Ultrafast Recovery Modules
UFT200, 201 & 202

Baseplate
A=Common Anode

Baseplate
Common Cathode

Baseplate
D=Doubler

Notes:
Baseplate: Nickel plated copper
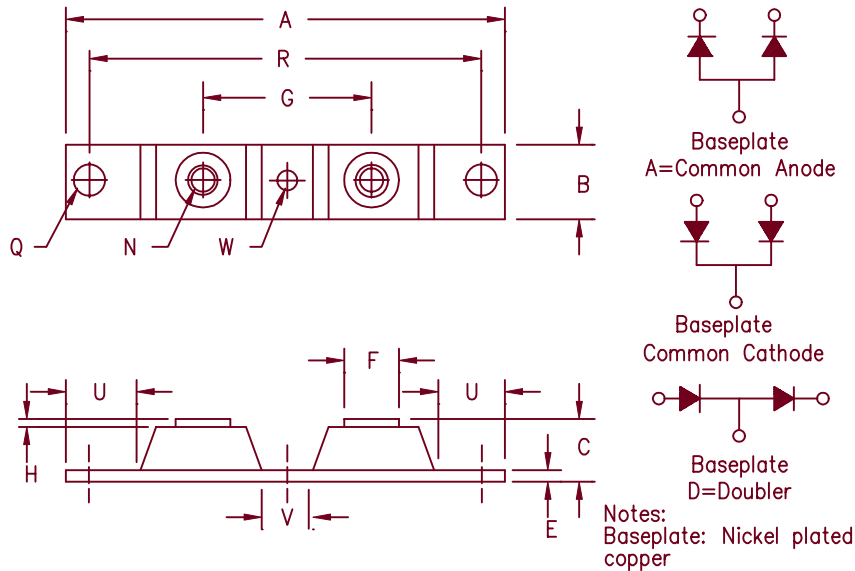
Dim.	Inches		Millimeters		
	Min.	Max.	Min.	Max.	Notes
A	---	3.630	---	92.20	
B	0.700	0.800	17.78	20.32	
C	---	0.630	---	16.00	
E	0.120	0.130	3.05	3.30	
F	0.490	0.510	12.45	12.95	
G	1.375 BSC		34.92 BSC		
H	0.010	---	0.25	---	
N	---	---	---	---	1/4-20
Q	0.275	0.290	6.99	7.37	Dia.
R	3.150 BSC		80.01 BSC		
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
UFT20005*	50V	50V
UFT20010*	100V	100V
UFT20015*	150V	150V
UFT20020* UFT20120*	200V	200V
UFT20130*	300V	300V
UFT20140*	400V	400V
UFT20150*	500V	500V
UFT20260*	600V	600V
UFT20270*	700V	700V
UFT20280*	800V	800V

Add Suffix A for Common Anode, D for Doubler

- Ultra Fast Recovery
- 175°C Junction Temperature
- V_{RRM} 50 to 800 Volts
- High surge capacity
- 2 X 100 Amp current rating

Electrical Characteristics

		UFT200	UFT201	UFT202	
Average forward current per pkg	$I_{F(AV)}$	200A	200A	200A	Square Wave
Average forward current per leg	$I_{F(AV)}$	100A	100A	100A	Square Wave
Case Temperature	TC	135°C	120°C	115°C	$R_{\theta JC}$ = 0.5°C/W
Maximum surge current per leg	I_{FSM}	1500A	1400A	1200A	8.3ms, half sine, T_J = 175°C
Max peak forward voltage per leg	V_{FM}	.975V	1.25V	1.35V	I_{FM} = 100A: T_J = 25°C*
Typical reverse recovery time per leg	trr	50ns	70ns	90ns	1/2A, 1A, 1/4A, T_J = 25°C
Max reverse recovery time per leg	trr	60ns	90ns	100ns	1A, 2A, 1/2A, T_J = 25°C
Max peak reverse current per leg	I_{RM}	6.0mA			V_{RRM}, T_J = 125°C
Max peak reverse current per leg	I_{RM}	50μA			V_{RRM}, T_J = 25°C
Typical Junction capacitance	CJ	575pF	300pF	275pF	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}	-55°C to 175°C
Operating junction temp range	T_J	-55°C to 175°C
Max thermal resistance per leg	$R_{\theta JC}$	0.5°C/W Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	0.25°C/W Junction to case
Typical thermal resistance	$R_{\theta CS}$	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 bolt must be torqued first		
Weight		2.8 ounces (75 grams) typical

