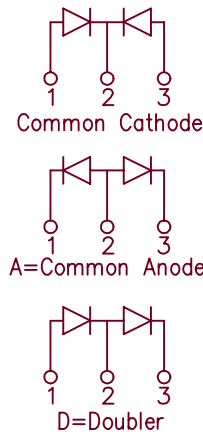
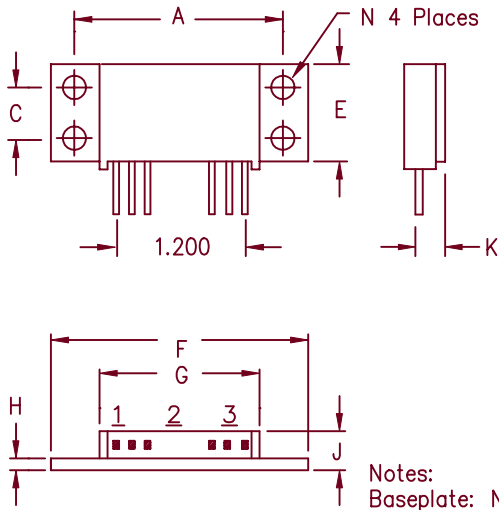


# Ultrafast Recovery Modules UFT120, 121 & 122



Notes:  
Baseplate: Nickel plated copper  
Pins: Nickel plated copper

Dim.	Inches		Millimeters		Notes
	Min.	Max.	Min.	Max.	
A	1.995	2.005	50.67	50.93	
B	----	----	----	----	
C	0.495	0.506	12.57	12.83	
D	----	----	----	----	Dia.
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	0.050	1.020	1.270	
N	0.175	0.195	4.450	4.950	Dia.
P	0.032	0.052	0.810	1.320	

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
UFT12010*	100V	100V
UFT12015*	150V	150V
UFT12020*	200V	200V
UFT12130*	300V	300V
UFT12140*	400V	400V
UFT12150*	500V	500V
UFT12260*	600V	600V
UFT12270*	700V	700V
UFT12280*	800V	800V

\*Add Suffix A for Common Anode, D for Doubler

- Ultra Fast Recovery
- 175°C Junction Temperature
- $V_{RRM}$  100 to 800 Volts
- High surge capacity
- 2 X 60 Amp current rating

Electrical Characteristics						
		UFT120	UFT121	UFT122		
Average forward current per pkg	$I_F(AV)$	120A	120A	120A		Square Wave
Average forward current per leg	$I_F(AV)$	60A	60A	60A		Square Wave
Case Temperature	$T_C$	135°C	120°C	115°C		$R_{\theta JC} = 0.85^\circ C/W$
Maximum surge current per leg	$I_{FSM}$	1000A	800A	700A		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 reverse recovery time per leg	$t_{rr}$	60ns	70ns	95ns		70A, 130A/us, $T_J = 25^\circ C$
Max peak reverse current per leg	$I_{RM}$	-----	3.0mA	-----		$V_{RRM}, T_J = 125^\circ C^*$
Max peak reverse current per leg	$I_{RM}$	-----	25μA	-----		$V_{RRM}, T_J = 25^\circ C$
Typical Junction capacitance	$C_J$	300pF	150pF	150pF		$V_R = 10V, T_J = 25^\circ C$

\*Pulse test: Pulse width 300 usec, 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	$R_{\theta JC}$	0.85°C/W Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	0.425°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		2.5 ounces (71 grams) typical

