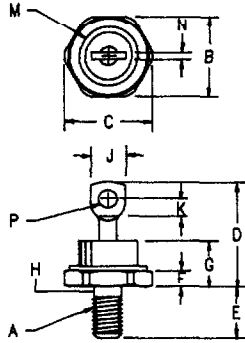


Ultra Fast Recovery Rectifiers UFR70, 71 & 72



Notes:

1. 1/4 28
2. Full threads within 2 1/2 threads
3. For Reverse Polarity add R to Part Number
Standard Polarity: Stud is Cathode
Reverse Polarity: Stud is Anode

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	---	---	---	---	1
B	.669	.688	16.99	17.48	
C	---	.793	---	20.14	
D	.750	1.00	19.05	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	---	.375	---	9.53	
K	.156	---	3.97	---	
M	---	.667	---	16.94	Dia
N	---	.080	---	2.03	
P	.140	.175	3.56	4.45	Dia



D0203AB (D05)

Microsemi Catalog Number	Working Peak Reverse Voltage	Peak Reverse Voltage
UFR7005*	50V	50V
UFR7010*	100V	100V
UFR7015*	150V	150V
UFR7020*	UFR7120*	200V
	UFR7130*	300V
	UFR7140*	400V
UFR7250*	UFR7150*	500V
UFR7260*	600V	600V
UFR7270*	700V	700V
UFR7280*	800V	800V

*Add Suffix R For Reverse Polarity

- Ultra Fast Recovery Rectifier
- 175°C Junction Temperature
- V_{RRM} 50 to 800V
- High Reliability
- /O Amps current rating
- t_{RR} 50 to 75 nsec maximum

Electrical Characteristics					
	UFR70	UFR71	UFR72		
Average forward current	I _{F(AV)} 70A	70A	70A	Square wave, R _{θJC} = 0.8°C/W	
Case Temperature	T _C 125°C	110°C	105°C		
Maximum surge current	I _{FSM} 1000A	800A	700A	8.3 ms, half sine, T _C = 175°C	
Max peak forward voltage	V _{FM} .975V	1.25V	1.35V	I _{FM} = 70A; T _J = 25°C*	
Max reverse recovery time	t _{RR} 50 ns	60ns	75 ns	1/2A, 1A, 1/4A, T _J = 25°C	
Typical reverse recovery time	t _{RR} 30 ns	45 ns	50 ns	1/2A, 1A, 1/4A, T _J = 25°C	
Max reverse recovery time	t _{RR} 60 ns	70 ns	95 ns	70A, 130A/μs, T _J = 25°C	
Max peak reverse current	I _{RM} ---	3.0 mA	---	V _{RRM} , T _J = 125°C	
Max peak reverse current	I _{RM} ---	25 μA	---	V _{RRM} , T _J = 25°C	
Typical Junction Capacitance	C _J 300 pF	150 pF	150 pF	V _R = 10V, f = 1Mhz, T _J = 25°C	

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

Thermal and Mechanical Characteristics		
Storage temp range	T _{STG}	-65°C to 175°C
Operating junction temp range	T _J	-65°C to 175°C
Max thermal resistance	R _{θJC}	0.8°C/W Junction to case
Typical thermal resistance	R _{θJC}	0.75°C/W Junction to case
Typical thermal resistance	R _{θCS}	0.2°C/W Case to sink
Max mounting torque		30 inch pounds maximum
Weight		.54 ounces (15.3 grams) typical

