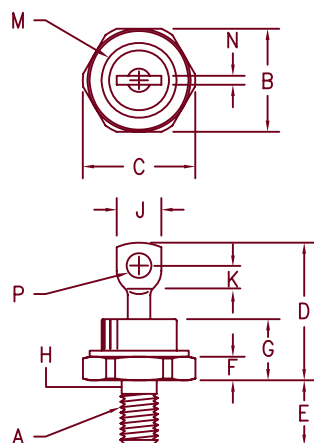


Ultra Fast Recovery Rectifiers

UFR8630 — UFR8650



Notes:

1. Full threads within 2 1/2 threads
2. Standard Polarity: Stud is Cathode
Reverse Polarity: Stud is Anode

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A			1/4-28 UNF 3A		1
B	.667	.687	16.94	17.45	
C	---	.793	---	20.14	
D	---	1.00	---	25.40	
E	.422	.453	10.72	11.51	
F	.115	.200	2.92	5.08	
G	---	.450	---	11.43	
H	.220	.249	5.59	6.32	2
J	.250	.375	6.35	9.52	
K	.140	---	3.56	---	
M	---	.667	---	16.94	Dia
N	---	.080	---	2.03	
P	.140	.175	3.56	4.44	Dia

D0203AB (D05)

Microsemi Catalog Number	Working Peak Reverse Voltage	Peak Reverse Voltage
UFR8630*	300V	300V
UFR8640*	400V	400V
UFR8650*	500V	500V

*Add Suffix R For Reverse Polarity

- Ultra Fast Recovery Rectifier
- 175°C Junction Temperature
- 85 Amps current rating
- V_{RRM} 300 to 500 Volts
- t_{RR} 100 nsec maximum

Electrical Characteristics

Average forward current	$I_F(AV)$ 85 Amps	Square wave, $R_{\theta JC} = 0.6^{\circ}C/W$, $T_C = 130^{\circ}C$
Maximum surge current	I_{FSM} 1500 Amps	8.3 ms, half sine, $T_J = 175^{\circ}C$
Max peak forward voltage	V_{FM} 1.25 Volts	$I_{FM} = 85A$; $T_J = 25^{\circ}C$ *
Max reverse recovery time	t_{RR} 100 ns	$I_F = 1A$, $V_R = 30V$, $di/dt = 25A/\mu s$
Max peak reverse current	I_{RM} 5 mA	V_{RRM} , $T_J = 125^{\circ}C$
Max peak reverse current	I_{RM} 30 μA	V_{RRM} , $T_J = 25^{\circ}C$
Typical Junction Capacitance	C_J 180 pF	$V_R = 10V$, $f = 1MHz$, $T_J = 25^{\circ}C$

*Pulse test: Pulse width 300 μs , Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	$-65^{\circ}C$ to $175^{\circ}C$
Operating junction temp range	T_J	$-65^{\circ}C$ to $175^{\circ}C$
Max thermal resistance	$R_{\theta JC}$	$0.6^{\circ}C/W$ Junction to case
Mounting torque		25-30 inch pounds
Weight		.52 ounces (14.7 grams) typical