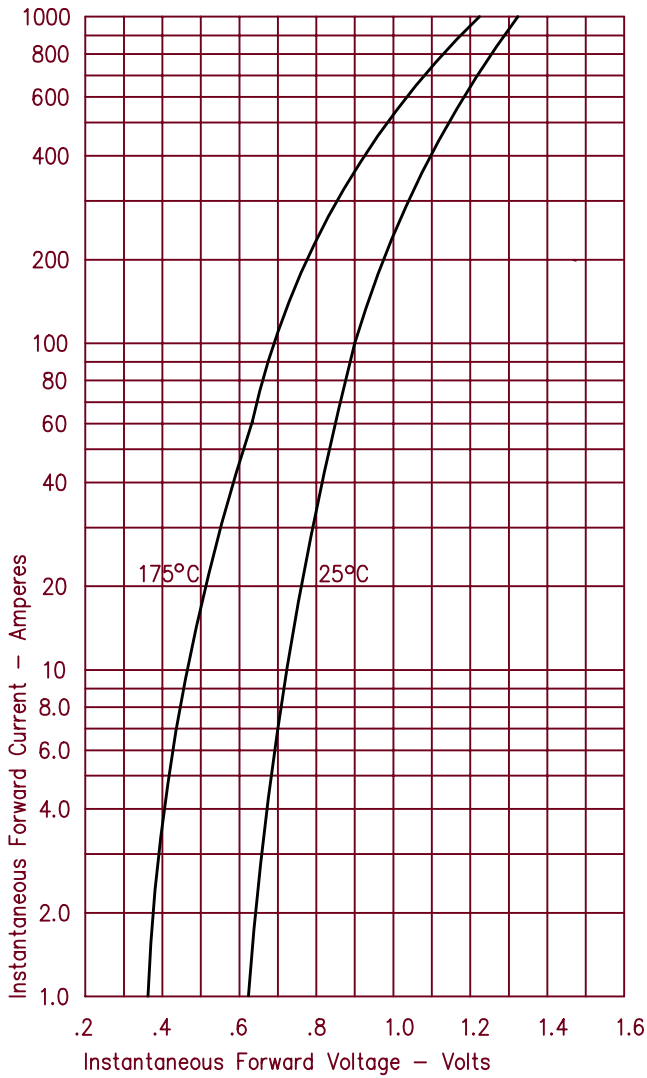# UFT200

Figure 1
Typical Forward Characteristics — Per Leg

Instantaneous Forward Current — Amperes

175°C   25°C

Instantaneous Forward Voltage — Volts

Figure 3
Typical Junction Capacitance — Per Leg

Junction Capacitance — pF

Reverse Voltage — Volts

Figure 4
Forward Current Derating — Per Leg

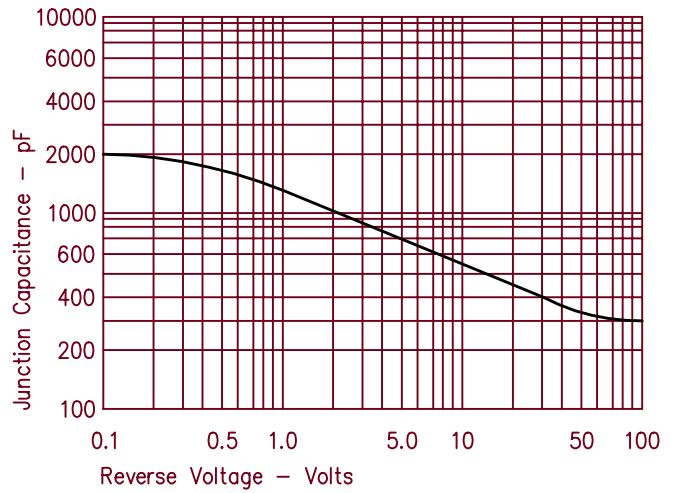Maximum Allowable Case Temperature –°C

60° 90° 120° 180°   DC

