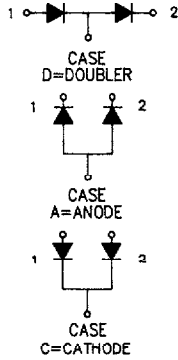
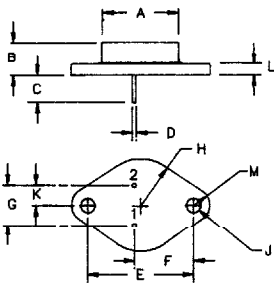


Ultra Fast Recovery Rectifiers UFT30, 31 & 32



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	—	.875	—	22.23	Dia.
B	.250	.450	6.35	11.43	
C	.312	—	7.92	—	
D	.038	.043	.97	1.09	Dia.
E	1.177	1.197	29.90	30.40	
F	.655	.675	16.64	17.15	
G	.420	.440	10.67	11.18	
H	—	.525	—	13.34	Rad.
J	.151	.161	3.84	4.09	Dia.
K	.205	.225	5.21	5.72	
L	—	.135	—	3.43	
M	—	.188	—	4.78	Rad.

TO-204AA (TO-3)

Microsemi Catalog Number	Working Peak Reverse Voltage	Peak Reverse Voltage
UFT3005*	50V	50V
UFT3010*	100V	100V
UFT3015*	150V	150V
UFT3020*	200V	200V
UFT3120*	300V	300V
UFT3130*	400V	400V
UFT3140*	500V	500V
UFT3150*	600V	600V
UFT3250*	700V	700V
UFT3260*	800V	800V
UFT3270*	—	—
UFT3280*	—	—

*Add D, C or A

- Ultra Fast Recovery Rectifier
- 175°C Junction Temperature
- VRRM 50 to 800V
- High Reliability
- 30 Amps current rating
- tRR 35 to 60 nsec maximum

Electrical Characteristics Per Leg

	UFT30	UFT31	UFT32	
Average forward current	I _{F(AV)} 30A	30A	30A	Square wave
Case Temperature (Standard)	T _C 138°C	124°C	122°C	R _{θJC} = 1.4°C/W
Case Temperature (Reverse)	T _C 115°C	95°C	90°C	R _{θJC} = 2.2°C/W
Maximum surge current	I _{FSM} 400A	350A	300A	8.3 ms, half sine, T _J = 175°C
Max peak forward voltage	V _{FM} .93V	1.10V	1.20V	I _{FM} = 15A; T _J = 25°C*
Max reverse recovery time	t _{RR} 35 ns	50 ns	60 ns	1/2A, 1A, 1/4A, T _J = 25°C
Typical reverse recovery time	t _{RR} 26 ns	36 ns	50 ns	1/2A, 1A, 1/4A, T _J = 25°C
Max peak reverse current	I _{RM} —	1.0 mA	—	VRRM, T _J = 125°C
Max peak reverse current	I _{RM} —	15 μA	—	VRRM, T _J = 25°C
Typical Junction Capacitance	C _J 140 pF	115 pF	100 pF	VR = 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 200°C
Operating junction temp range	T _J	-65°C to 175°C
Max thermal resistance (standard polarity)	R _{θJC}	1.4°C/W Junction to Case
Typical thermal resistance (standard polarity)	R _{θJC}	1.2°C/W Junction to Case
Max thermal resistance (reverse polarity)	R _{θJC}	2.2°C/W Junction to Case
Typical thermal resistance (reverse polarity)	R _{θJC}	2.0°C/W Junction to Case
Typical thermal resistance	R _{θCS}	0.4°C/W Case to sink
Weight		1.0 ounces (28 grams) typical

