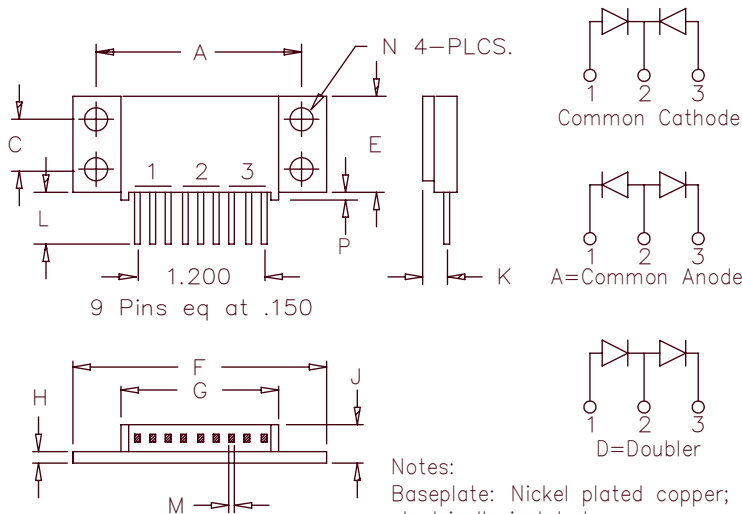


# Ultrafast Recovery Modules UFT100, 101 & 102



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	1.995	2.005	50.67	50.93	
C	0.495	0.506	12.57	12.83	
E	0.990	1.010	25.15	25.65	
F	2.390	2.410	60.71	61.21	
G	1.490	1.510	37.85	38.35	
H	0.120	0.130	3.05	3.30	
J	---	0.400	---	10.16	
K	0.240	0.260	6.10	6.60	to Lead $\varnothing$
L	0.490	0.510	12.45	12.95	
M	0.040	.050	1.02	1.27	Square Dia
N	0.175	0.195	4.45	4.95	
P	0.032	0.052	0.81	1.32	

Notes:  
Baseplate: Nickel plated copper;  
electrically isolated  
Pins: Nickel plated copper

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
UFT10010*	100V	100V
UFT10015*	150V	150V
UFT10020*	200V	200V
UFT10130*	300V	300V
UFT10140*	400V	400V
UFT10150*	500V	500V
UFT10260*	600V	600V
UFT10270*	700V	700V
UFT10280*	800V	800V

Add Suffix A for Common Anode, D for Doubler

- Ultra Fast Recovery
- 175°C Junction Temperature
- $V_{RRM}$  100 to 800 Volts
- Electrically isolated base
- 2 X 50 Amp current rating
- ROHS Compliant

## Electrical Characteristics

	UFT100	UFT101	UFT102	
Average forward current per pkg	$I_F(AV)$ 100A	100A	100A	Square Wave
Average forward current per leg	$I_F(AV)$ 50A	50A	50A	Square Wave
Case Temperature	$T_C$ 135°C	124°C	118°C	$R_{\theta JC} = 0.85^\circ C/W$
Maximum surge current per leg	$I_{FSM}$ 800A	700A	600A	8.3ms, half sine, $T_J = 175^\circ C$
Max peak forward voltage per leg	$V_{FM}$ .975V	1.25V	1.35V	$I_{FM} = 70A, T_J = 25^\circ C^*$
Max reverse recovery time per leg	$t_{rr}$ 50ns	60ns	75ns	1/2A, 1A, 1/4A, $T_J = 25^\circ C$
Max peak reverse current per leg	$I_{RM}$ —	3.0ma	—	$V_{RRM}, T_J = 125^\circ C^*$
Max peak reverse current per leg	$I_{RM}$ —	25 $\mu$ a	—	$V_{RRM}, T_J = 25^\circ C$
Typical Junction capacitance	$C_J$ 300pF	150pF	150pF	$V_R = 10V, T_J = 25^\circ C$