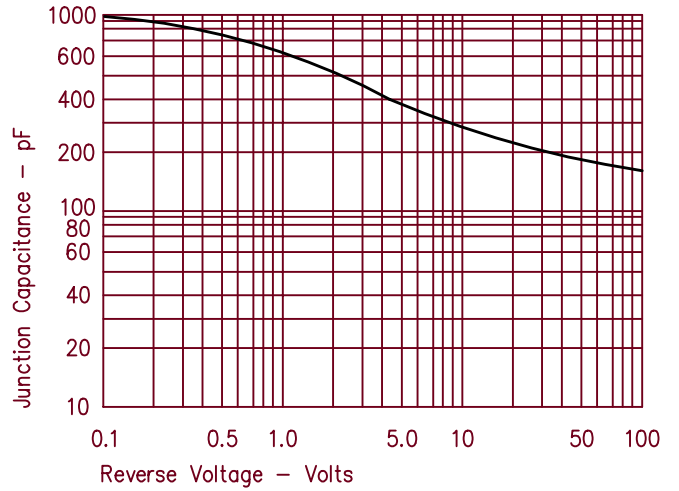Average Forward Current — Amperes

Figure 2
Typical Reverse Characteristics — Per Leg

Typical Reverse Current — mA

175°C
125°C
75°C
25°C

Reverse Voltage — Volts

Figure 5
Maximum Forward Power Dissipation — Per Leg

Maximum Power Dissipation — Watts

DC
180°
120°
90°
60°

Average Forward Current — Amperes
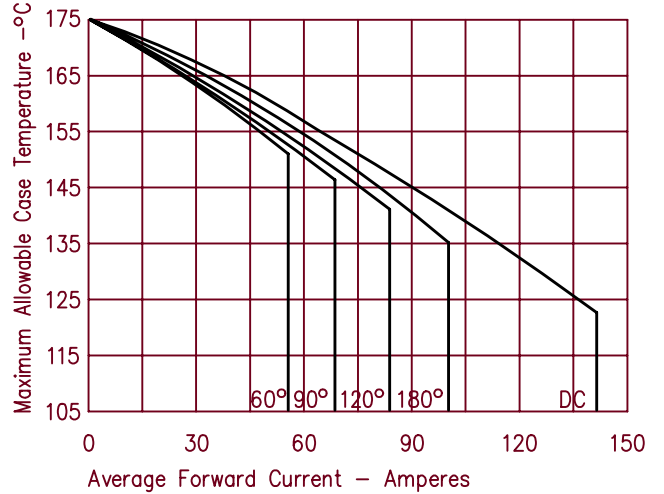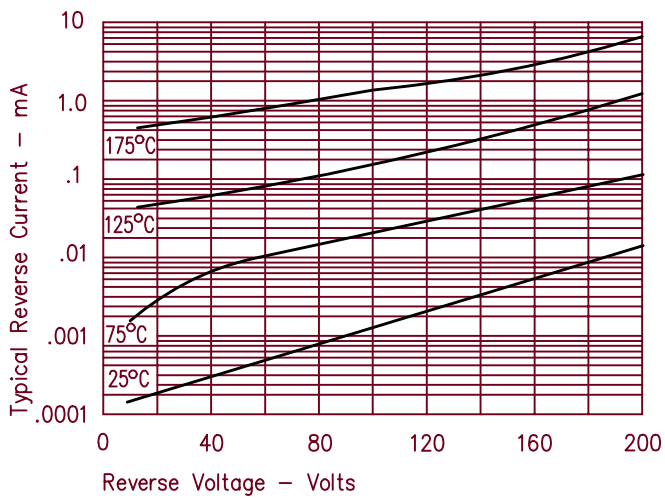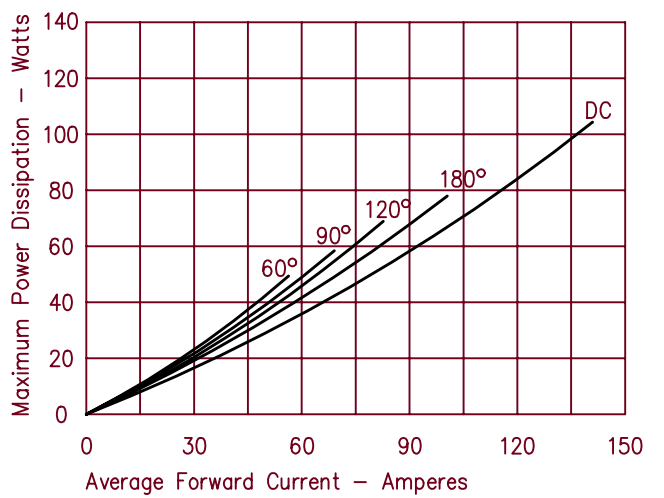
UFT201

