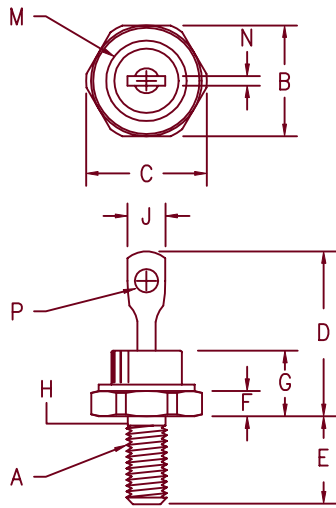


# Ultra Fast Recovery Rectifiers UFR30, 31 & 32



- Notes:
1. 10-32 UNF3A threads
  2. Full threads within 2 1/2 threads Standard Polarity: Stud is Cathode  
Reverse Polarity: Stud is Anode

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	---	---	---	---	1
B	.424	.437	10.77	11.10	
C	---	.505	---	12.82	
D	.600	.800	15.24	20.32	
E	.422	.453	10.72	11.50	
F	.075	.175	1.91	4.44	
G	---	.405	---	10.29	
H	.163	.189	4.15	4.80	2
J	.100	.310	2.54	7.87	
M	---	.350	---	8.89	Dia.
N	.020	.065	.510	1.65	
P	.070	.100	1.78	2.54	Dia.

## DO203AA (D04)

Microsemi Catalog Number	Working Peak Reverse Voltage	Peak Reverse Voltage
UFR3010*	100V	100V
UFR3015*	150V	150V
UFR3020*	UFR3120*	200V
	UFR3130*	300V
	UFR3140*	400V
	UFR3150*	500V
UFR3260*	600V	600V
UFR3270*	700V	700V
UFR3280*	800V	800V

\*Add Suffix R For Reverse Polarity

- Ultra Fast Recovery Rectifier
- 175°C Junction Temperature
- $V_{RRM}$  100 to 800V
- High Reliability
- 30 Amps current rating
- $t_{RR}$  35 to 60 nsec maximum

Electrical Characteristics					
	UFR30	UFR31	UFR32		
Average forward current	$I_{F(AV)}$ 30A	30A	30A	Square wave, $R_{\theta JC} = 1.8^{\circ}C/W$	
Case Temperature	$T_C$ 127°C	110°C	107°C		
Maximum surge current	$I_{FSM}$ 500A	400A	300A	8.3 ms, half sine, $T_J = 175^{\circ}C$	
Max peak forward voltage	$V_{FM}$ .975V	1.25V	1.35V	$I_{FM} = 30A; T_J = 25^{\circ}C^*$	
Max reverse recovery time	$t_{RR}$ 35 ns	50 ns	60 ns	1/2A, 1A, 1/4A, $T_J = 25^{\circ}C$	
Max peak reverse current	$I_{RM}$ _____	1.0 mA	_____	$V_{RRM}, T_J = 125^{\circ}C$	
Max peak reverse current	$I_{RM}$ _____	15 $\mu A$	_____	$V_{RRM}, T_J = 25^{\circ}C$	
Typical Junction Capacitance	$C_J$ 140 pF	115 pF	100 pF	$V_R = 10V, f = 1MHz, T_J = 25^{\circ}C$	

\*Pulse test: Pulse width 300  $\mu sec$ , Duty cycle 2%

Thermal and Mechanical Characteristics		
Storage temp range	TSTG	-65°C to 175°C
Operating junction temp range	$T_J$	-65°C to 175°C
Max thermal resistance	$R_{\theta JC}$	1.8°C/W Junction to Case
Typical thermal resistance	$R_{\theta JC}$	1.3°C/W Junction to Case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.4°C/W Case to sink
Mounting torque		12-15 inch pounds
Weight		0.2 ounces (6.0 grams) typical

