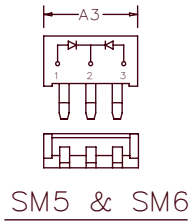
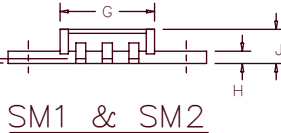
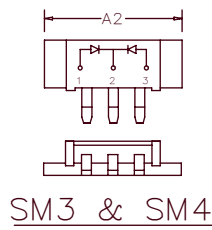
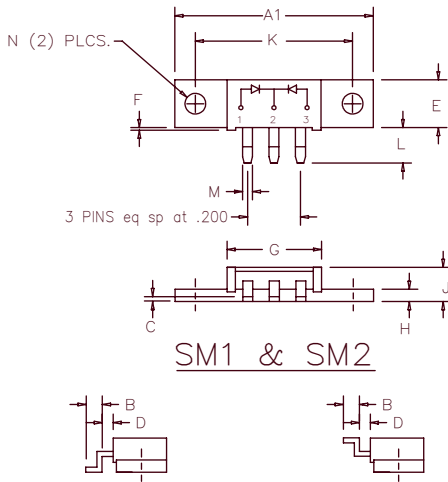


# Ultrafast Recovery Modules

## UFT70SM, 71SM & 72SM



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A1	1.490	1.510	37.85	38.35	
A2	1.020	1.040	26.12	26.42	
A3	.695	.715	17.65	18.16	
B	.110	.120	2.79	3.04	
C	.027	.037	0.69	0.94	
D	.100	.110	2.54	2.79	
E	.350	.370	8.89	9.40	
F	.015	.025	0.38	0.64	
G	.695	.715	17.65	18.16	
H	.088	.098	2.24	2.49	
J	.240	.260	6.10	6.60	
K	1.180	1.195	29.97	30.35	
L	.230	.250	5.84	6.35	
M	.065	.085	1.65	2.16	
N	.151	.161	3.84	4.09	Dia.

TYP. PIN CONFIGURATION FOR SM1, SM3, & SM5  
TYP. PIN CONFIGURATION FOR SM2, SM4, & SM6

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
UFT7010SM ①②	100V	100V
UFT7015SM — —	150V	150V
UFT7020SM — — UFT7120SM ①②	200V	200V
UFT7130SM — —	300V	300V
UFT7140SM — —	400V	400V
UFT7250SM ①② UFT7150SM — —	500V	500V
UFT7260SM — —	600V	600V
UFT7270SM — —	700V	700V
UFT7280SM — —	800V	800V

Note: ① Specify (1-6) to identify package desired  
② Specify C-Common Cathode, A-Common Anode, D-Doubler

- Ultra Fast Recovery
- 175°C Junction Temperature
- V<sub>RRM</sub> 100 to 800 Volts
- Unique surface mount package
- 2 X 35 Amp current rating
- ROHS Compliant

### Electrical Characteristics

	UFT70SM	UFT71SM	UFT72SM	
Average forward current per pkg	I <sub>F(AV)</sub> 70A	70A	70A	Square Wave
Average forward current per leg	I <sub>F(AV)</sub> 35A	35A	35A	Square Wave
Case Temperature	T <sub>C</sub> 148°C	142°C	138°C	R <sub>θJC</sub> = 1.0°C/W
Maximum surge current per leg	I <sub>FSM</sub> 700A	600A	500A	8.3ms, half sine, T <sub>J</sub> = 175°C
Max peak forward voltage per leg	V <sub>FM</sub> .95V	1.20V	1.35V	I <sub>FM</sub> = 35A; T <sub>J</sub> = 25°C*
Max reverse recovery time per leg	t <sub>rr</sub> 50ns	60ns	75ns	1/2A, 1A, 1/4A, T <sub>J</sub> = 25°C
Max peak reverse current per leg	I <sub>RM</sub> —	3.0mA	—	V <sub>RRM, T<sub>J</sub></sub> = 125°C
Max peak reverse current per leg	I <sub>RM</sub> —	25μA	—	V <sub>RRM, T<sub>J</sub></sub> = 25°C
Typical Junction capacitance	C <sub>J</sub> 300pF	120pF	115pF	V <sub>R</sub> = 10V, T <sub>J</sub> = 25°C