Figure 1
Typical Forward Characteristics — Per Leg
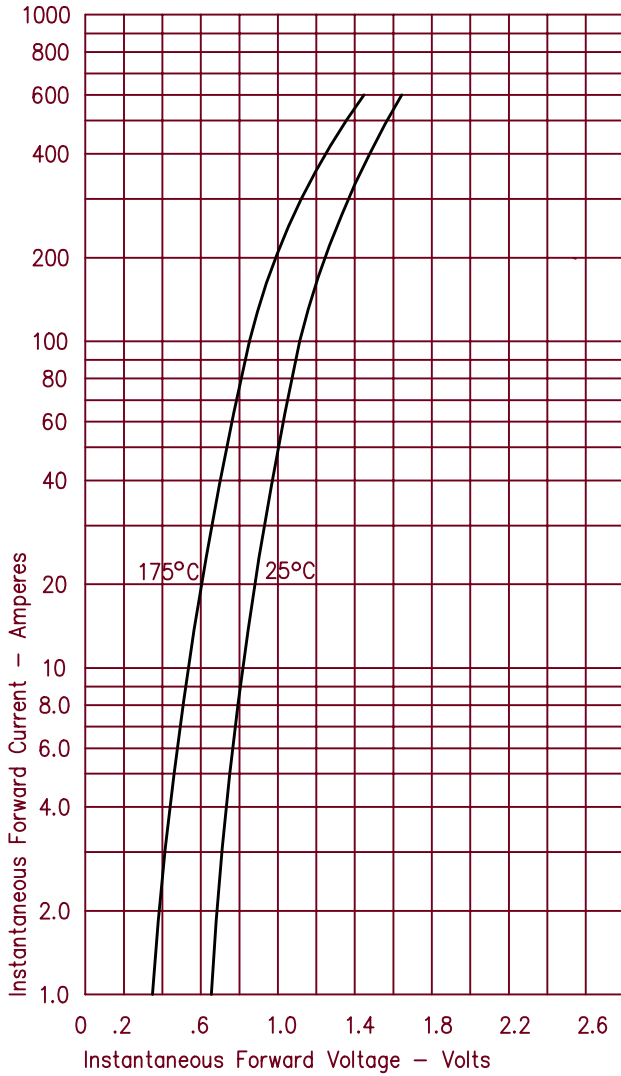
Instantaneous Forward Current — Amperes