# UFR30

Figure 1  
Typical Forward Characteristics

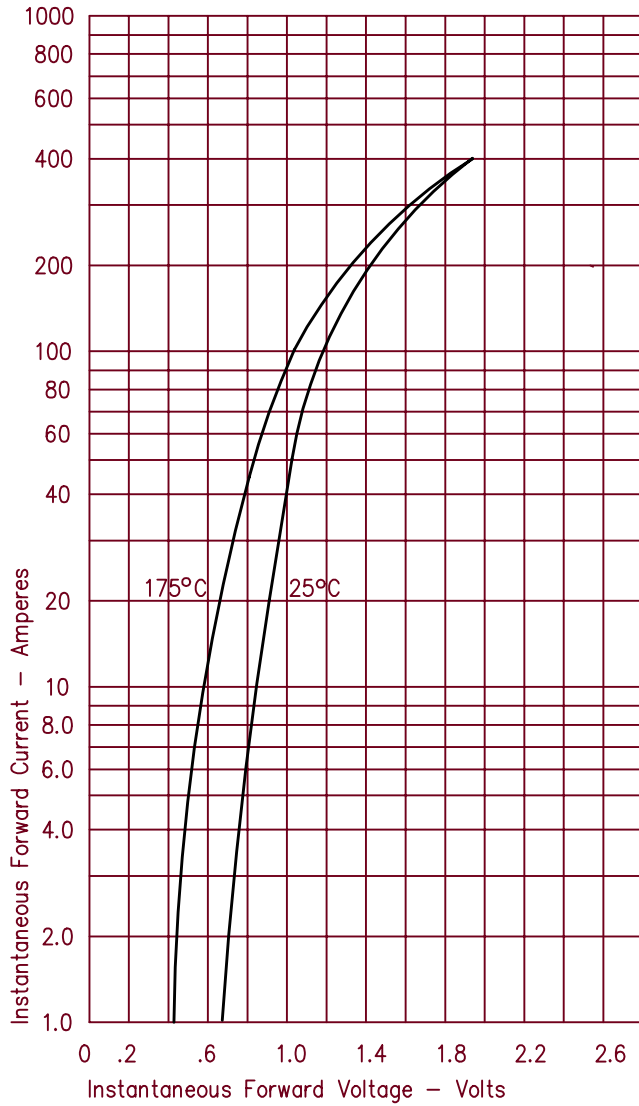


Figure 3  
Typical Junction Capacitance

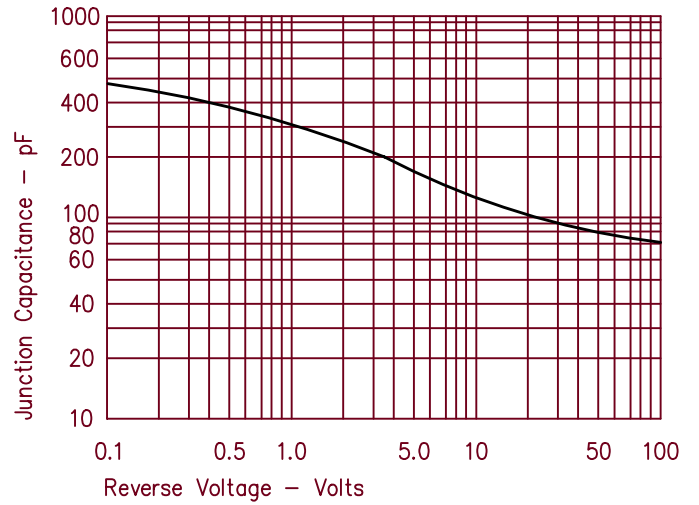


Figure 4  