Microsemi Corp.
Colorado

PH: 303-469-2161
FAX: 303-466-3775

D-69

UFR70

Figure 1
Typical Forward Characteristics

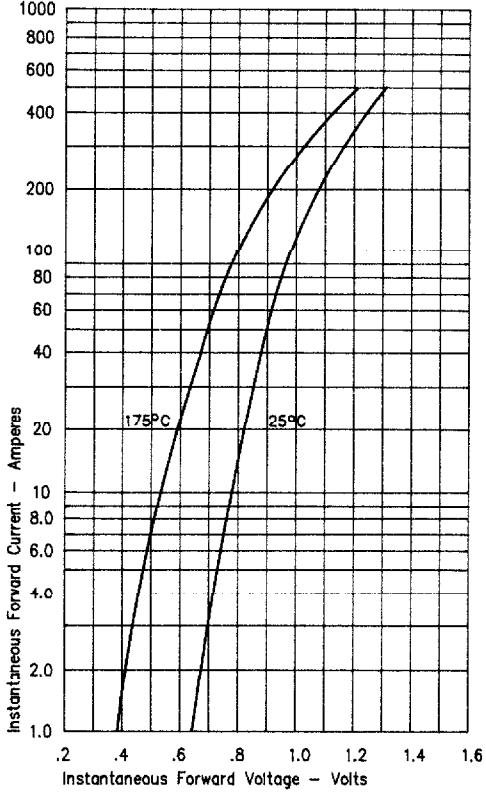


Figure 3
Typical Junction Capacitance

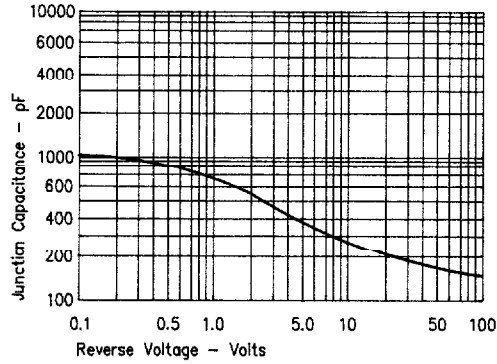


Figure 4
Forward Current Derating

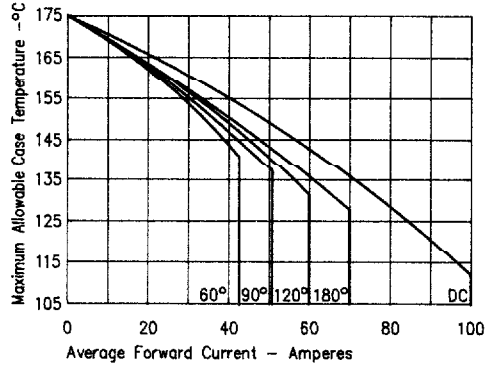


Figure 2
Typical Reverse Characteristics

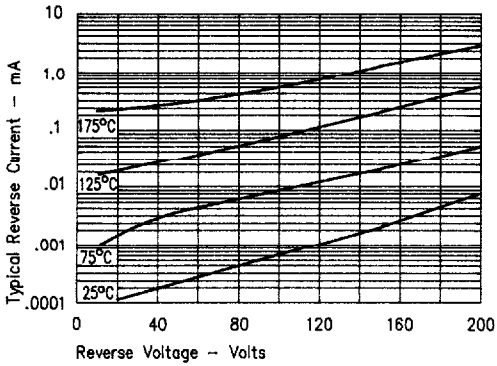
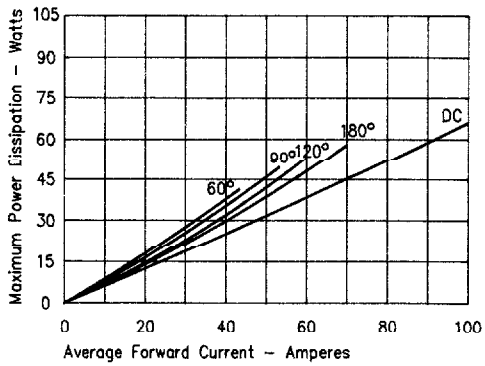