Microsemi Corp.
Colorado

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

D-51

UFT30

Figure 1
Typical Forward Characteristics - Per Leg

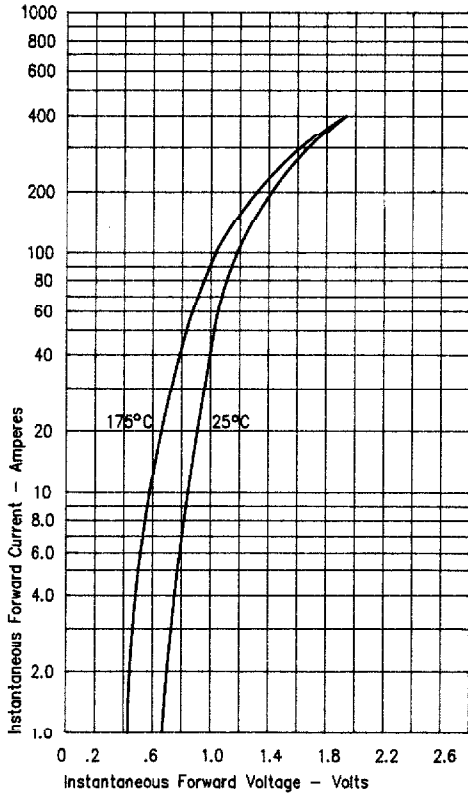


Figure 3
Typical Junction Capacitance - Per Leg

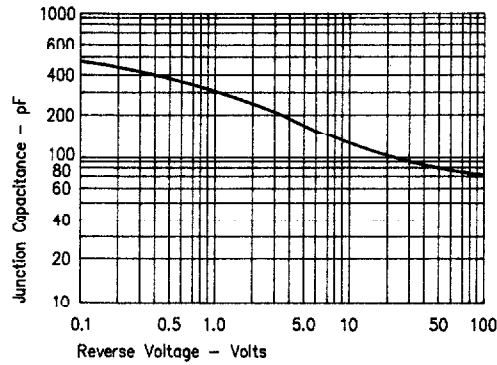


Figure 4
Forward Current Derating - Standard Polarity - Per Leg

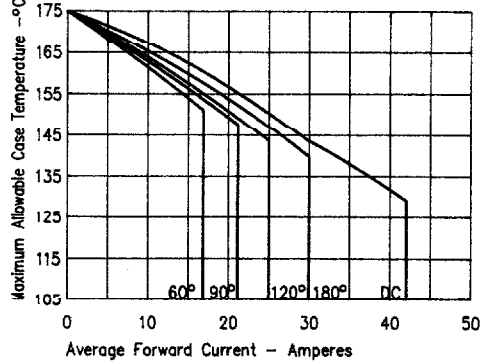


Figure 2
Typical Reverse Characteristics - Per Leg

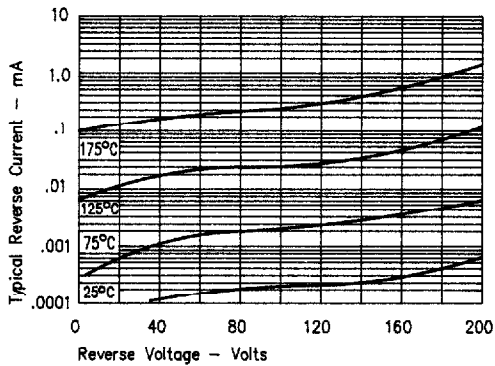
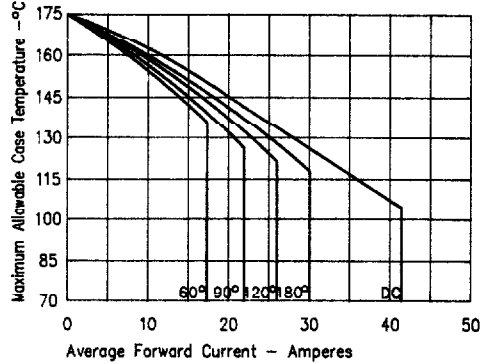