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

## Thermal and Mechanical Characteristics

Storage temp range	$T_{STG}$	-55°C to 175°C
Operating junction temp range	$T_J$	-55°C to 175°C
Max thermal resistance per leg	$R_{\theta JC}$	1.0°C/W Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	0.5°C/W Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.1°C/W Case to sink
Mounting Torque		15-20 inch pounds
Weight		2.8 ounces (75 grams) typical

# UFT100

Figure 1  
Typical Forward Characteristics – Per Leg

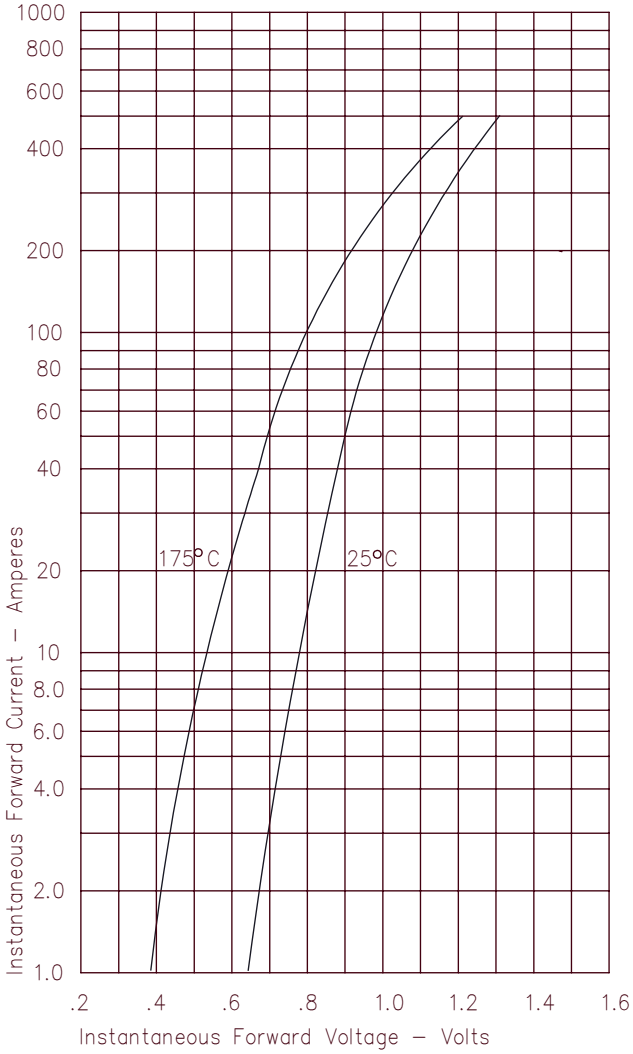


Figure 3  
Typical Junction Capacitance – Per Leg

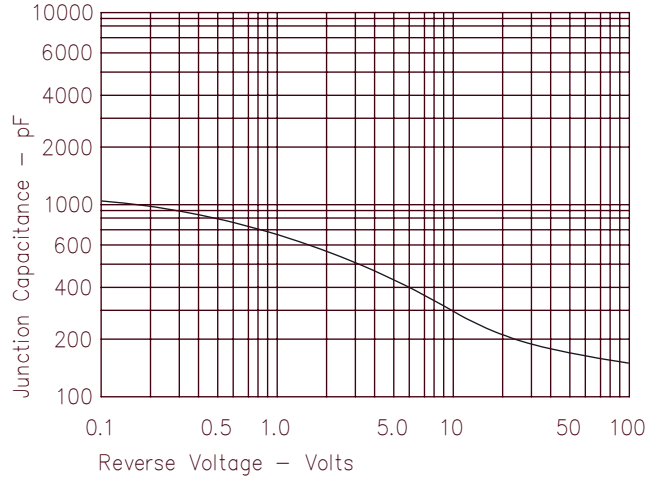


Figure 4  
Forward Current Derating – Per Leg

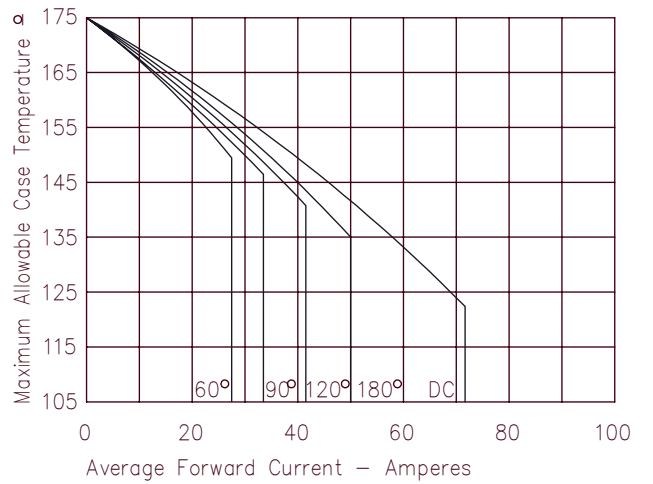


Figure 2  
Typical Reverse Characteristics – Per Leg

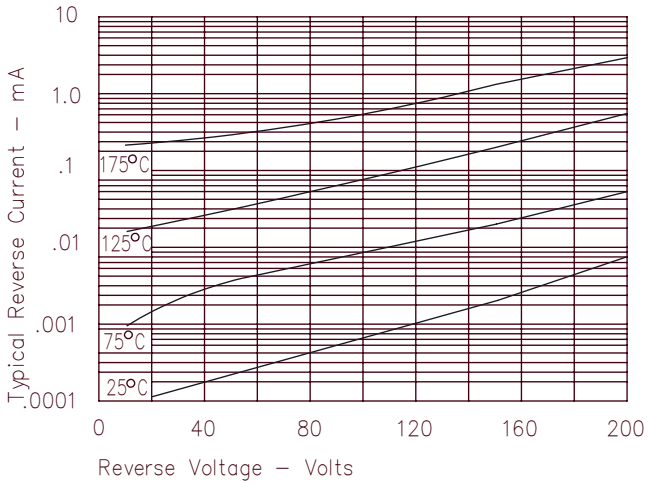
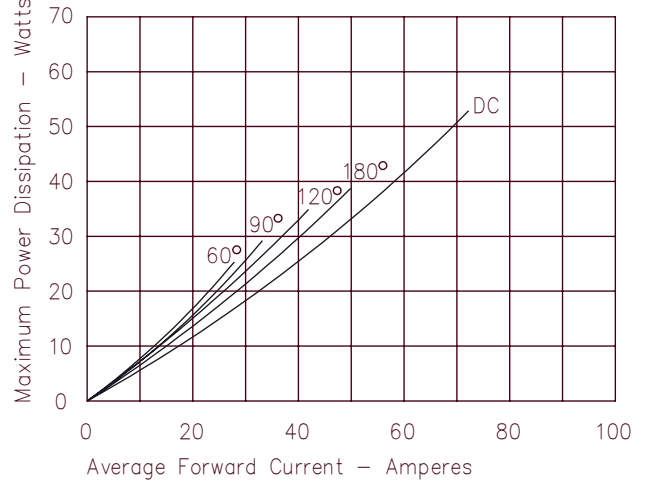


