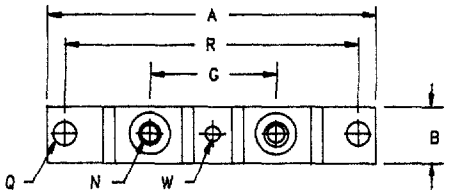
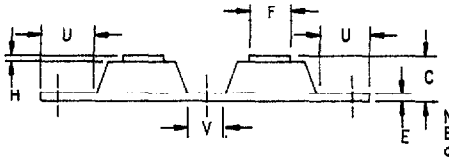
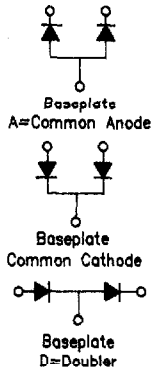
Ultrafast Recovery Modules
UFT 125, 126 & 127







Notes:
Baseplate: Nickel plated copper; common cathode

Dim.	Inches		Millimeters		
	Min.	Max.	Min.	Max.	Notes
A	---	3.630	---	92.20	
B	0.700	0.800	17.78	20.32	
C	---	0.625	---	15.87	
E	0.120	0.130	3.05	3.30	
F	0.490	0.510	12.45	12.95	
G	1.375 BSC		34.92 BSC		
H	---	0.050	---	1.27	
N	---	---	---	---	1/4-28
Q	0.280	0.310	6.86	7.11	Dia.
R	3.150 BSC		80.01 BSC		
U	0.600	---	15.24	---	
V	0.330	0.350	8.38	8.89	
W	0.170	0.190	4.32	4.82	Dia.
Y	46.10 BSC		1.815 BSC		

Microsemi Catalog Number		Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
UFT12505*		50V	50V
UFT12510*		100V	100V
UFT12515*		150V	150V
UFT12520*	UFT12620*	200V	200V
	UFT12630*	300V	300V
	UFT12640*	400V	400V
UFT12750*	UFT12650*	500V	500V
UFT12760*		600V	600V
UFT12770*		700V	700V
UFT12780*		800V	800V

Add Suffix A for Common Anode, D for Doubler

- Ultra Fast Recovery
- *175°C Junction Temperature*
- V_{RRM} 50 to 800 Volts
- 120 Amps Current Rating
- 2 X 60 Amp current rating

Electrical Characteristics

		UFT125	UFT126	UFT127	
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	130°C	115°C	114°C	$R\theta JC$ = 0.85°C/W
Maximum surge current per leg	I_{FSM}	800A	700A	600A	8.3ms, half sine, T_J = 175°C
Max peak forward voltage per leg	V_{FM}	.975V	1.25V	1.35V	I_{FM} = 60A, T_J = 25°C*
Max reverse recovery time per leg	t_{rr}	40ns	60ns	80ns	1/2A, 1A, 1/4A, T_J = 25°C
Typical reverse recovery time per leg	t_{rr}	35ns	50ns	75ns	1/2A, 1A, 1/4A, T_J = 25°C
Max peak reverse current per leg	I_{RM}	———	2.0ma	———	V_{RRM}, T_J = 125°C*
Max peak reverse current per leg	I_{RM}	———	30ua	———	V_{RRM}, T_J = 25°C
Typical Junction capacitance	C_J	270pF	200pF	160pF	V_R = 10V, T_J = 25°C

*Pulse test: Pulse width 300 usec, Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	-40°C to 175°C
Operating junction temp range	T_J	-40°C to 175°C
Max thermal resistance per leg	$R\theta JC$	0.85°C/W Junction to case
per package	$R\theta JC$	0.425°C/W Junction to case
Typical thermal resistance per leg	$R\theta JC$	0.8°C/W Junction to case
Typical thermal resistance	$R\theta CS$	0.08°C/W Case to sink
Terminal Torque		50 inch pounds maximum
Mounting Base Torque - outside holes		40 inch pounds maximum
Mounting Base Torque - (center hole)		10 inch pounds maximum
center bolt must be torqued first		
Weight		2.8 ounces (75 grams) typical