# UFT120

Figure 1  
Typical Forward Characteristics – Per Leg

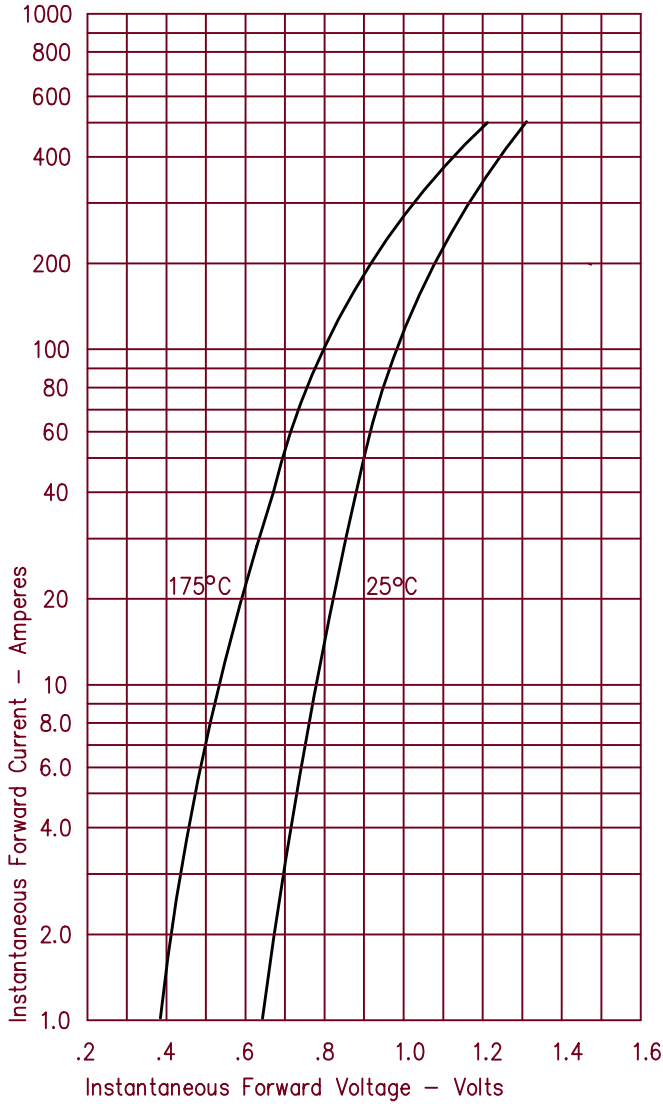


Figure 3  
Typical Junction Capacitance – Per Leg

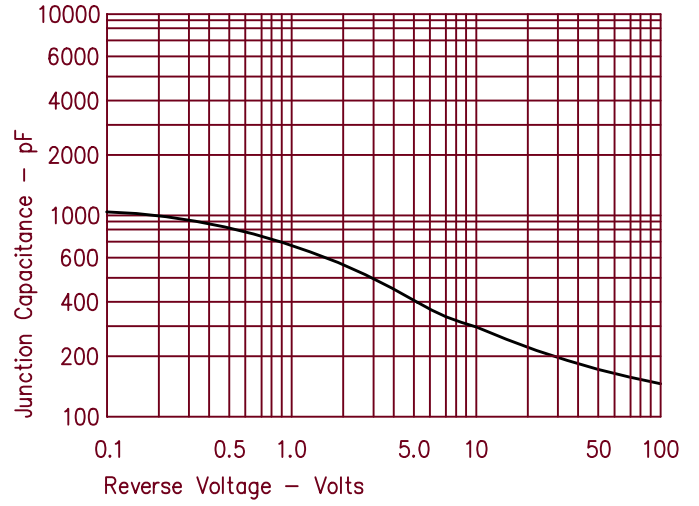


Figure 4  