Figure 5  
Maximum Forward Power Dissipation – Per Leg



# UFT101

Figure 1  
Typical Forward Characteristics – Per Leg

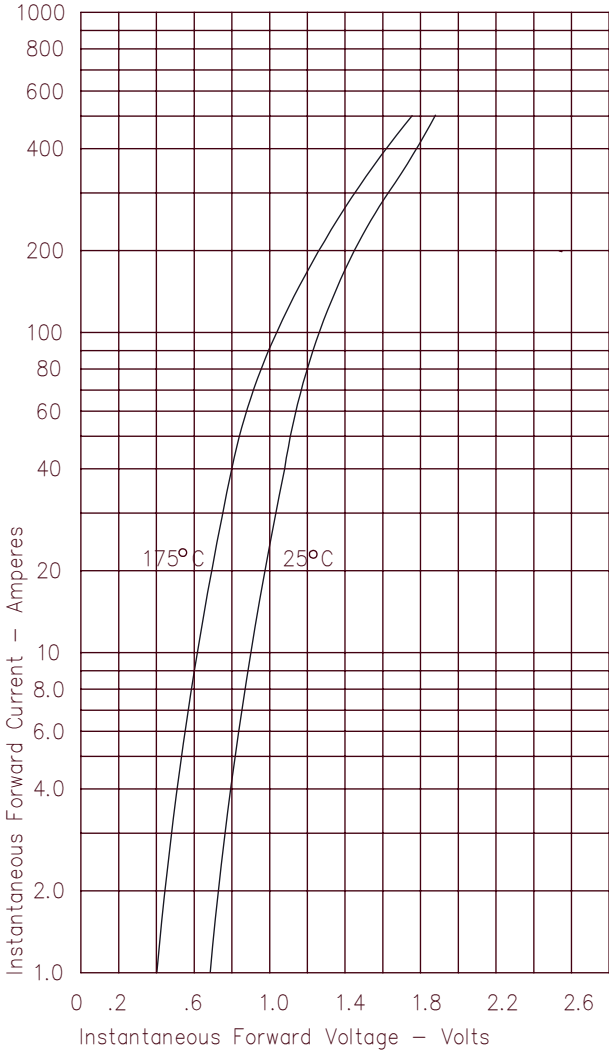


Figure 3  
Typical Junction Capacitance – Per Leg

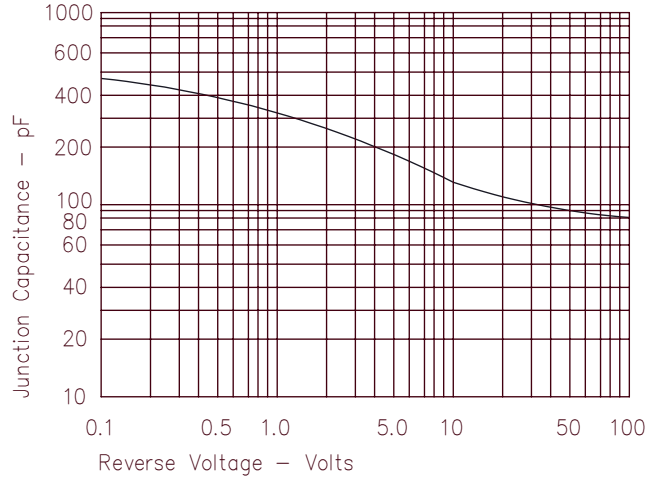