\*Pulse test: Pulse width 300μsec, Duty cycle 2%

### Thermal and Mechanical Characteristics

Storage temp range	T <sub>STG</sub>	-55°C to 175°C
Operating junction temp range	T <sub>J</sub>	-55°C to 175°C
Max thermal resistance per leg	R <sub>θJC</sub>	1.0°C/W Junction to case
Max thermal resistance per pkg	R <sub>θJC</sub>	0.5°C/W Junction to case
Typical thermal resistance (greased)	R <sub>θCS</sub>	0.3°C/W Case to sink
Mounting Base Torque		10 inch pounds maximum
Weight	SM1-2	0.3 ounce (8.4 grams) typical
	SM3-4	0.24 ounce (6.7 grams) typical
	SM5-6	0.18 ounce (5.2 grams) typical

# UFT70SM1 – SM6

Figure 1  
Typical Forward Characteristics – Per Leg

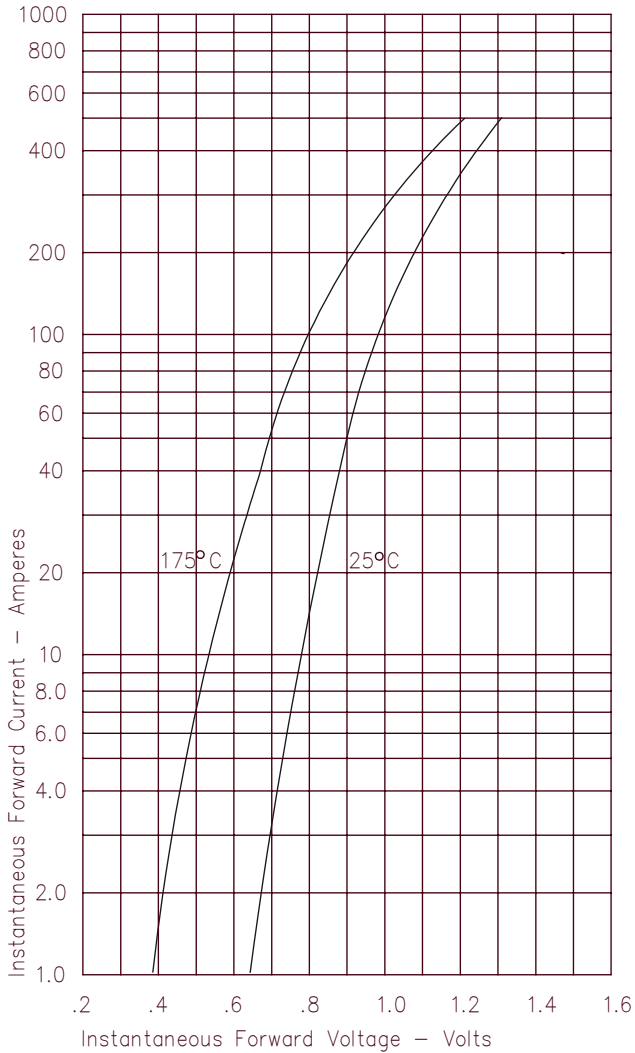


Figure 3  
Typical Junction Capacitance – Per Leg

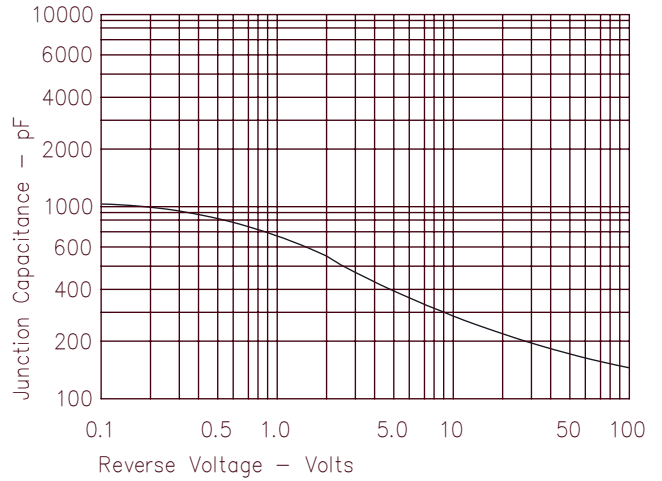


Figure 4  
Forward Current Derating – Per Leg

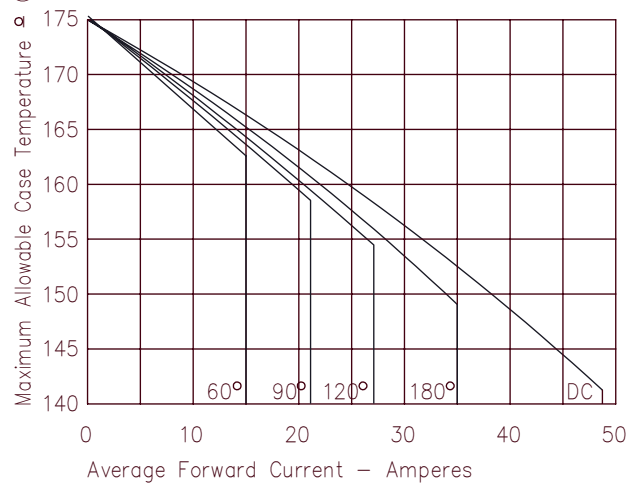


Figure 2  
Typical Reverse Characteristics – Per Leg

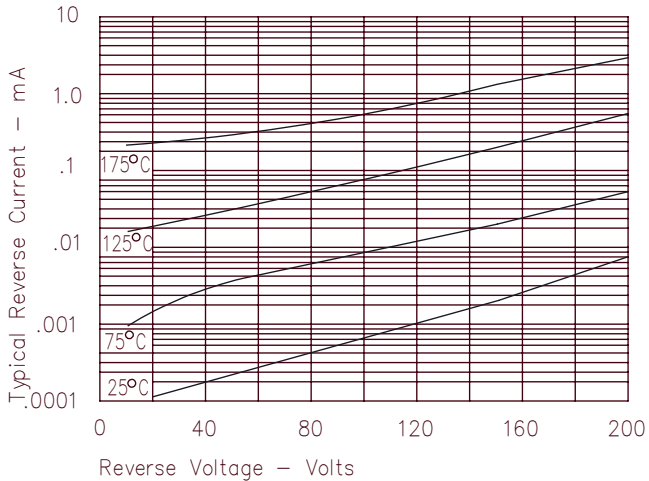
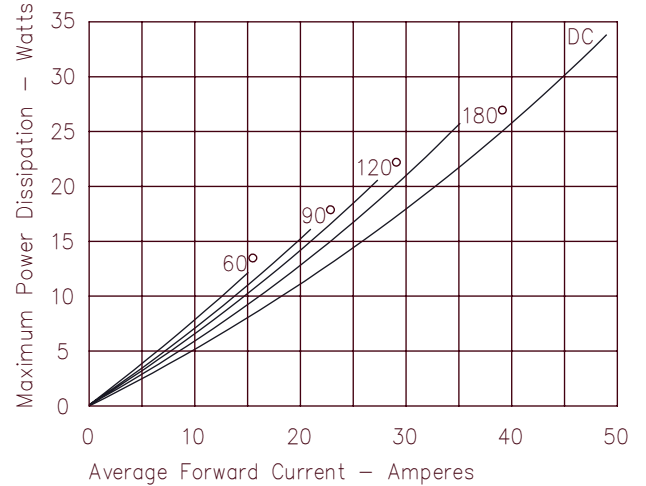