Figure 5
Forward Current Derating - Reverse Polarity - Per Leg



UFT30

Figure 6
Forward Current Derating - Standard Polarity - Per Leg

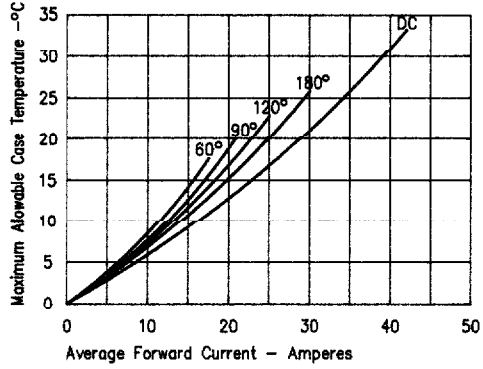
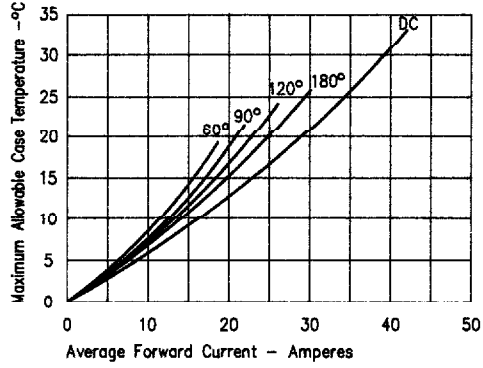


