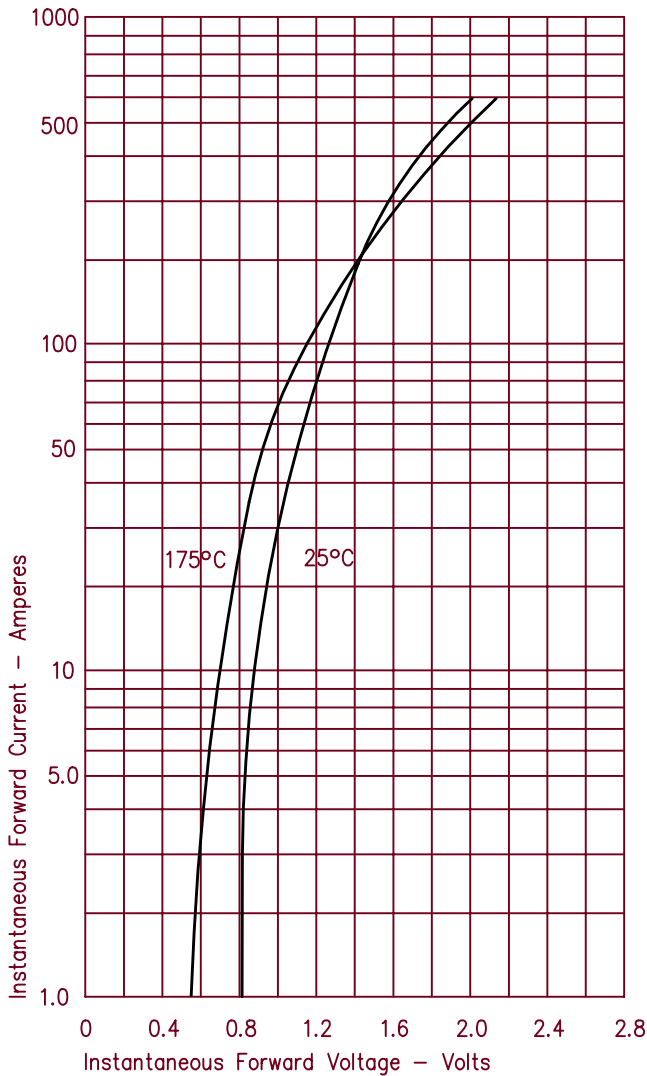


Figure 3  
Typical Junction Capacitance

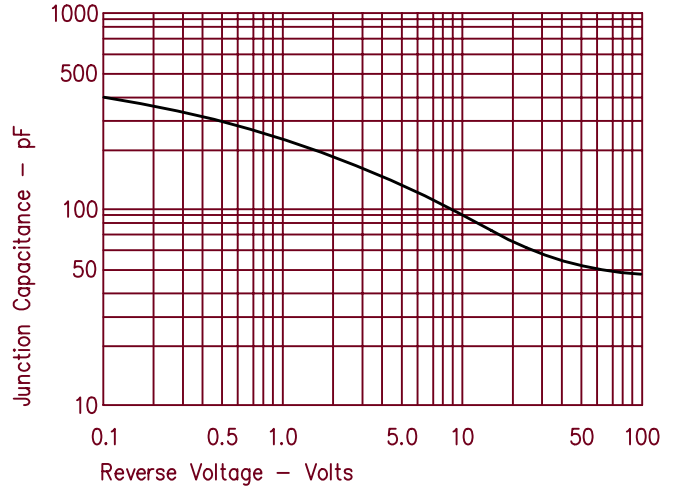


Figure 4  
Forward Current Derating

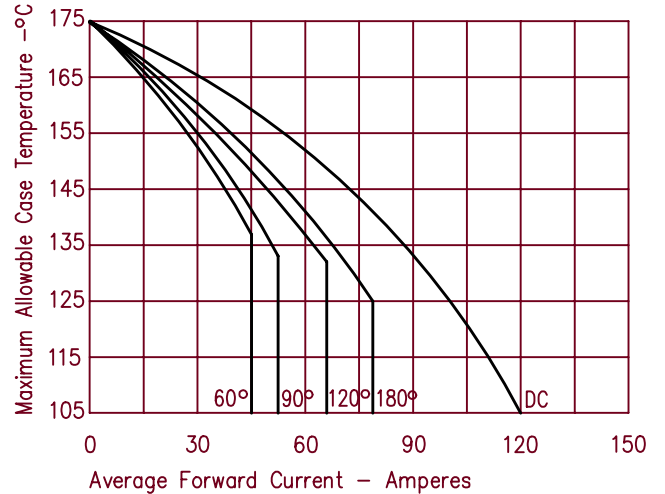


Figure 2  
Typical Reverse Characteristics

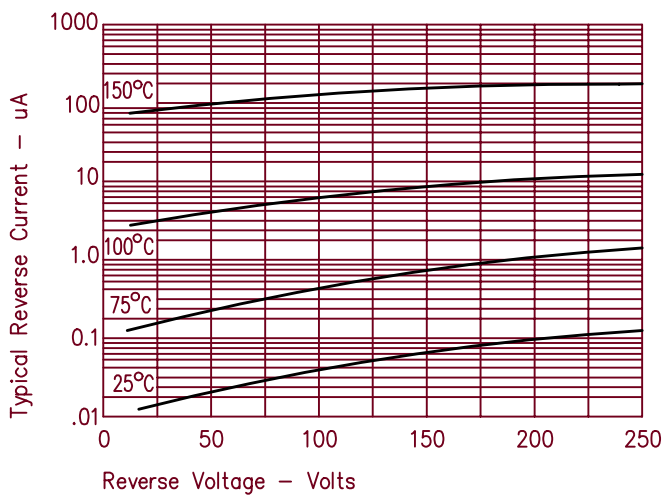


Figure 5  
Maximum Forward Power Dissipation

