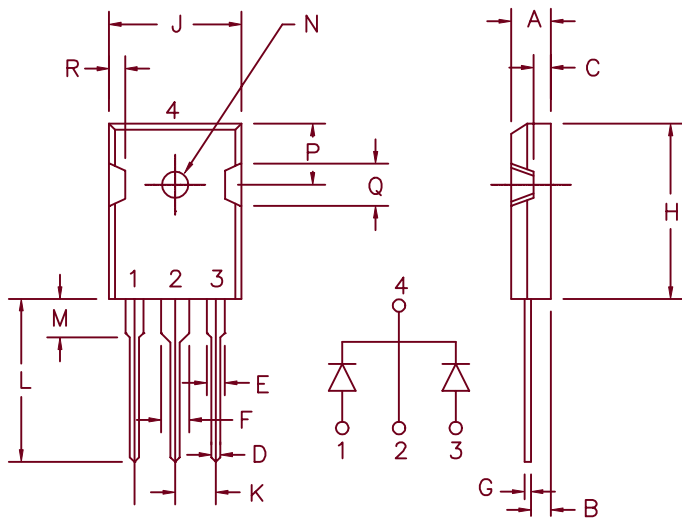


30 Amp Ultra Fast Recovery Rectifier UF3010 — UF3020



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

UF3010
UF3015
UF3020

Repetitive Peak
Reverse Voltage

100V
150V
200V

Transient Peak
Reverse Voltage

100V
150V
200V

- Ultra Fast Recovery Rectifier
- 2 x 15 Amp current rating
- trr 30nS maximum
- Non isolated base
- 175°C junction temperature
- V_{RRM} 100 to 200 volts

Electrical Characteristics

Average forward current per pkg
Average forward current per leg
Maximum surge current per leg
Max. peak forward voltage per leg
Max. peak reverse current per leg
Typical junction capacitance
Max. reverse recovery time

$I_F(AV)$ 30 Amps
 $I_F(AV)$ 15 Amp
 I_{FSM} 200 Amps
 V_{FM} .98 Volts
 I_{RM} 10 μ A
 C_J 180 pF
trr 30nS

$T_C = 158^\circ\text{C}$, square wave, $R_{\theta JC} = .75^\circ\text{C/W}$
 $T_C = 158^\circ\text{C}$, square wave, $R_{\theta JC} = 1.5^\circ\text{C/W}$
8.3ms, half sine, $T_J = 175^\circ\text{C}$
 $I_{FM} = 15\text{A}$, $T_J = 25^\circ\text{C}$ *
 V_{RRM} , $T_J = 25^\circ\text{C}$
 $V_R = 10\text{V}$, $T_J = 25^\circ\text{C}$
1/2A, 1A, 1/4A, $T_J = 25^\circ\text{C}$

*Pulse test: Pulse width 300 μ sec. Duty Cycle 2%

Thermal and Mechanical Characteristics

Storage temp range
Operating junction temp range
Max thermal resistance per leg
Max thermal resistance per pkg
Mounting torque
Typical weight

TSTG
 T_J
 $R_{\theta JC}$
 $R_{\theta JC}$
 $R_{\theta JC}$

-55°C to $+175^\circ\text{C}$
 -55°C to $+175^\circ\text{C}$
 1.5°C/W Junction to case
 $.75^\circ\text{C/W}$ Junction to case
8–10 inch pounds (#6 screw)
.22 ounces (6.36 grams) typical

