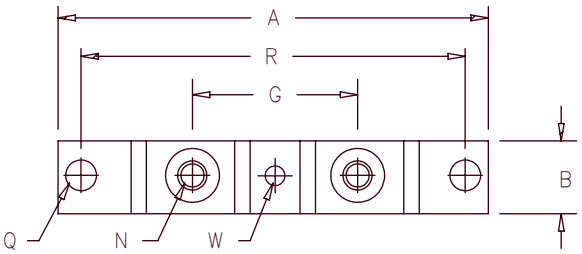
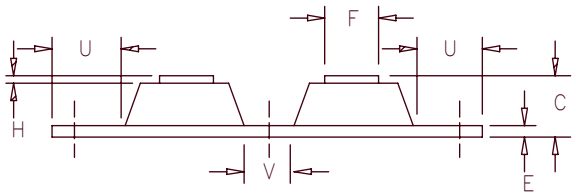
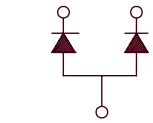
Ultra Fast Recovery Module

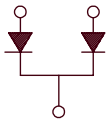
UFT40130 – UFT40150



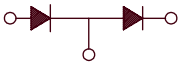




Baseplate
A=Common Anode



Baseplate
Common Cathode



Baseplate
D=Doubler

Notes:
Baseplate: Nickel plated copper

Dim.	Inches		Millimeters		
	Min.	Max.	Min.	Max.	Notes
A	---	3.630	---	92.20	
B	0.700	0.800	17.78	20.32	
C	---	0.630	---	16.00	
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	0.010	---	0.25	---	
N	---	---	---	---	1/4-20
Q	0.275	0.290	6.99	7.37	Dia.
R	3.150 BSC		80.01 BSC		
U	0.600	---	15.24	---	
V	0.312	0.340	7.92	8.64	
W	0.180	0.195	4.57	4.95	Dia.

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
UFT40130*	300V	300V
UFT40140*	400V	400V
UFT40150*	500V	500V

*Add Suffix A for Common Anode, D for Doubler

- Ultra Fast Recovery
- 175°C Junction Temperature
- 2 X 200 Amp current rating
- ROHS Compliant

Electrical Characteristics

Average forward current per pkg	$I_{F(AV)}$	400 Amps	T_C = 126°C, Square wave, $R_{\theta JC}$ = 0.12°C/W
Average forward current per leg	$I_{F(AV)}$	200 Amps	T_C = 126°C, Square wave, $R_{\theta JC}$ = 0.24°C/W
Maximum surge current per leg	I_{FSM}	2500 Amps	8.3ms, half sine, T_J = 175°C
Max peak forward voltage per leg	V_{FM}	1.25 Volts	I_{FM} = 200A; T_J = 25°C*
Max peak reverse recovery time per leg	t_{rr}	110 nS	I_F = 1A, V_R = 30V di/dt = 25A/μS
Max peak reverse current per leg	I_{RM}	8 mA	V_{RRM}, T_J = 125°C*
Max peak reverse current per leg	I_{RM}	50 uA	V_{RRM}, T_J = 25°C
Typical junction capacitance per leg	C_J	500 pF	V_R = 10V, T_J = 25°C

*Pulse test: Pulse width 300μsec, 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	$R_{\theta JC}$	0.24°C/W Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	0.12°C/W Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.08°C/W Case to sink
Terminal Torque		35–50 inch pounds
Mounting Base Torque (outside holes)		30–40 inch pounds
Mounting Base Torque (center hole)		8–10 inch pounds
center hole must be torqued first		
Weight		2.8 ounces (75 grams) typical