Figure 5  
Maximum Forward Power Dissipation – Per Leg



# UFT71SM1 – SM6

Figure 1  
Typical Forward Characteristics – Per Leg

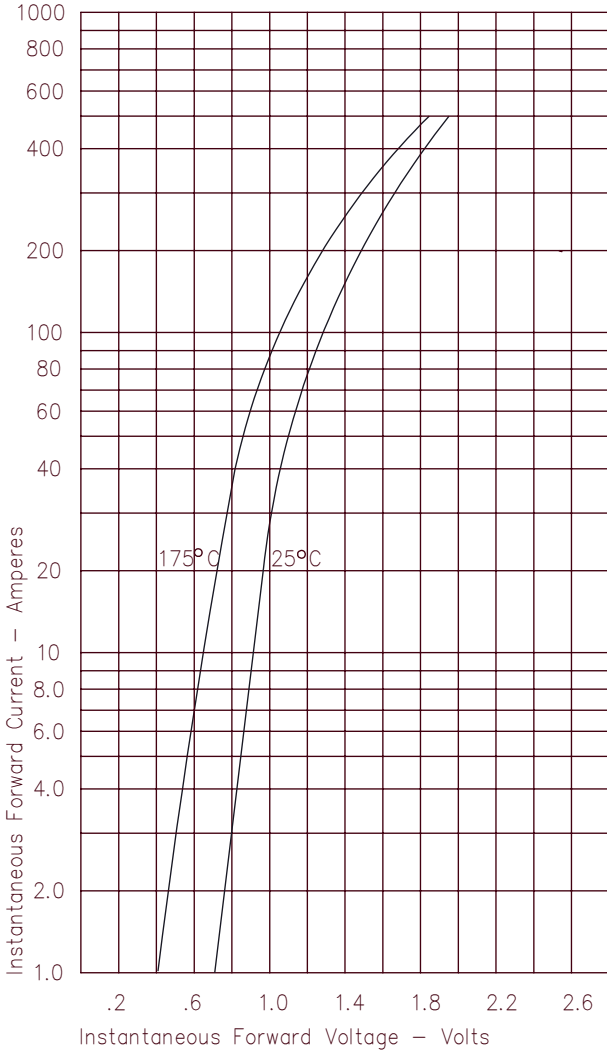


Figure 3  
Typical Junction Capacitance – Per Leg

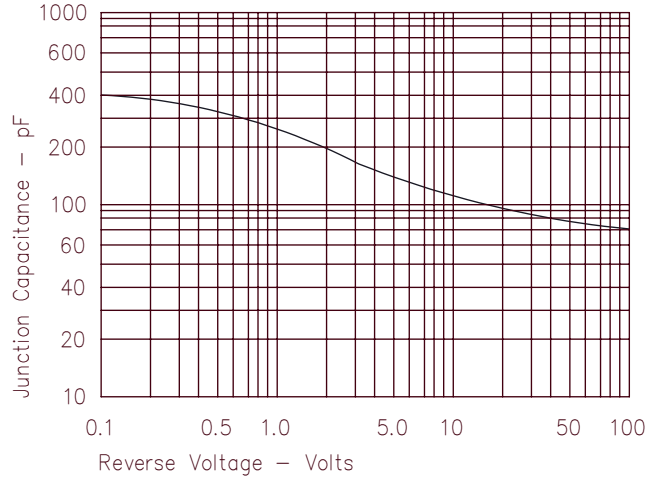


Figure 4  
Forward Current Derating – Per Leg

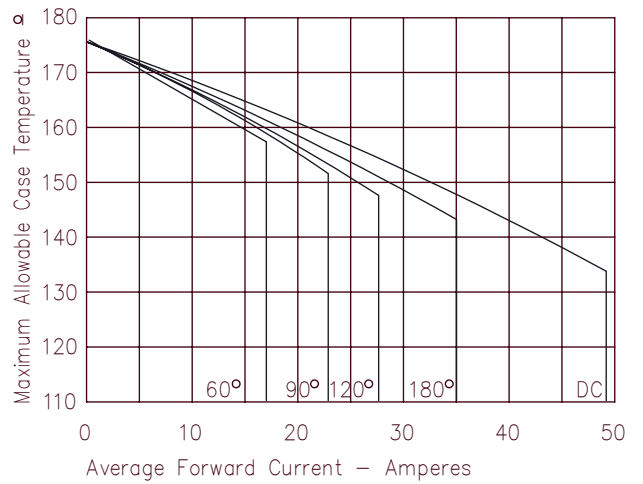