Forward Current Derating – Per Leg

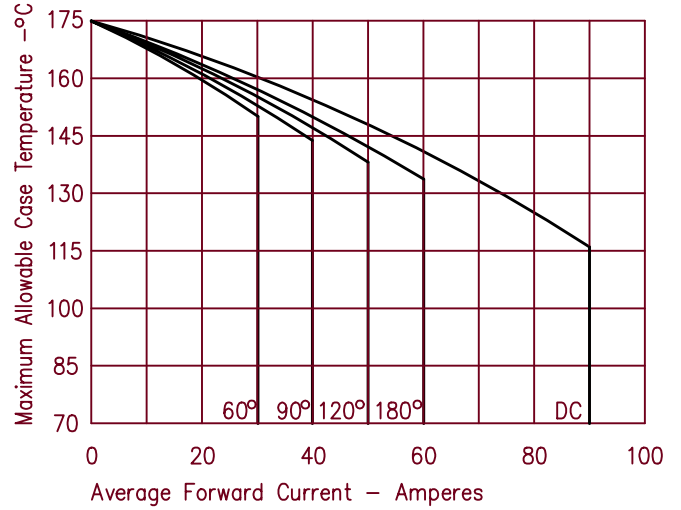


Figure 2  
Typical Reverse Characteristics – Per Leg

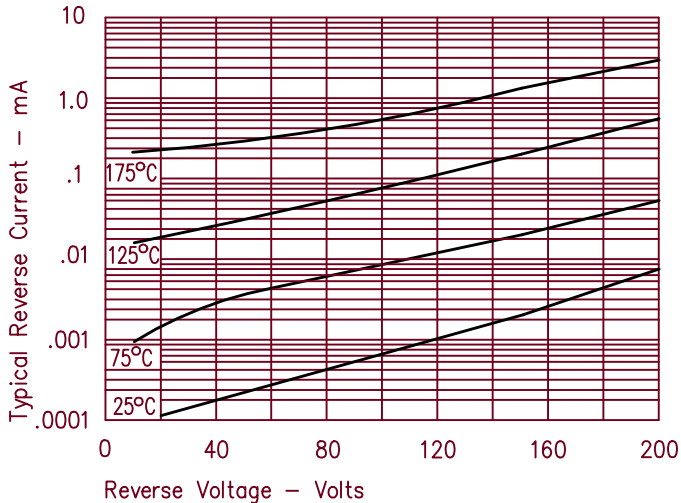
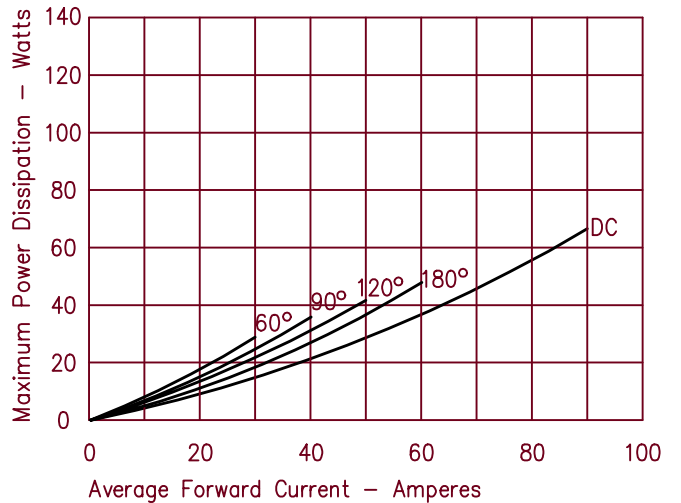