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

Microsemi Corp.
Colorado

UFT 125

Figure 1
Typical Forward Characteristics – Per Leg

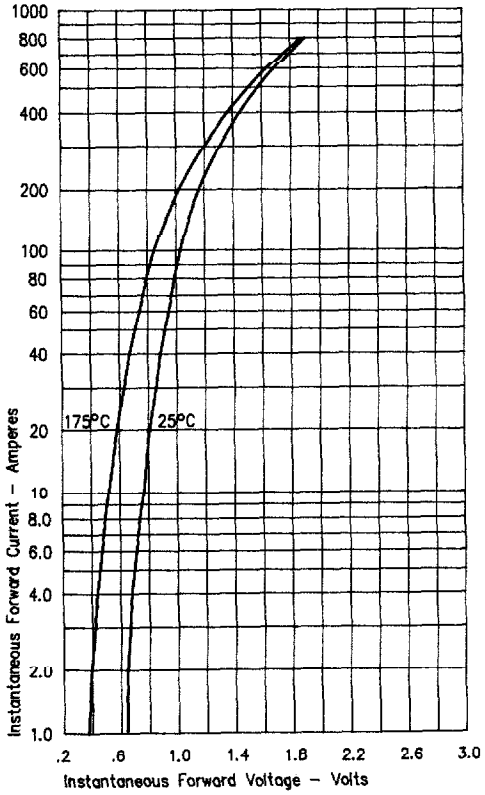


Figure 2
Typical Reverse Characteristics – Per Leg

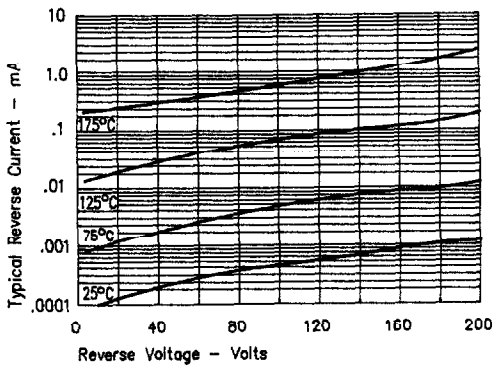


Figure 3
Typical Junction Capacitance – Per Leg

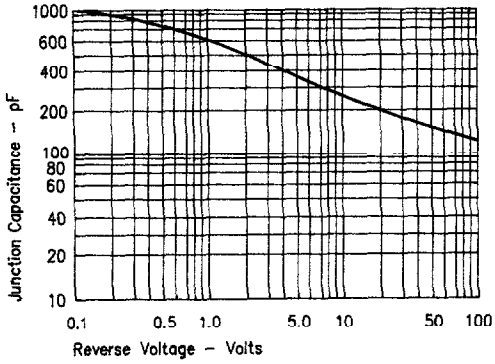


Figure 4
Forward Current Derating – Per Leg

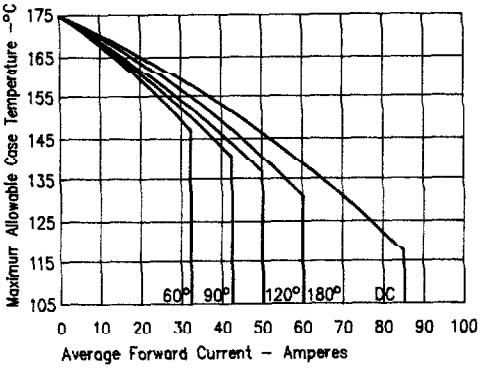
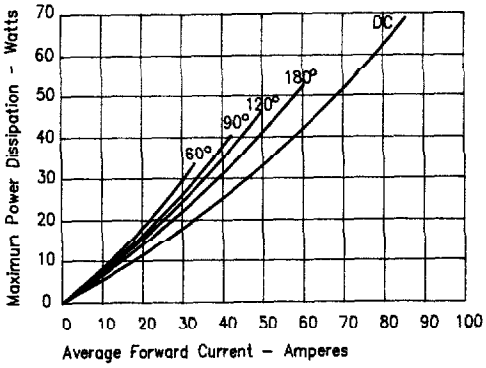