UFT40130 – UFT40150

Figure 1
Typical Forward Characteristics – Per Leg

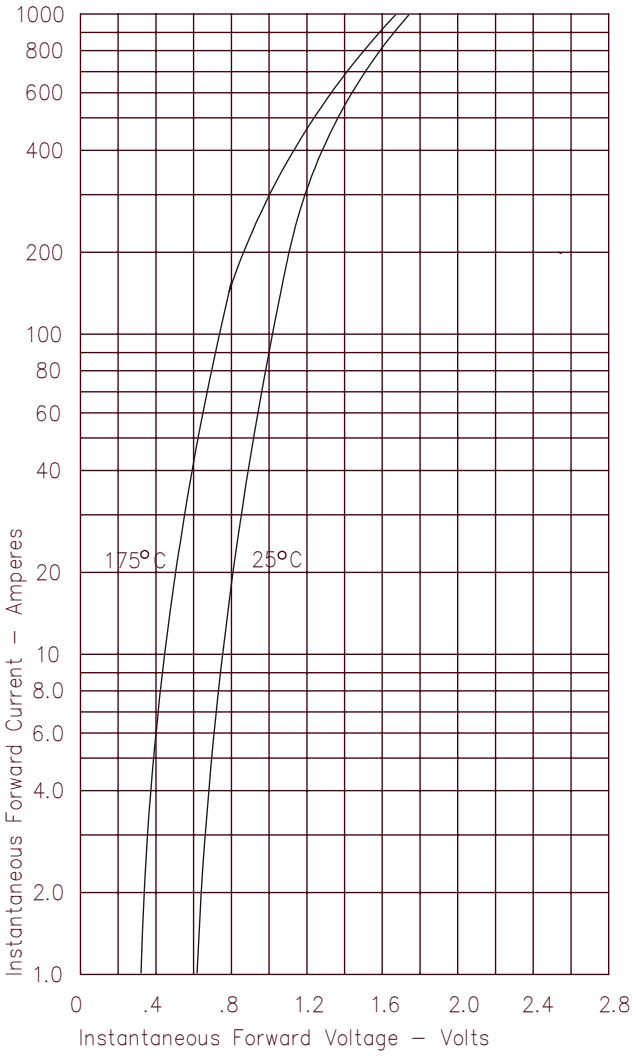


Figure 2
Typical Reverse Characteristics – Per Leg

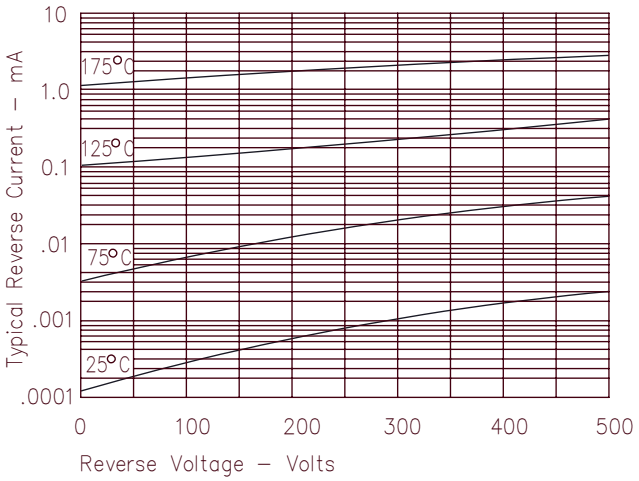


Figure 3
Typical Junction Capacitance – Per Leg

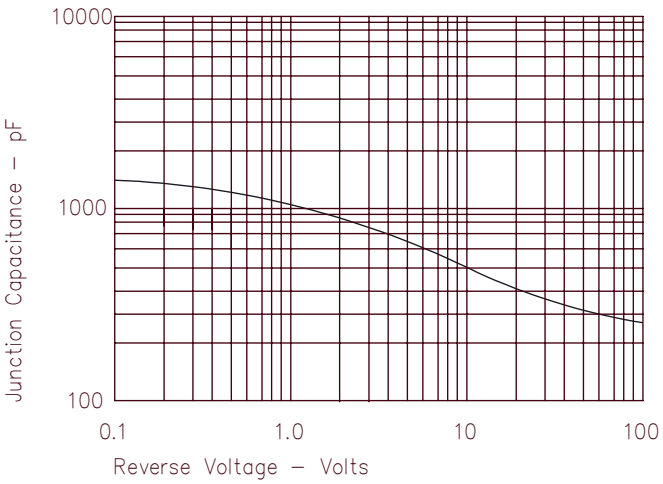


Figure 4
Forward Current Derating – Per Leg

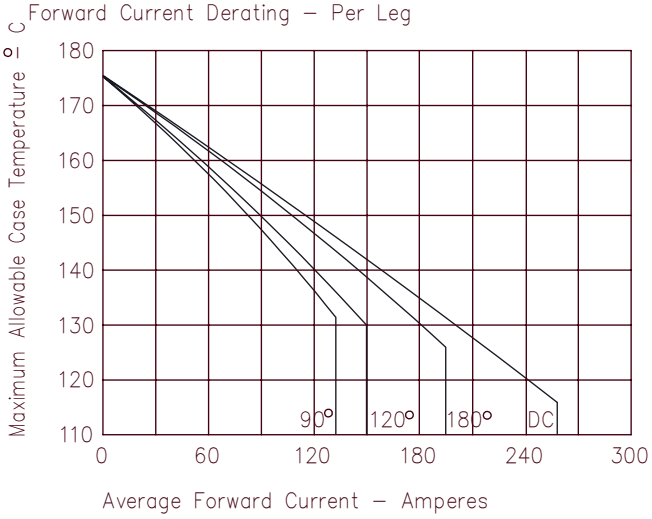


Figure 5
Maximum Forward Power Dissipation – Per Leg