Figure 5
Maximum Forward Power Dissipation



UFR71

Figure 1
Typical Forward Characteristics

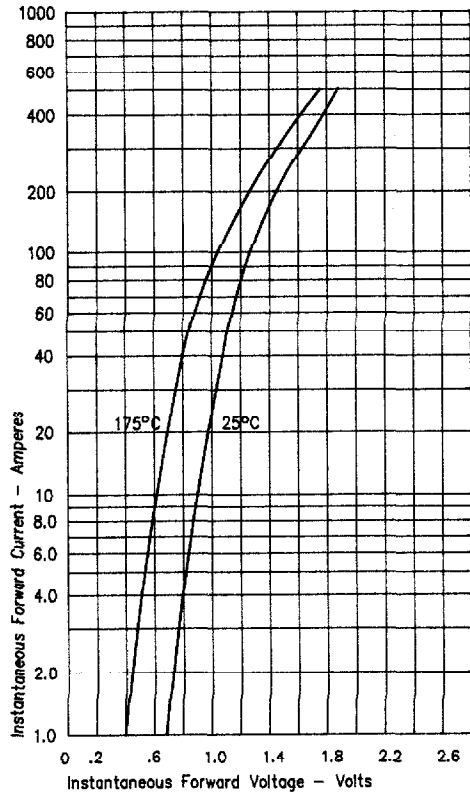


Figure 3
Typical Junction Capacitance

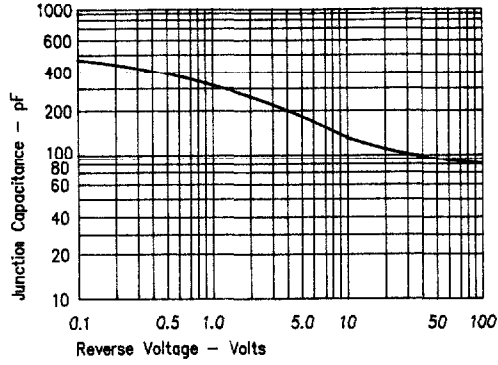


Figure 4
Forward Current Derating

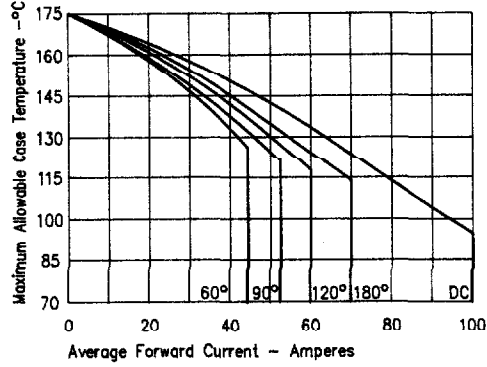


Figure 2
Typical Reverse Characteristics

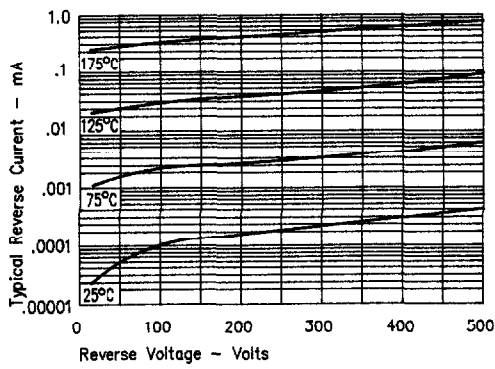
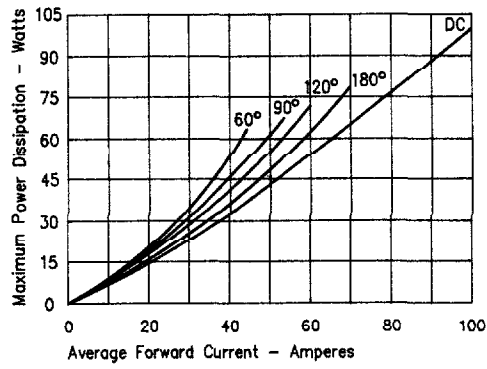


Figure 5
Maximum Forward Power Dissipation



D

UFR72

Figure 1
Typical Forward Characteristics

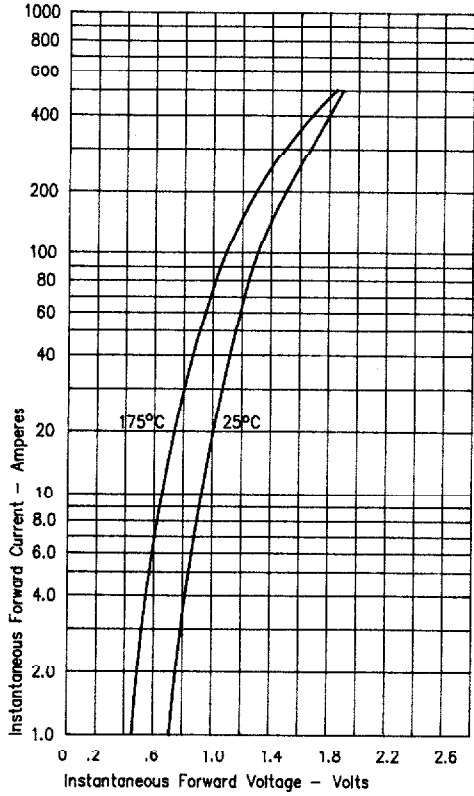


Figure 3
Typical Junction Capacitance

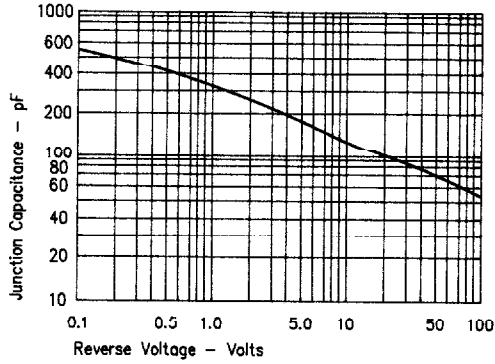


Figure 4
Forward Current Derating

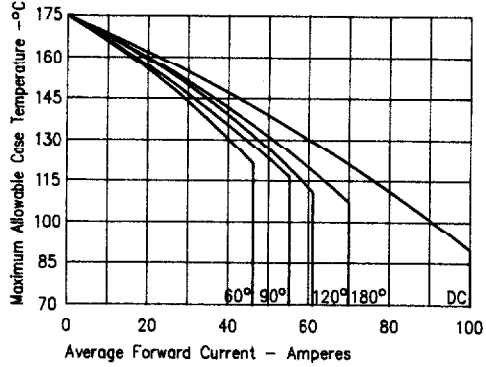


Figure 2
Typical Reverse Characteristics

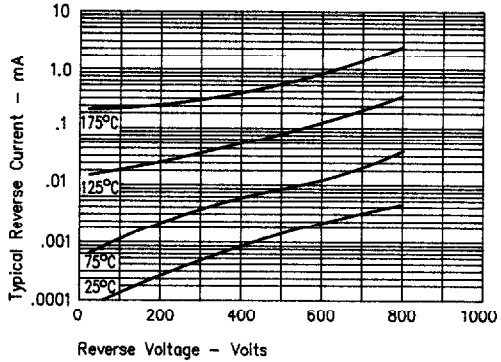


Figure 5
Maximum Forward Power Dissipation