175°C   25°C

Instantaneous Forward Voltage — Volts

Figure 2
Typical Reverse Characteristics — Per Leg

Typical Reverse Current — mA

175°C
125°C
75°C
25°C

Reverse Voltage — Volts

Figure 3
Typical Junction Capacitance — Per Leg

Junction Capacitance — pF

Reverse Voltage — Volts

Figure 4
Forward Current Derating — Per Leg

Maximum Allowable Case Temperature –°C

60° 90° 120° 180°   DC

Average Forward Current — Amperes

Figure 5
Maximum Forward Power Dissipation — Per Leg

Maximum Power Dissipation — Watts

DC
180°
120°
90°
60°

Average Forward Current — Amperes
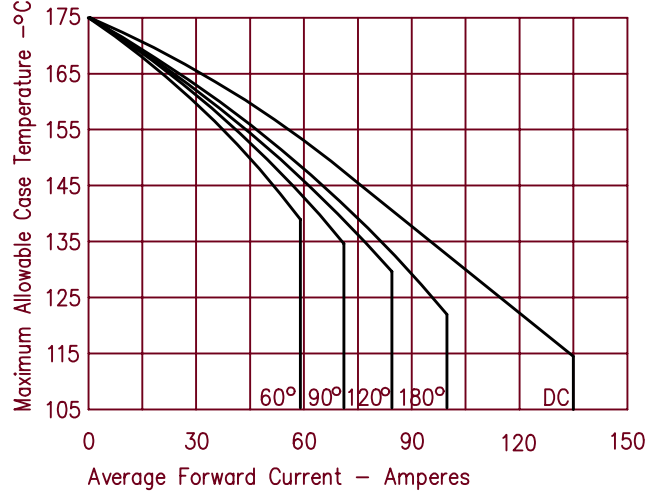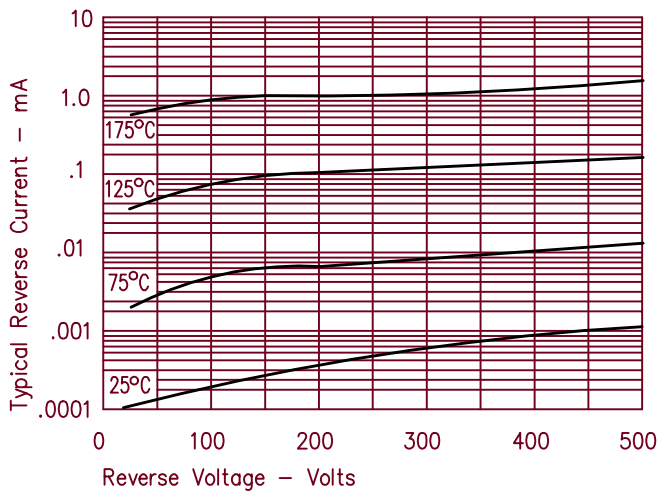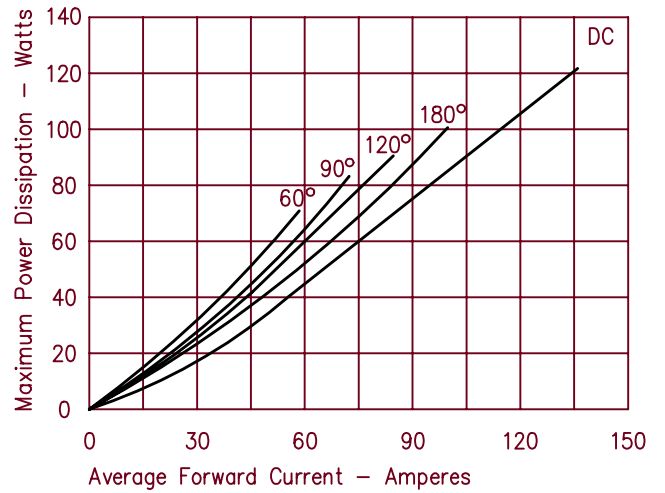
UFT202

Figure 1
Typical Forward Characteristics — Per Leg

Instantaneous Forward Current — Amperes vs Instantaneous Forward Voltage — Volts (curves labeled 175°C and 25°C)

Figure 3
Typical Junction Capacitance — Per Leg

Junction Capacitance — pF vs Reverse Voltage — Volts

Figure 4
Forward Current Derating — Per Leg

Maximum Allowable Case Temperature – °C vs Average Forward Current — Amperes (curves labeled 60° 90° 120° 180° DC)

Figure 2
Typical Reverse Characteristics — Per Leg

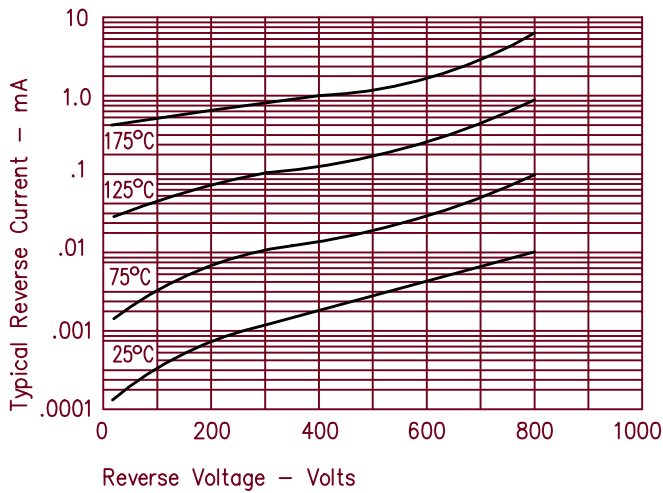Typical Reverse Current — mA vs Reverse Voltage — Volts (curves labeled 175°C, 125°C, 75°C, 25°C)

Figure 5
Maximum Forward Power Dissipation — Per Leg

Maximum Power Dissipation — Watts vs Average Forward Current — Amperes (curves labeled 60° 90° 120° 180° DC)