Forward Current Derating

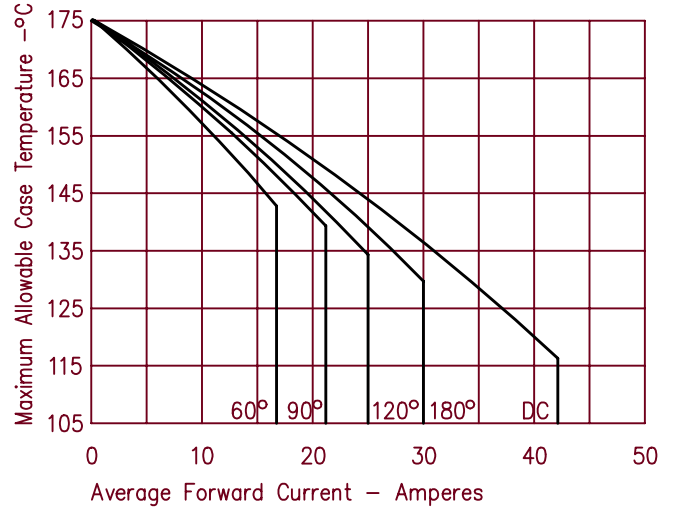


Figure 2  
Typical Reverse Characteristics

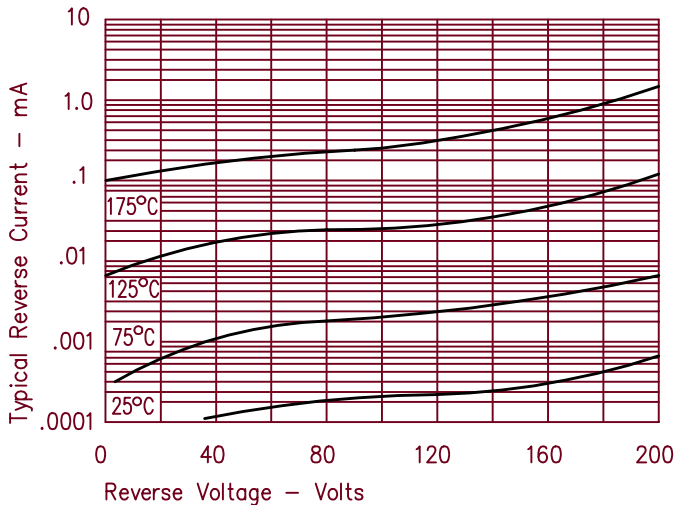
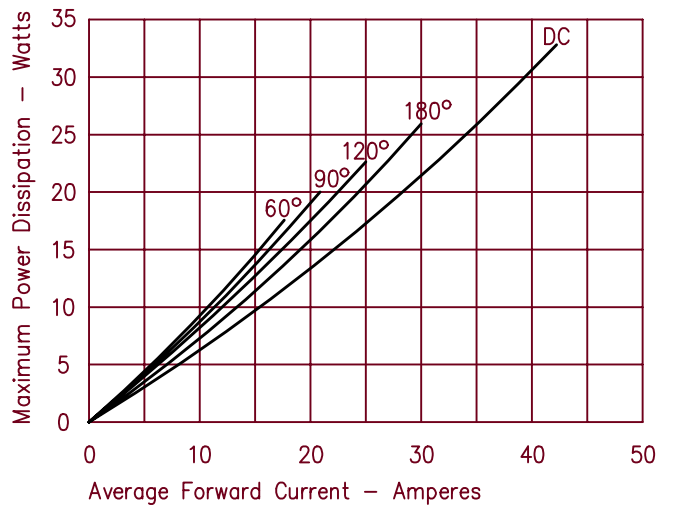


