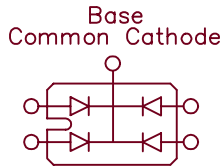
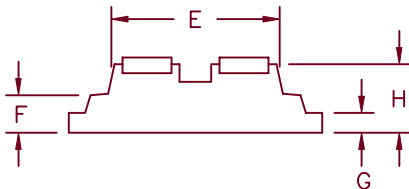
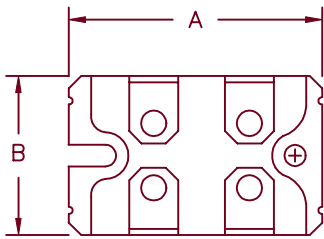
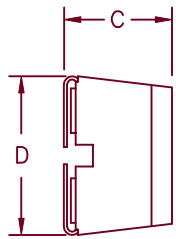


# Ultra Fast Recovery UFPB6050



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	1.494	1.504	37.95	38.20	
B	0.976	0.986	24.79	25.04	
C	0.472	0.480	12.00	12.24	
D	0.990	1.000	25.15	25.40	
E	1.049	1.059	26.67	26.90	
F	0.164	0.174	4.16	4.42	
G	0.080	0.084	2.03	2.13	
H	0.372	0.378	9.45	9.60	

SOT-227

Microsemi Catalog Number	Working Peak Reverse Voltage	Peak Reverse Voltage
UFPB6050	500V	500V

- Ultra Fast Recovery Rectifier
- $V_{RRM}$  500 Volts
- 60 Amps current rating per leg
- 175°C Junction Temperature
- $t_{RR}$  60 nsec maximum

## Electrical Characteristics

Average forward current per leg	$I_{F(AV)}$ 60 Amps	$T_C = 125^\circ\text{C}$ , Square wave
Average forward current per package	$I_{F(AV)}$ 240 Amps	$T_C = 125^\circ\text{C}$ , Square wave
Maximum surge current per leg	$I_{FSM}$ 500 Amps	8.3 ms, half sine, $T_J = 175^\circ\text{C}$
Max peak forward voltage per leg	$V_{FM}$ 1.35 Volts	$I_{FM} = 60\text{A}; T_J = 25^\circ\text{C}^*$
Typ. peak forward voltage per leg	$V_{FM}$ 1.15 Volts	$I_{FM} = 60\text{A}; T_J = 175^\circ\text{C}^*$
Typ. peak reverse current per leg	$I_{RM}$ 125 $\mu\text{A}$	$V_{RRM}, T_J = 125^\circ\text{C}$
Max peak reverse current per leg	$I_{RM}$ 10 $\mu\text{A}$	$V_{RRM}, T_J = 25^\circ\text{C}$
Max peak reverse current per leg	$t_{RR}$ 60 ns	1/2A, 1A, 1/4A, $T_J = 25^\circ\text{C}$
Typical junction capacitance per leg	$C_J$ 125 pF	$V_R = 10\text{V}, f = 1\text{Mhz}, T_J = 25^\circ\text{C}$

\*Pulse test: Pulse width 300  $\mu\text{sec}$ , 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	$R_{\theta JC}$	0.6°C/W Junction to case
Typical thermal resistance per package	$R_{\theta JC}$	0.15°C/W Junction to case
Mounting torque		9-13 inch pounds
Weight		1.1 ounces (30 grams) typical