Figure 5  
Maximum Forward Power Dissipation – Per Leg



# UFT121

Figure 1  
Typical Forward Characteristics – Per Leg

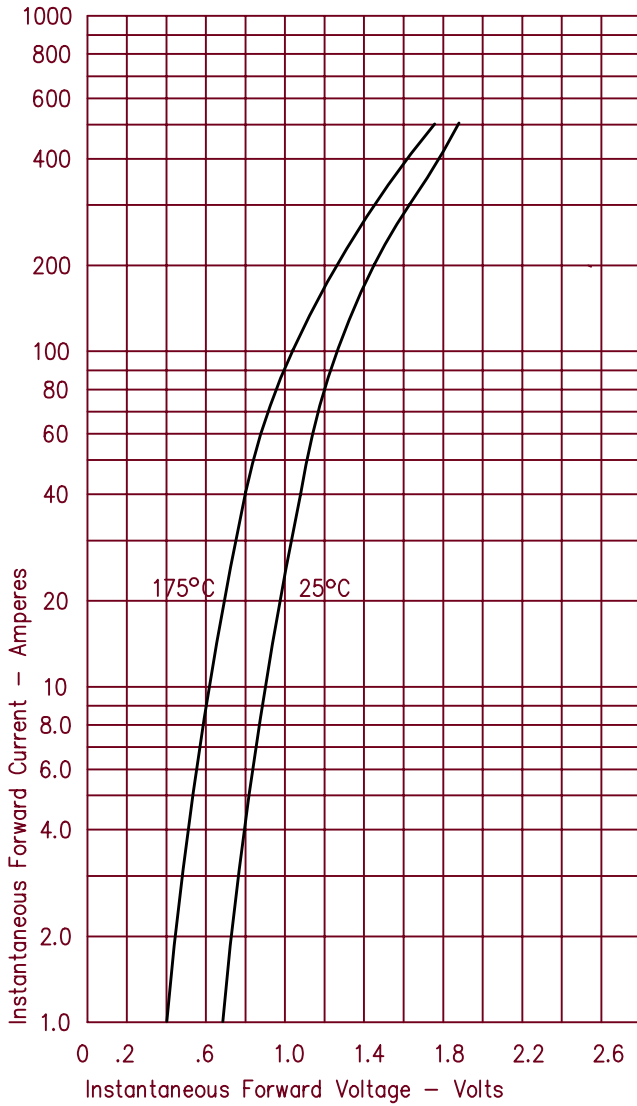


Figure 3  
Typical Junction Capacitance – Per Leg

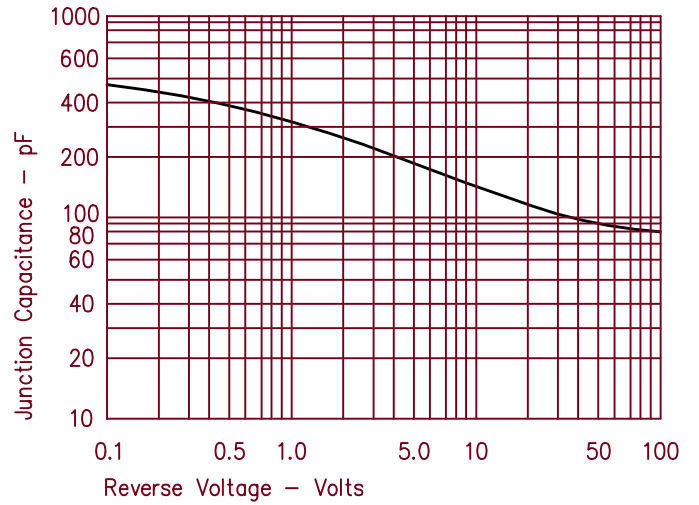