Figure 5  
Maximum Forward Power Dissipation



# UFR31

Figure 1  
Typical Forward Characteristics

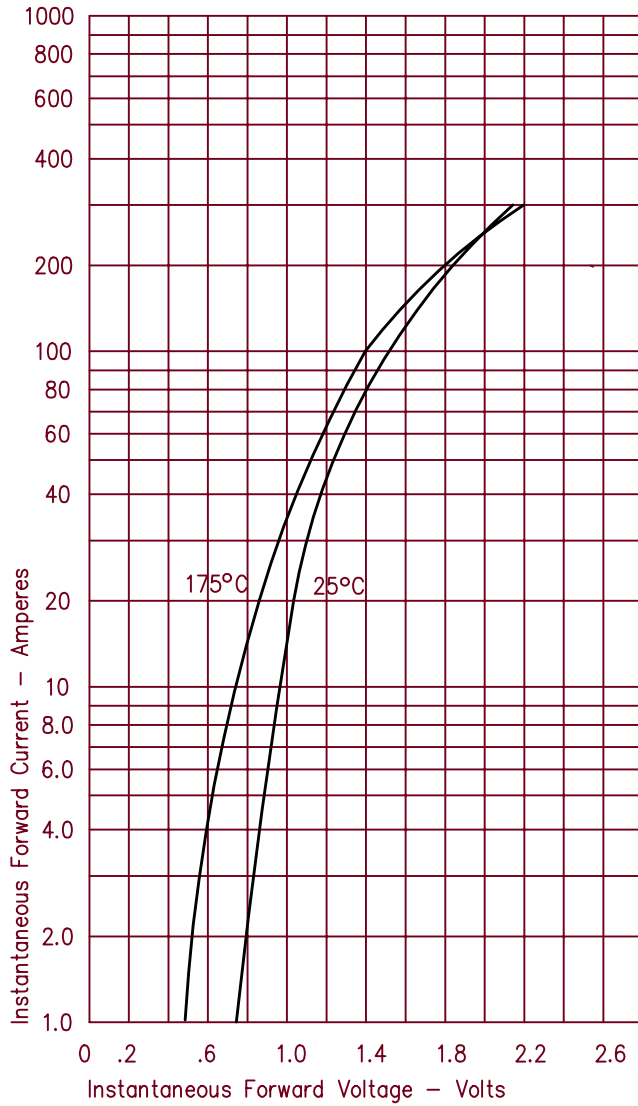


Figure 3  
Typical Junction Capacitance

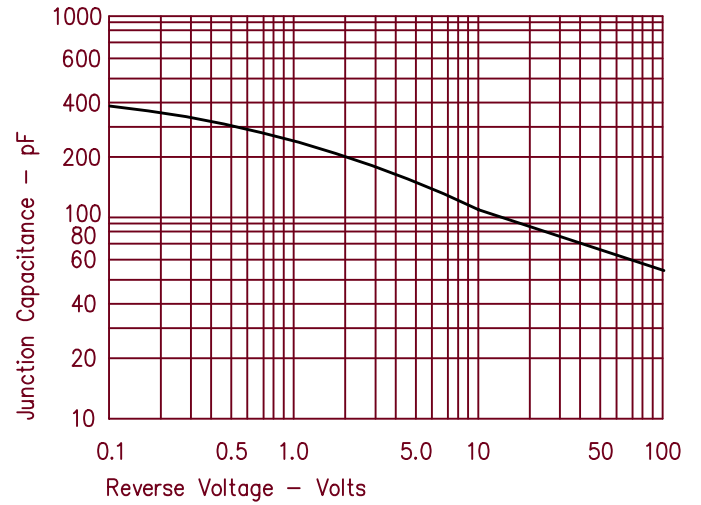