UF3010 — UF3020

Figure 1
Typical Forward Characteristics — Per Leg

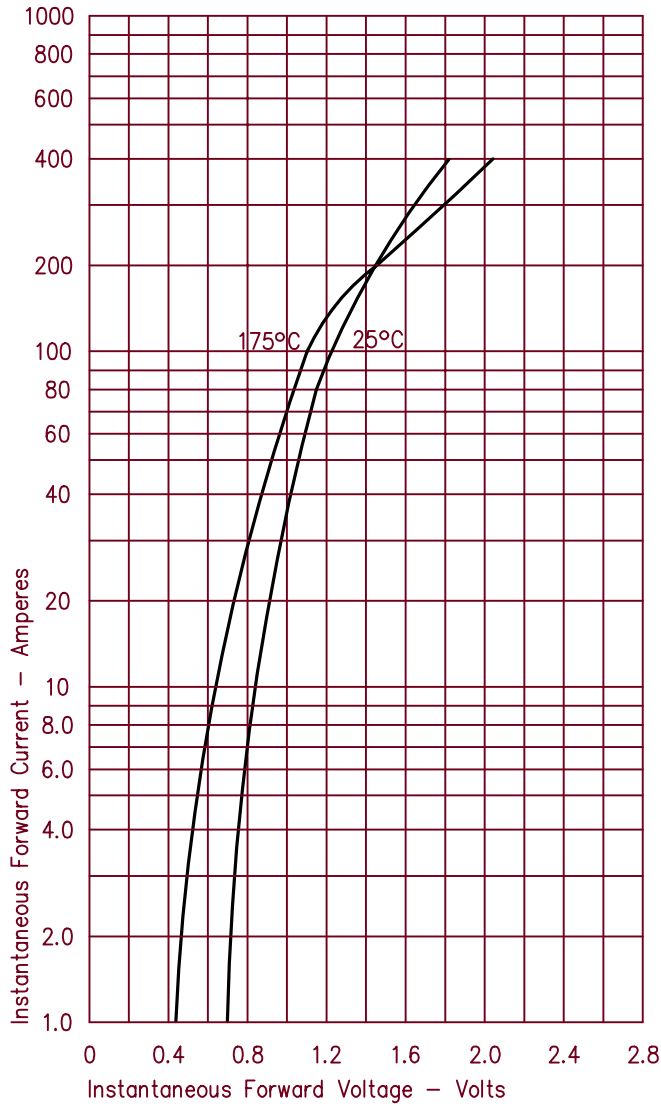


Figure 3
Typical Junction Capacitance — Per Leg

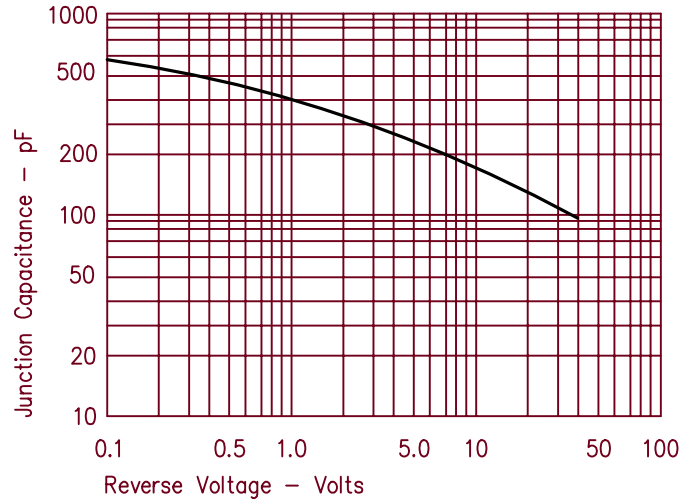


Figure 4
Forward Current Derating — Per Leg

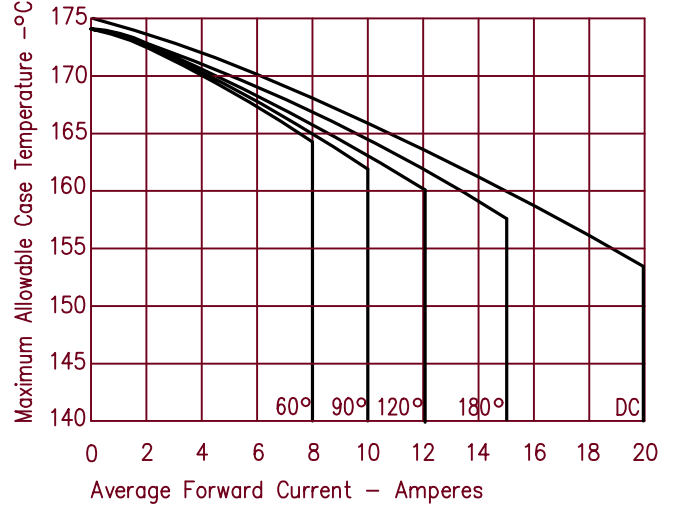


Figure 2
Typical Reverse Characteristics — Per Leg

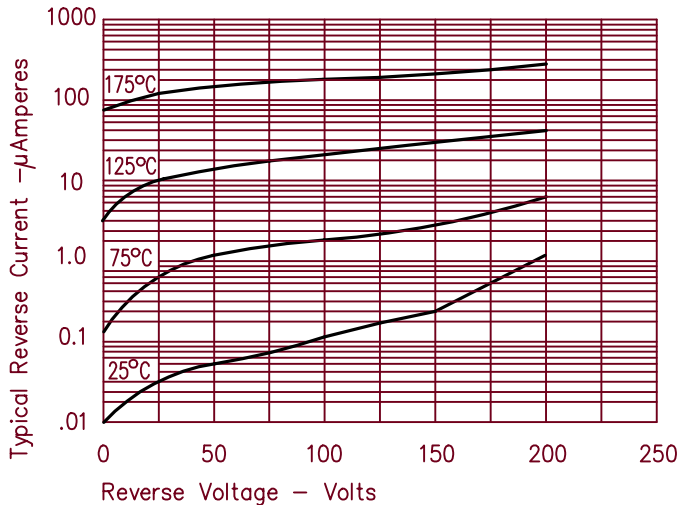


Figure 5
Maximum Forward Power Dissipation — Per Leg