Figure 4  
Forward Current Derating – Per Leg

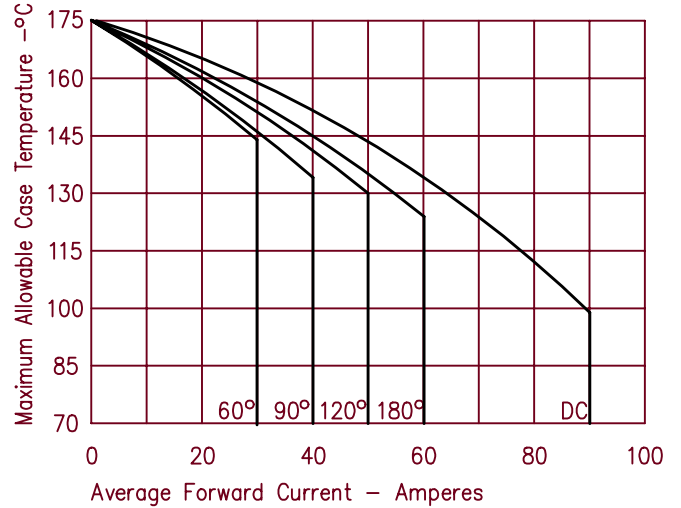


Figure 2  
Typical Reverse Characteristics – Per Leg

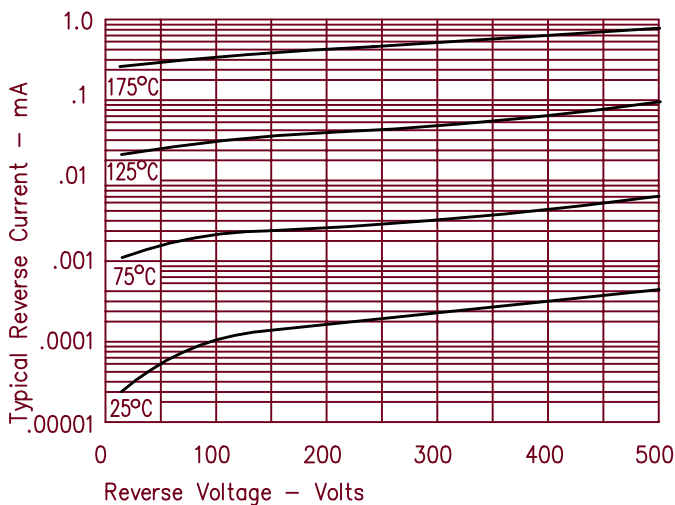
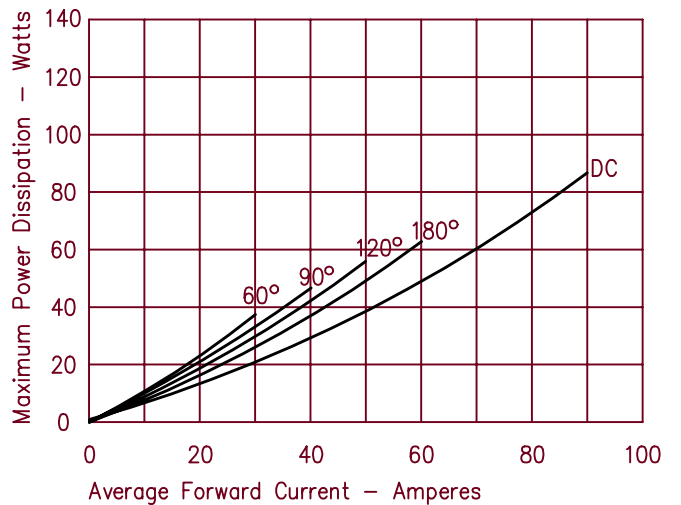