Figure 4  
Forward Current Derating

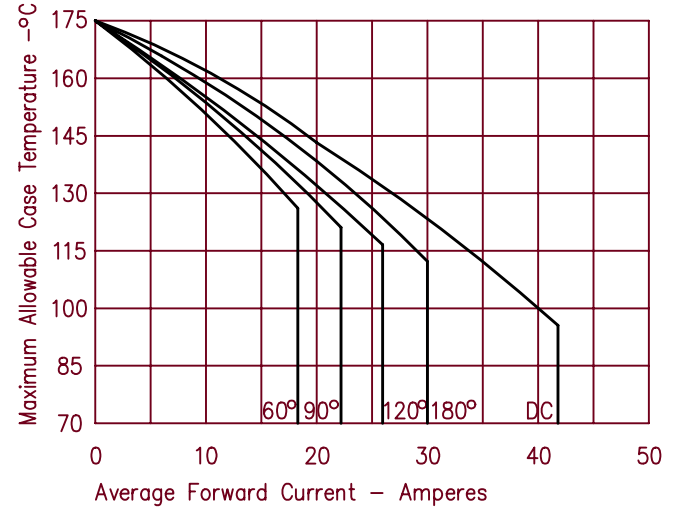


Figure 2  
Typical Reverse Characteristics

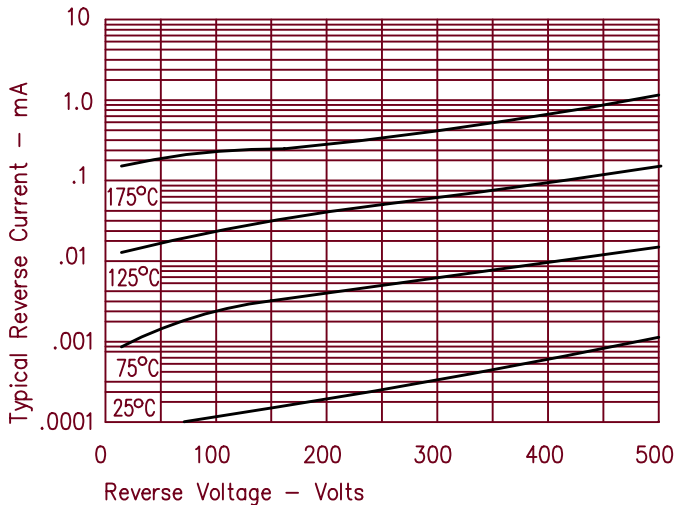
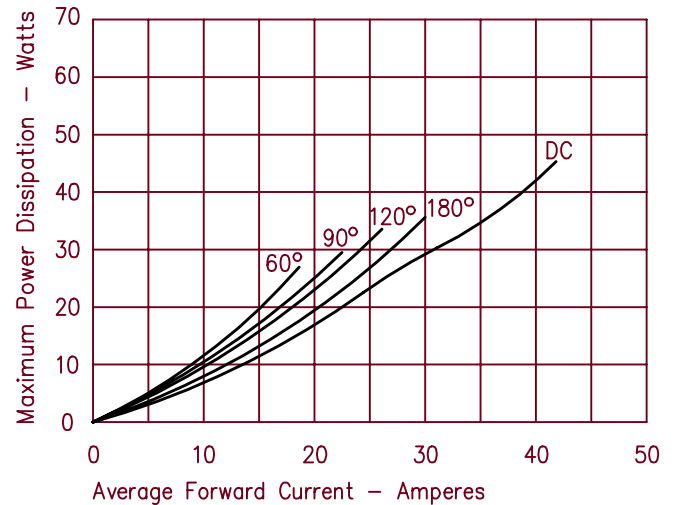