# UFPB6050

Figure 1  
Typical Forward Characteristics – Per Leg

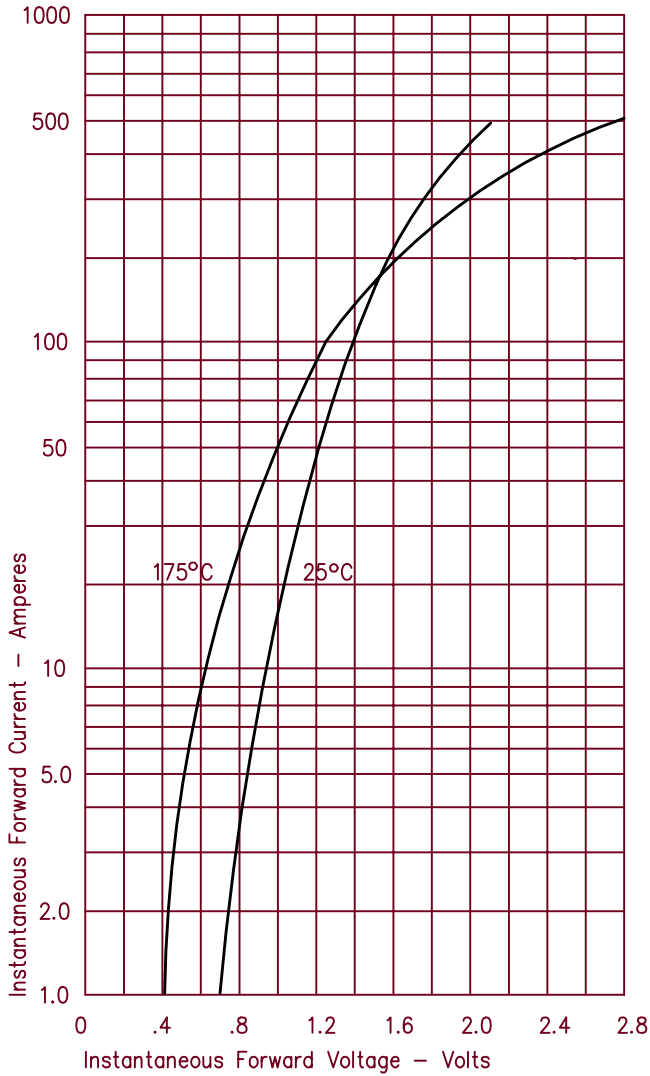


Figure 3  
Typical Junction Capacitance – Per Leg

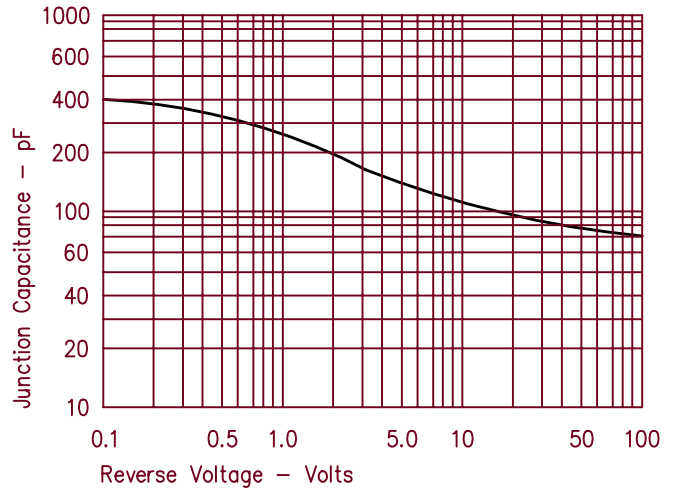


Figure 4  
Forward Current Derating – Per Leg

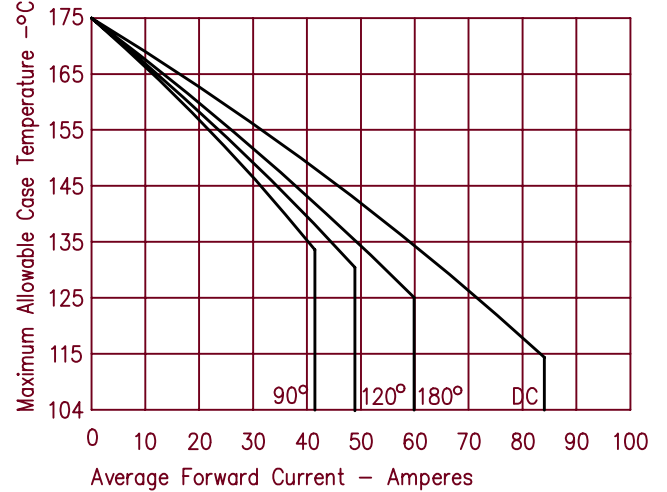


Figure 2  
Typical Reverse Characteristics – Per Leg

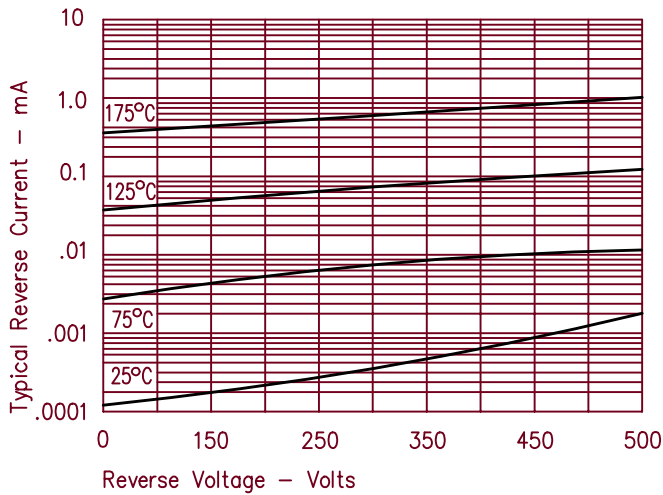


Figure 5  
Maximum Forward Power Dissipation – Per Leg