Figure 5
Maximum Forward Power Dissipation – Per Leg



UFT 126

D

Figure 1
Typical Forward Characteristics – Per Leg

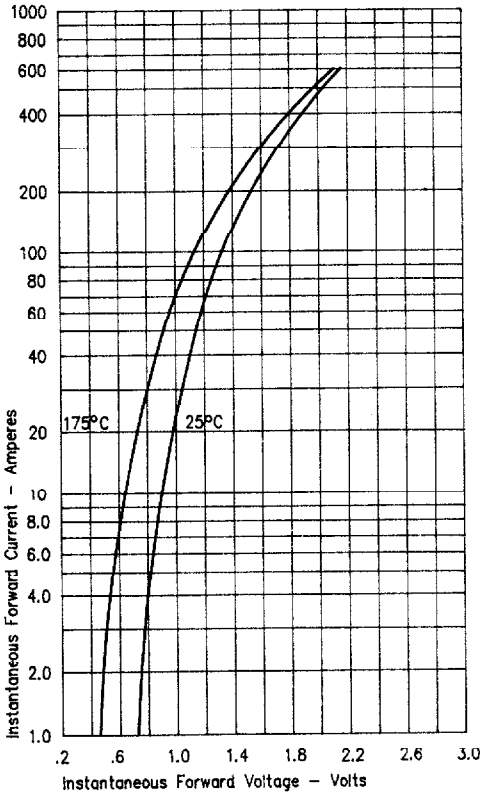


Figure 2
Typical Reverse Characteristics – Per Leg

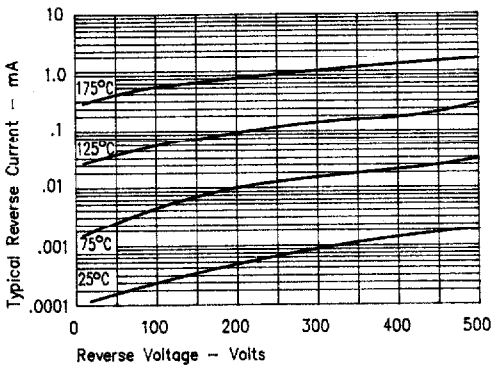


Figure 3
Typical Junction Capacitance – Per Leg

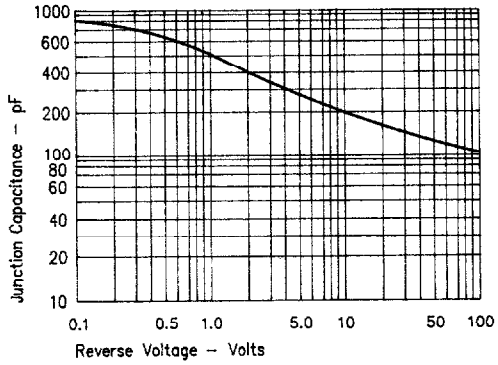


Figure 4
Forward Current Derating – Per Leg

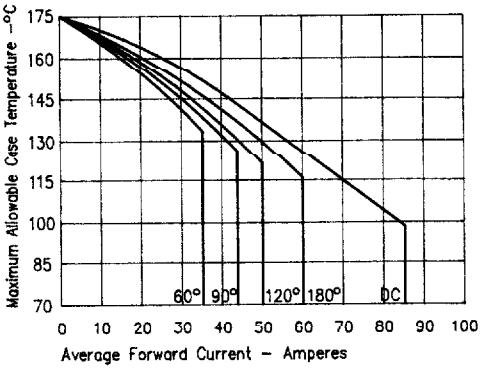
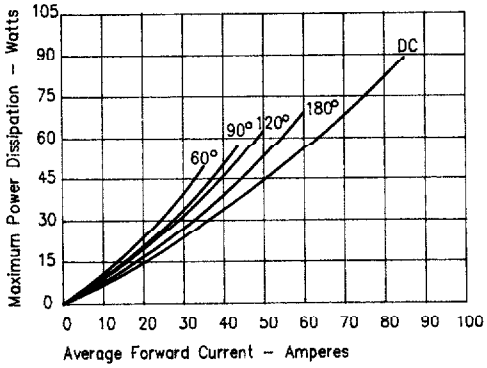