Figure 4  
Forward Current Derating – Per Leg

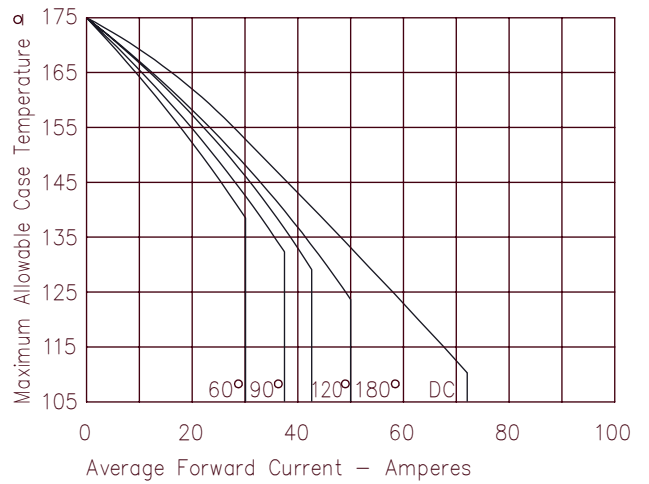


Figure 2  
Typical Reverse Characteristics – Per Leg

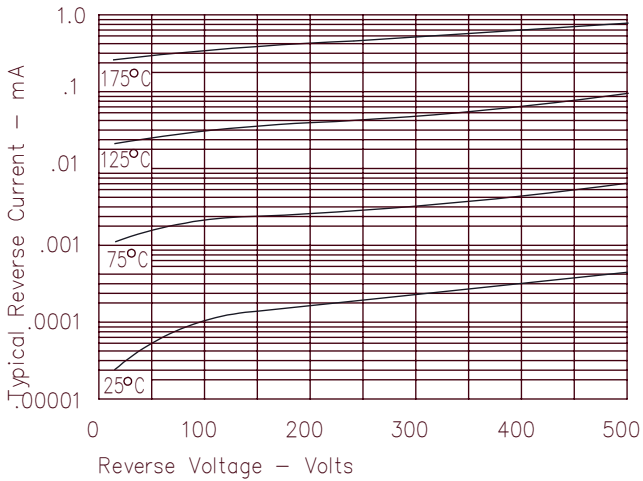
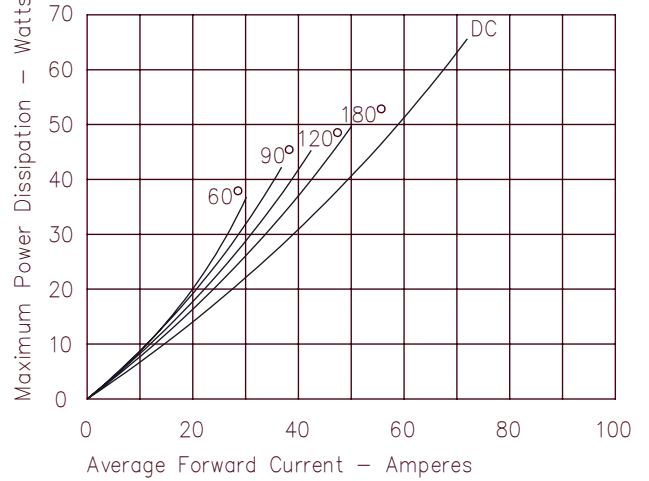