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05-09-07 Rev. 1

UFR8630 — UFR8650

Figure 1
Typical Forward Characteristics

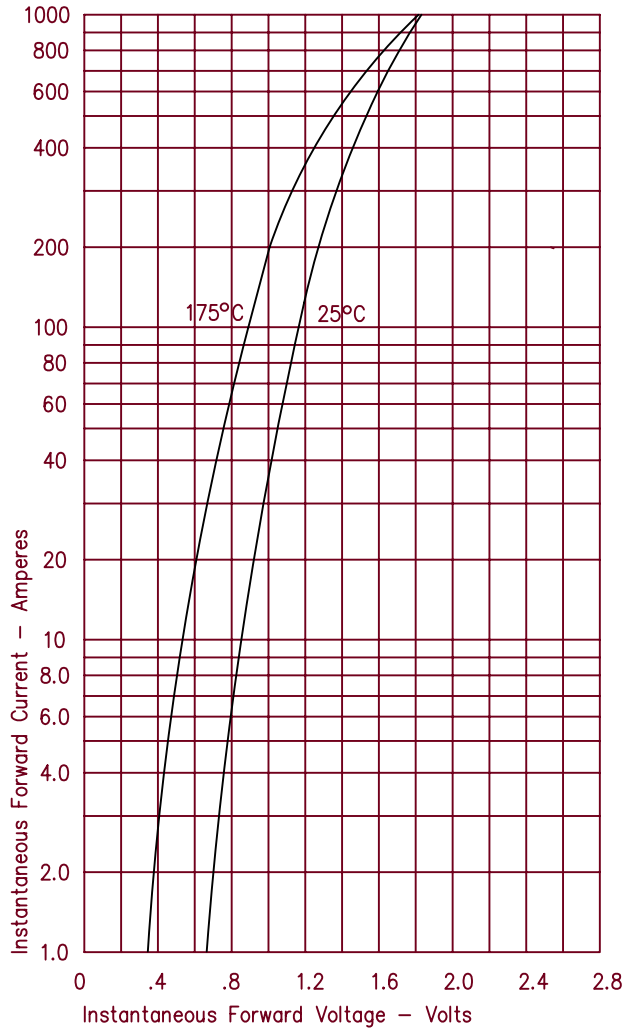


Figure 3
Typical Junction Capacitance

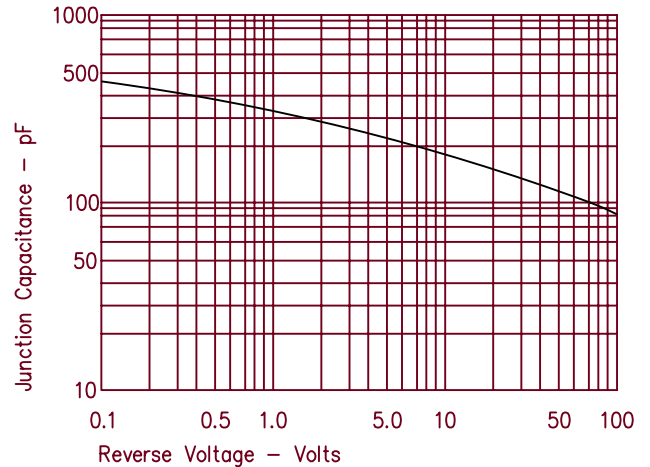


Figure 4
Forward Current Derating

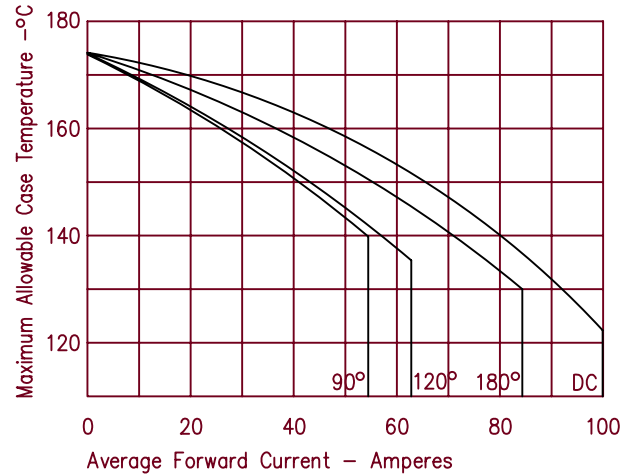


Figure 2
Typical Reverse Characteristics

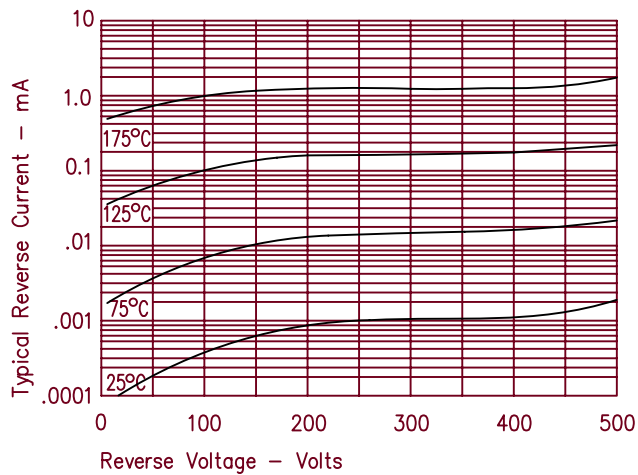


Figure 5
Maximum Forward Power Dissipation

