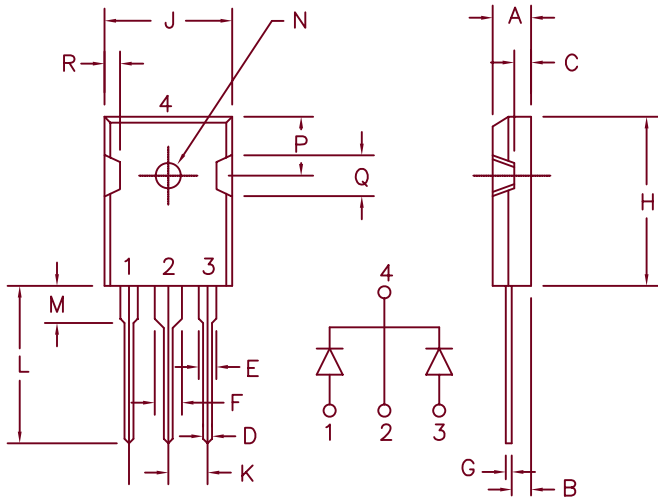


# 30 Amp Ultra Fast Recovery Rectifier UF3030 — UF3050



Similar to TO-247AD

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	.118	.133	3.00	3.38	
G	.016	.031	.410	0.78	
H	.819	.883	20.80	22.4	
J	.627	.650	15.93	16.5	
K	.215	—	5.46	—	Typ.
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	

Microsemi Catalog Number

UF3030  
UF3040  
UF3050

Repetitive Peak Reverse Voltage

300V  
400V  
500V

Transient Peak Reverse Voltage

300V  
400V  
500V

- Ultra Fast Recovery Rectifier
- 2 x 15 Amp current rating
- trr 50nS maximum
- Non isolated base
- 175°C junction temperature
- $V_{RRM}$  300 to 500 volts

## Electrical Characteristics

Average forward current per pkg	$I_{F(AV)}$ 30 Amps	$T_C = 150^\circ\text{C}$ , square wave, $R_{\theta JC} = .75^\circ\text{C/W}$
Average forward current per leg	$I_{F(AV)}$ 15 Amp	$T_C = 150^\circ\text{C}$ , square wave, $R_{\theta JC} = 1.5^\circ\text{C/W}$
Maximum surge current per leg	$I_{FSM}$ 200 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Max. peak forward voltage per leg	$V_{FM}$ 1.1 Volts	$I_{FM} = 15\text{A}$ , $T_J = 25^\circ\text{C}^*$
Max. peak reverse current per leg	$I_{RM}$ 10 $\mu\text{A}$	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical junction capacitance	$C_J$ 110 pF	$V_R = 10\text{V}$ , $T_J = 25^\circ\text{C}$
Max. reverse recovery time	trr 50nS	1/2A, 1A, 1/4A, $T_J = 25^\circ\text{C}$

\*Pulse test: Pulse width 300  $\mu\text{sec}$ . Duty Cycle 2%

## Thermal and Mechanical Characteristics

Storage temp range	TSTG	-55°C to +175°C
Operating junction temp range	$T_J$	-55°C to +175°C
Max thermal resistance per leg	$R_{\theta JC}$	1.5°C/W Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	.75°C/W Junction to case
Mounting torque	$R_{\theta JC}$	8-10 inch pounds (#6 screw)
Weight		.22 ounces (6.36 grams) typical