Figure 5  
Maximum Forward Power Dissipation – Per Leg



# UFT102

Figure 1  
Typical Forward Characteristics – Per Leg

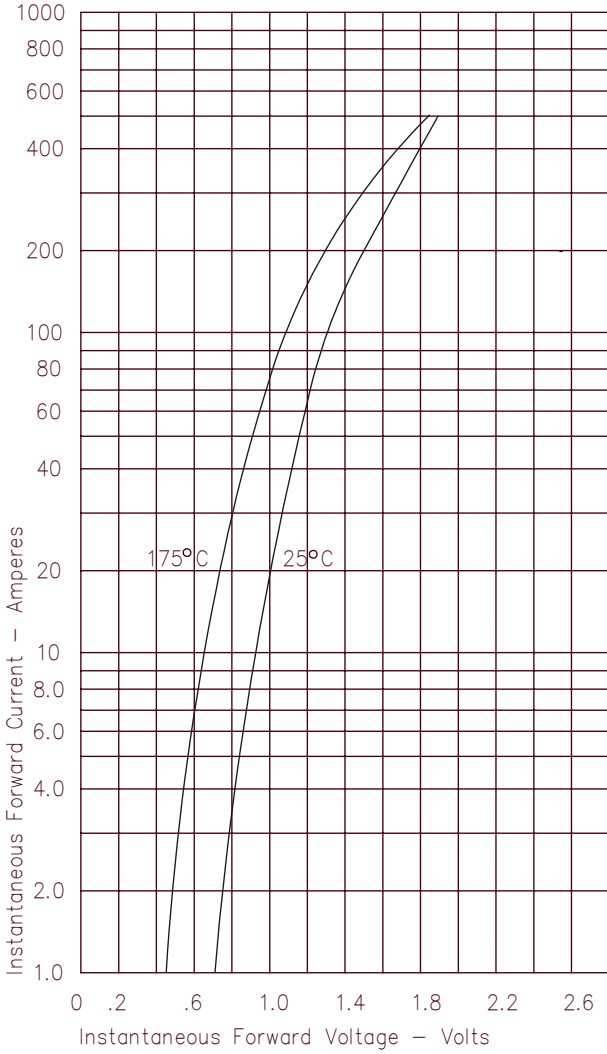


Figure 3  
Typical Junction Capacitance – Per Leg

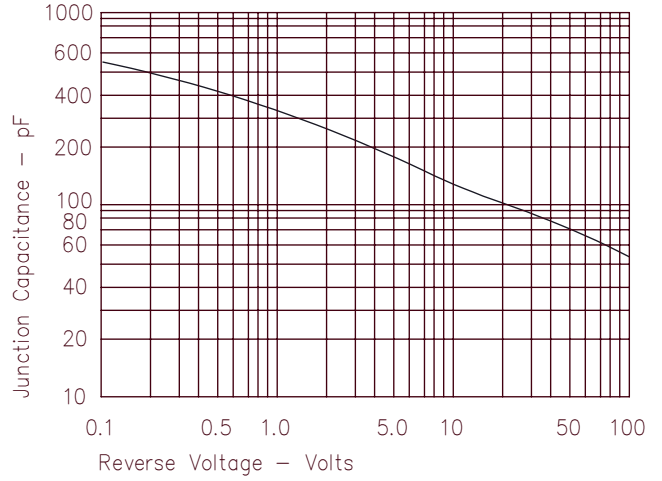


Figure 4  
Forward Current Derating – Per Leg

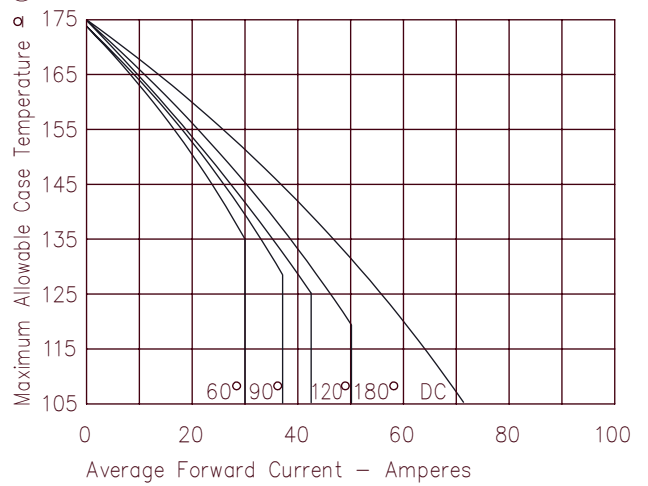


Figure 2  
Typical Reverse Characteristics – Per Leg

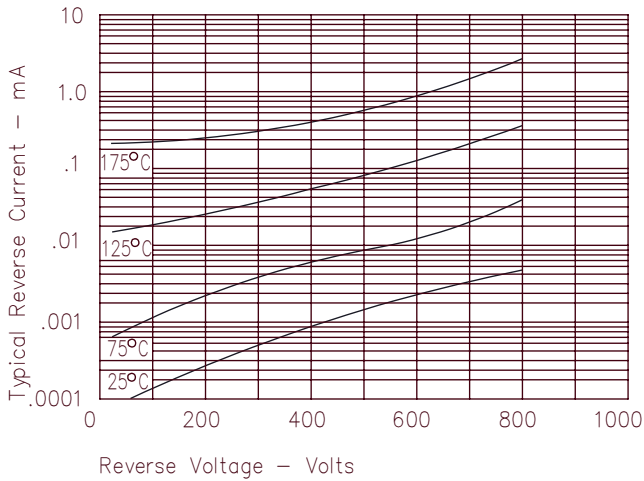


Figure 5  
Maximum Forward Power Dissipation – Per Leg