Figure 7
Forward Current Derating - Reverse Polarity - Per Leg



D

UFT31

Figure 1
Typical Forward Characteristics – Per Leg

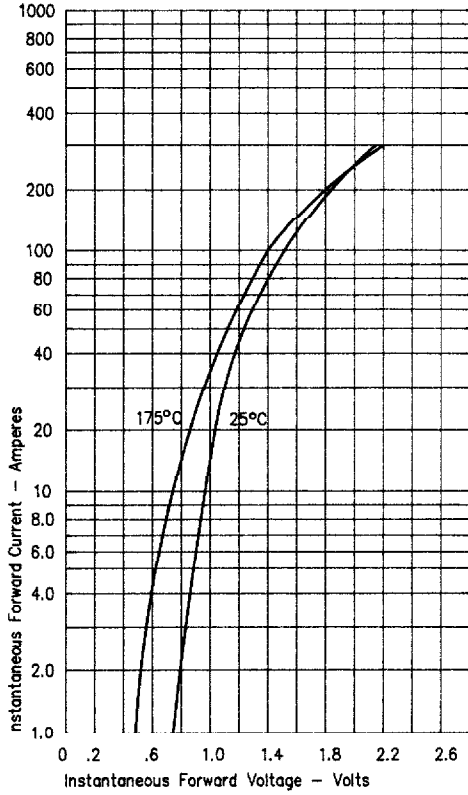


Figure 3
Typical Junction Capacitance – Per Leg

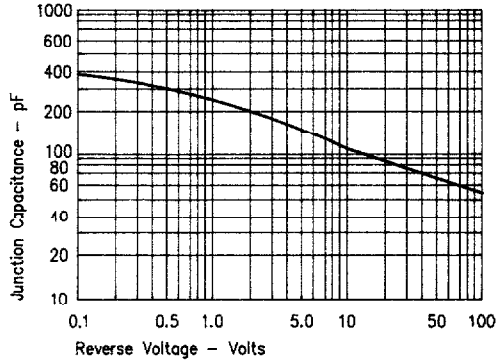


Figure 4
Forward Current Derating – Standard Polarity – Per Leg

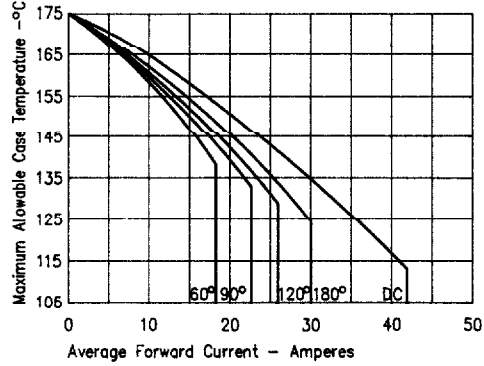


Figure 2
Typical Reverse Characteristics – Per Leg

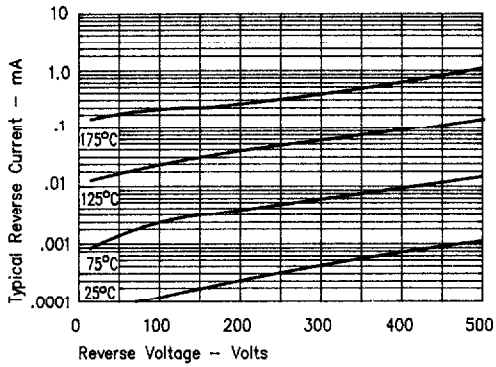
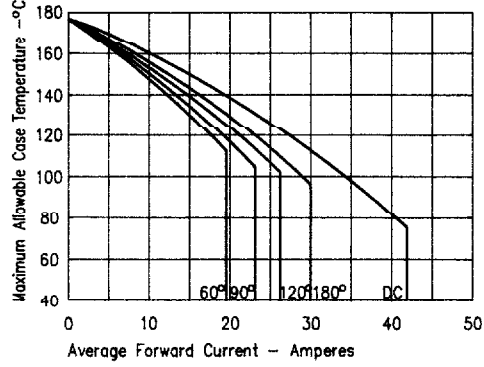


Figure 5
Forward Current Derating – Reverse Polarity – Per Leg



UFT31

D

Figure 6
Forward Current Derating - Standard Polarity - Per Leg

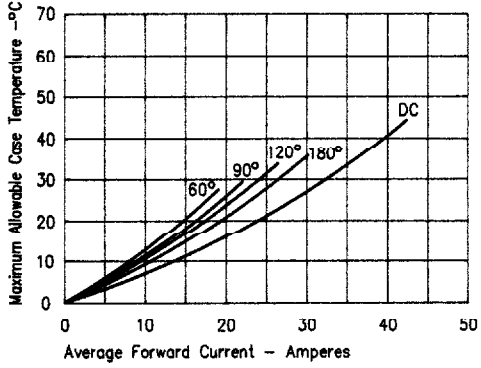
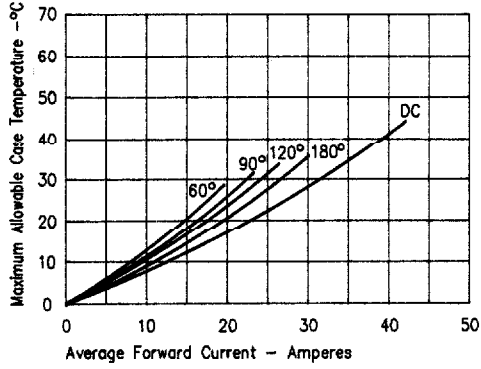