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05-07-07 Rev.1

# UF3030 — UF3050

Figure 1  
Typical Forward Characteristics — Per Leg

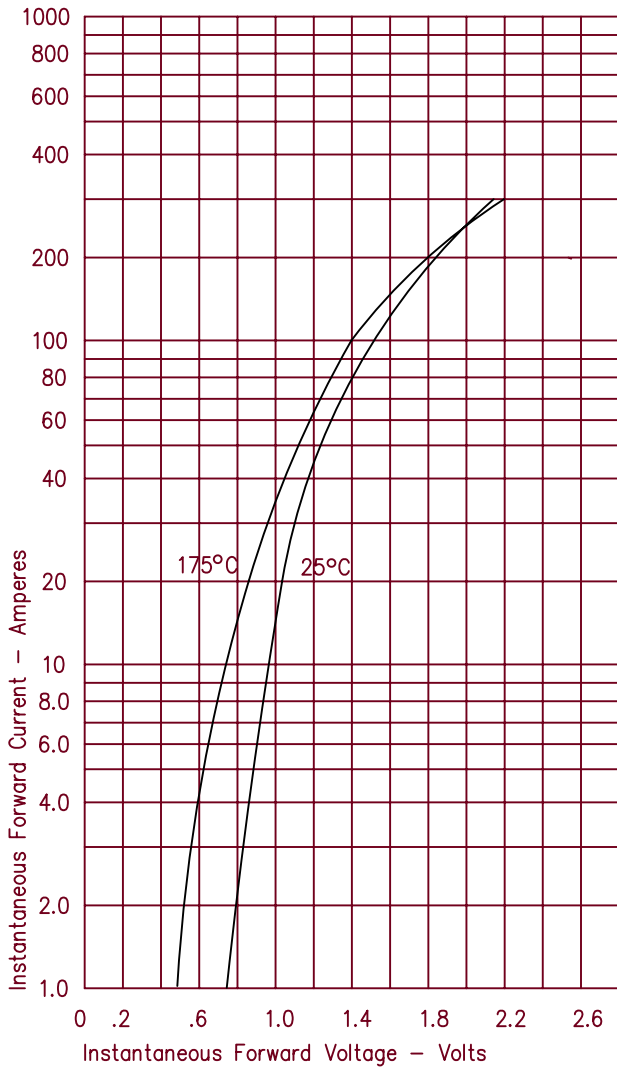


Figure 3  
Typical Junction Capacitance — Per Leg

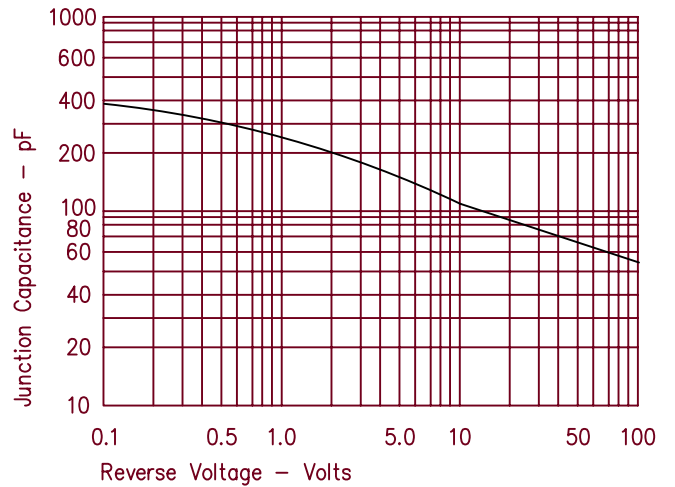


Figure 4  
Forward Current Derating — Per Leg

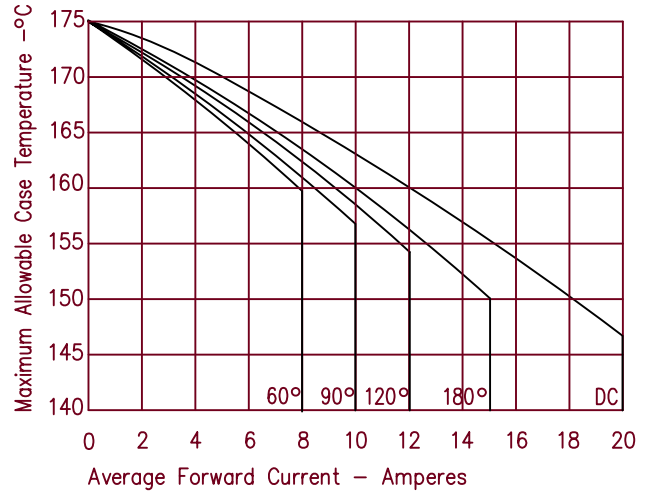


Figure 2  
Typical Reverse Characteristics — Per Leg

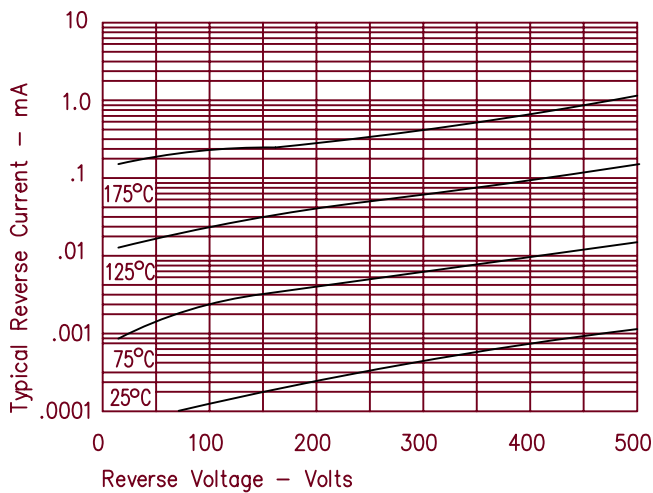


Figure 5  
Maximum Forward Power Dissipation — Per Leg