Figure 5  
Maximum Forward Power Dissipation



# UFR32

Figure 1  
Typical Forward Characteristics

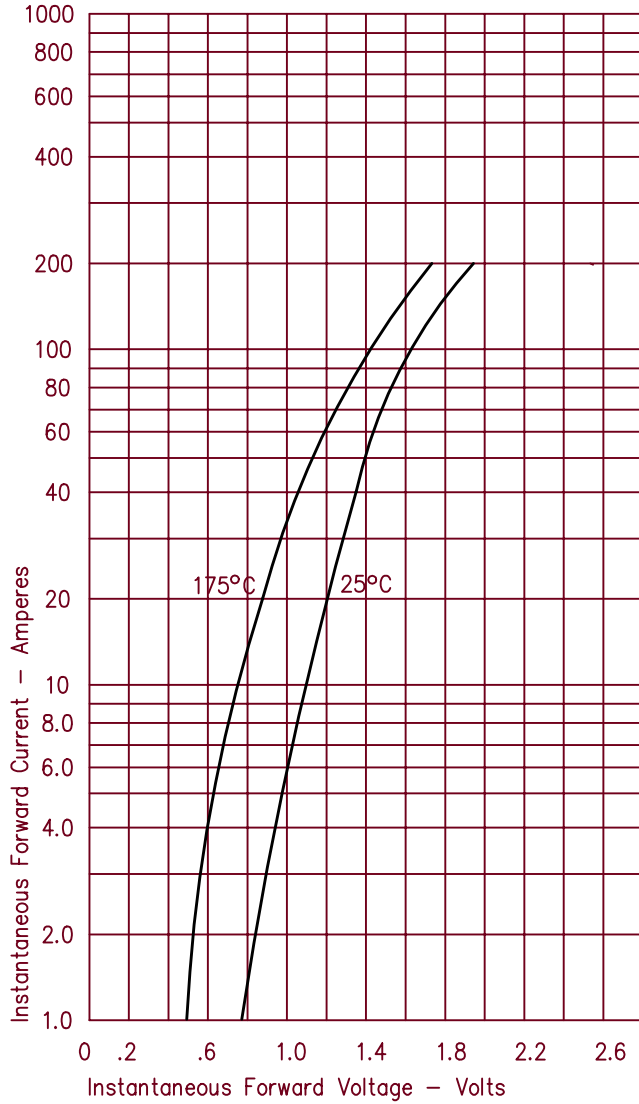


Figure 3  
Typical Junction Capacitance

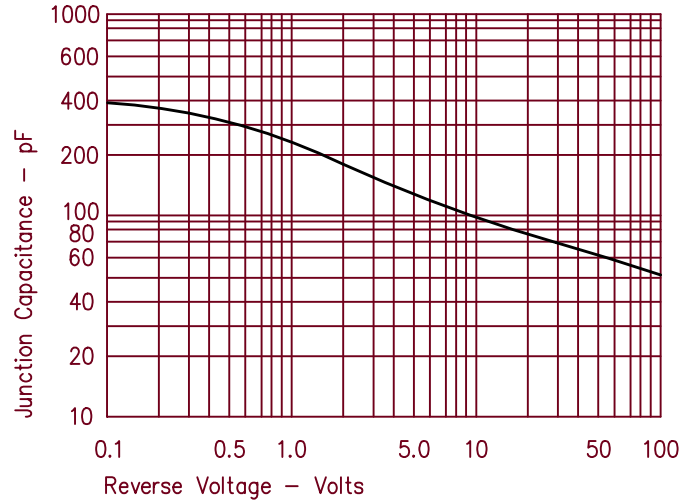


Figure 4  
Forward Current Derating

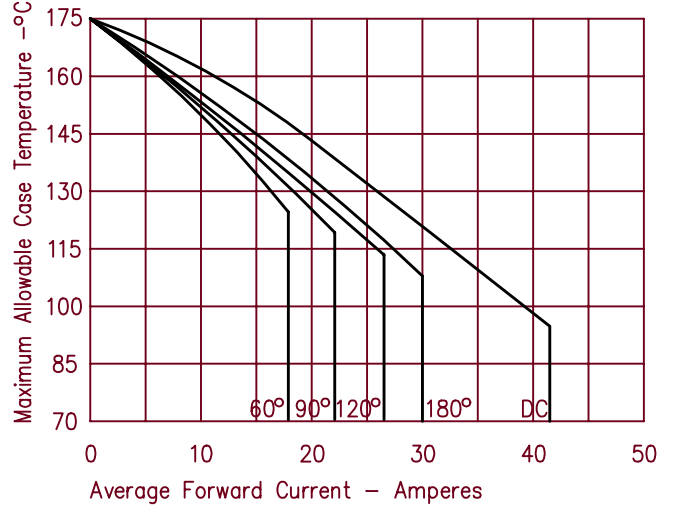


Figure 2  
Typical Reverse Characteristics

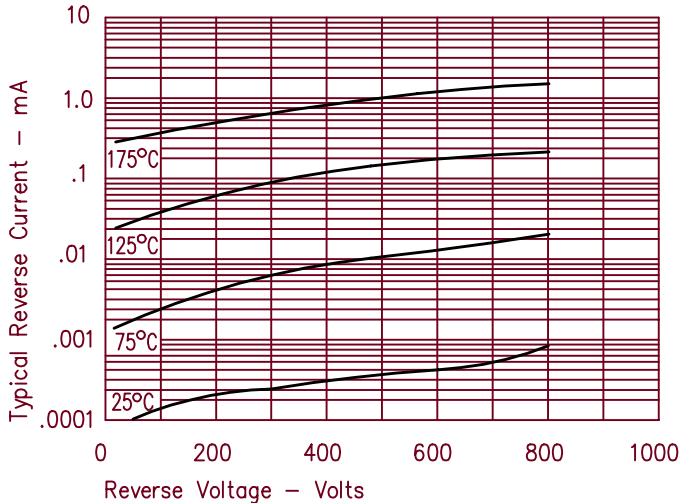


Figure 5  
Maximum Forward Power Dissipation