Figure 5
Maximum Forward Power Dissipation – Per Leg



UFT 127

Figure 1
Typical Forward Characteristics – Per Leg

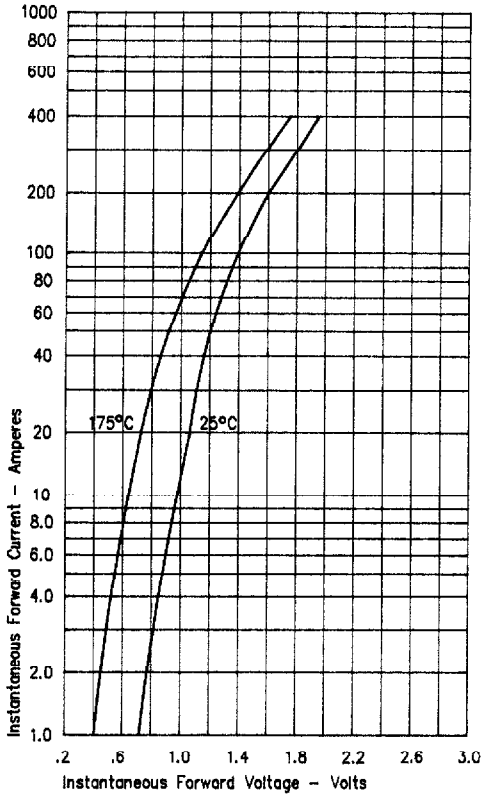


Figure 2
Typical Reverse Characteristics – Per Leg

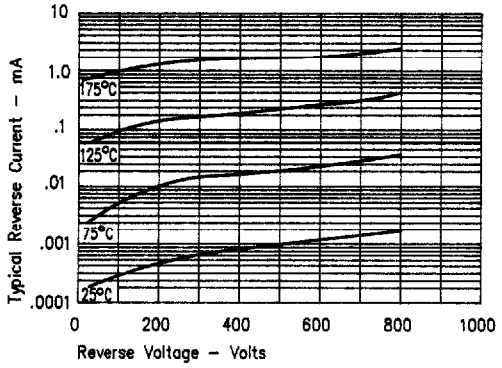


Figure 3
Typical Junction Capacitance – Per Leg

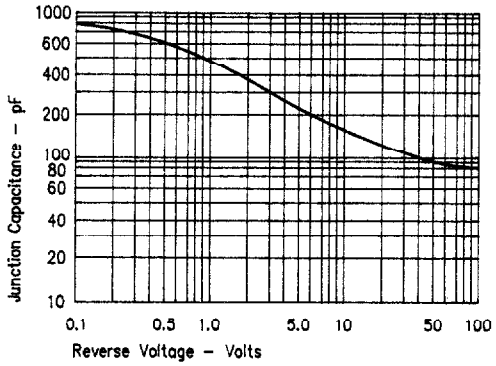


Figure 4
Forward Current Derating – Per Leg

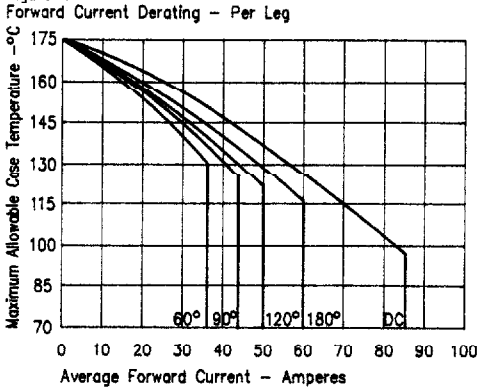


Figure 5
Maximum Forward Power Dissipation – Per Leg