Figure 5  
Maximum Forward Power Dissipation – Per Leg



# UFT122

Figure 1  
Typical Forward Characteristics – Per Leg

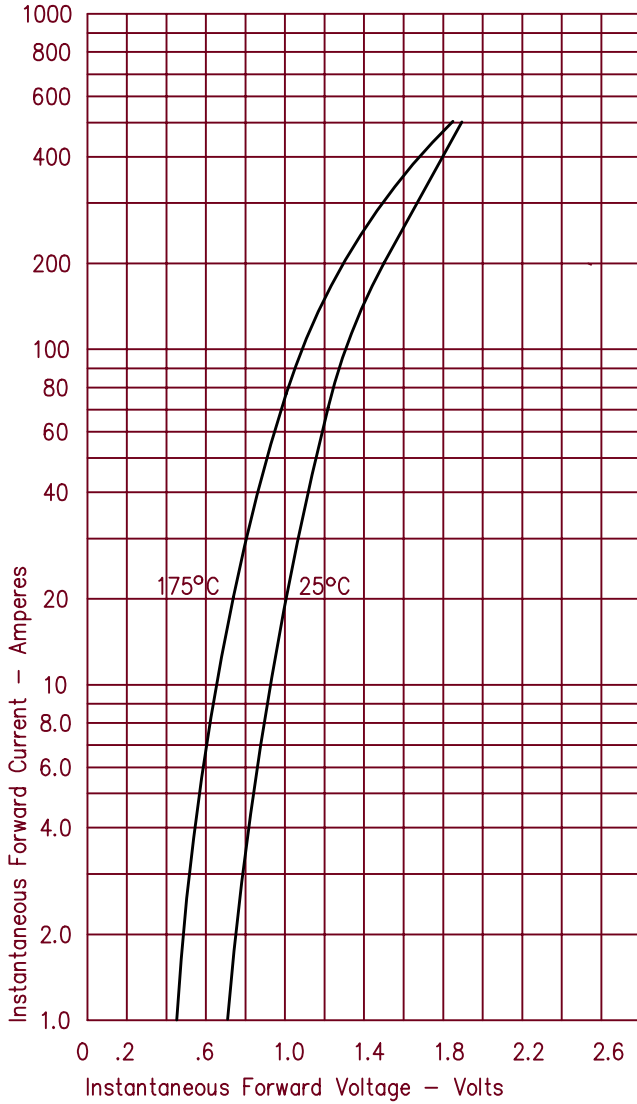


Figure 3  
Typical Junction Capacitance – Per Leg

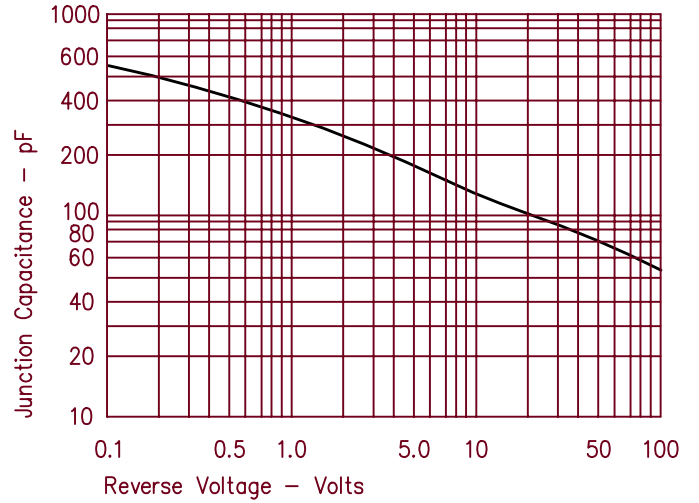


Figure 4  
Forward Current Derating – Per Leg

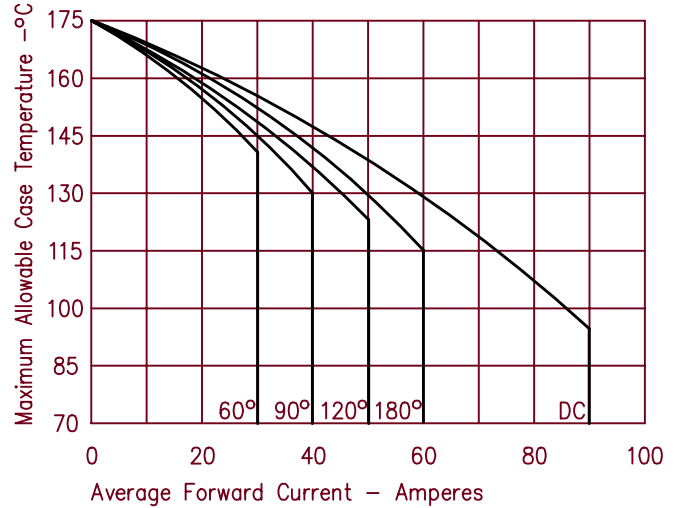


Figure 2  
Typical Reverse Characteristics – Per Leg

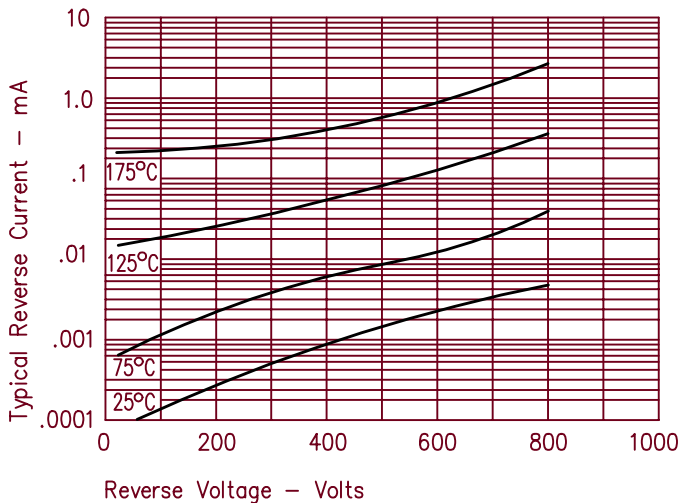


Figure 5  
Maximum Forward Power Dissipation – Per Leg