Figure 7
Forward Current Derating - Reverse Polarity - Per Leg



UFT32

Figure 1
Typical Forward Characteristics - Per Leg

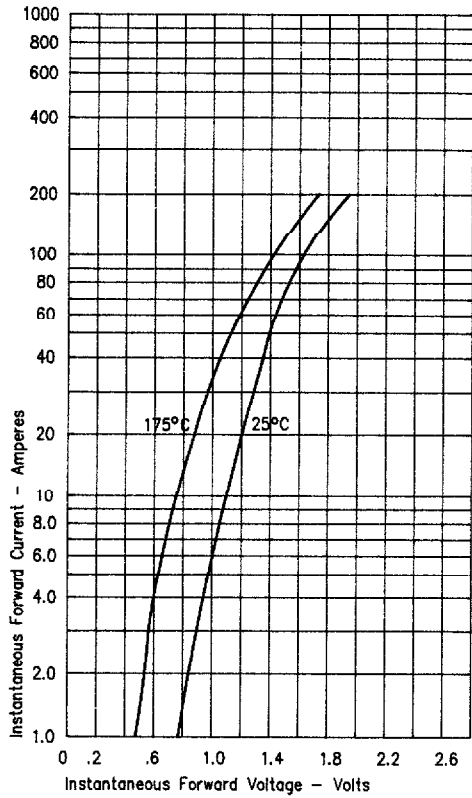


Figure 3
Typical Junction Capacitance - Per Leg

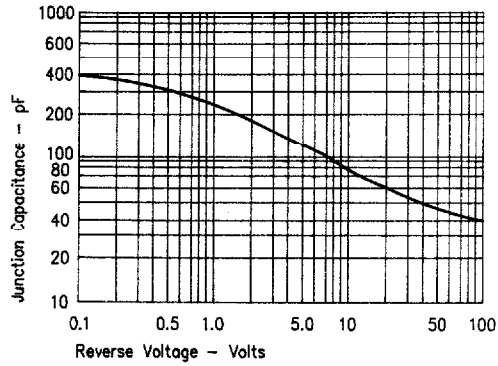


Figure 4
Forward Current Derating - Standard Polarity - Per Leg

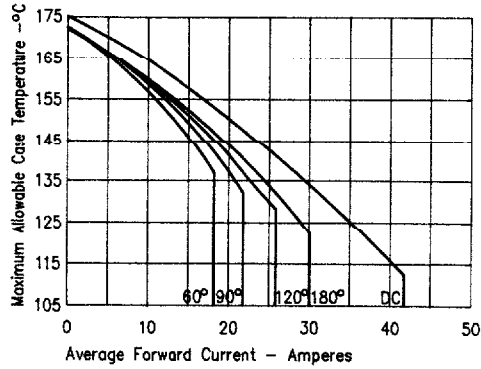


Figure 2
Typical Reverse Characteristics - Per Leg

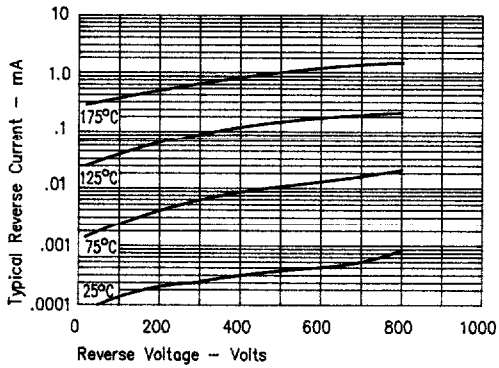
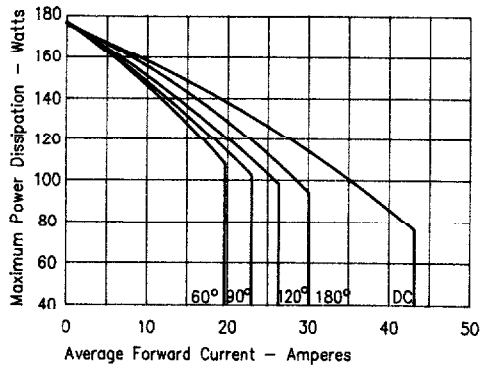


Figure 5
Forward Current Derating - Reverse Polarity - Per Leg



UFT32

Figure 6
Forward Current Derating - Standard Polarity - Per Leg

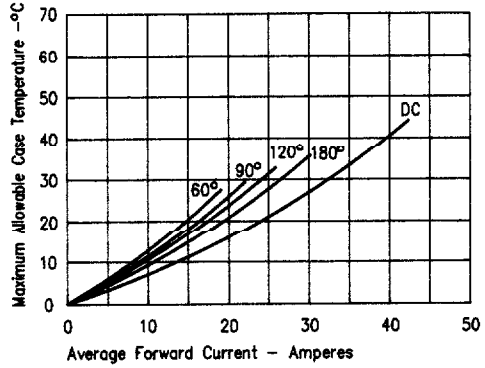


Figure 7
Forward Current Derating - Reverse Polarity - Per Leg