Figure 2  
Typical Reverse Characteristics – Per Leg

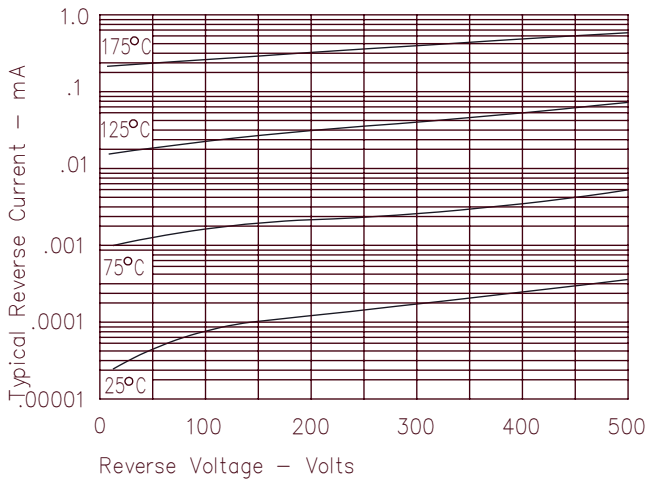
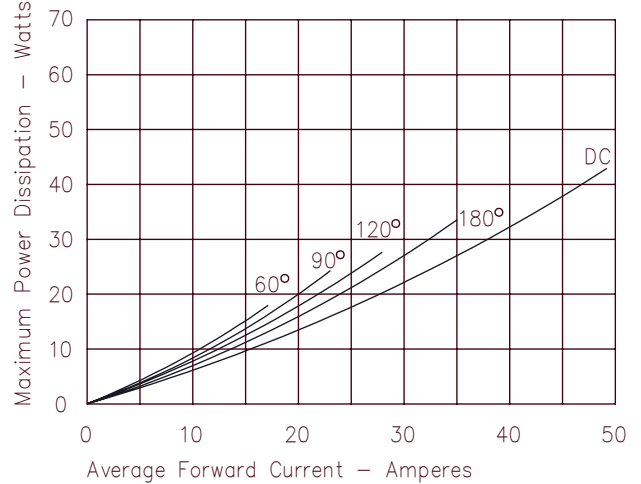


Figure 5  
Maximum Forward Power Dissipation – Per Leg



# UFT72SM1 – SM6

Figure 1  
Typical Forward Characteristics – Per Leg

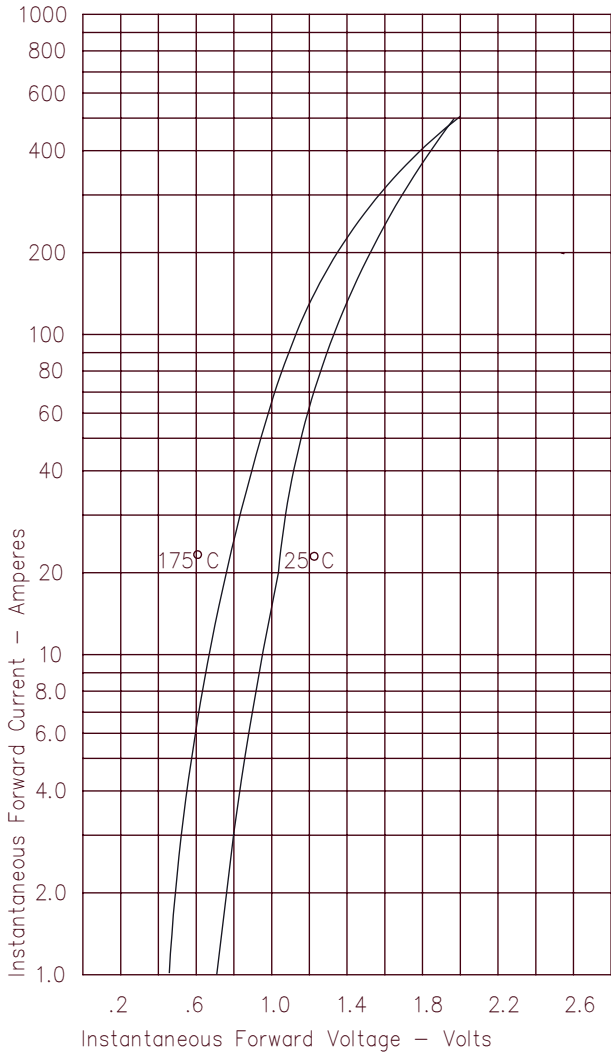


Figure 3  
Typical Junction Capacitance – Per Leg

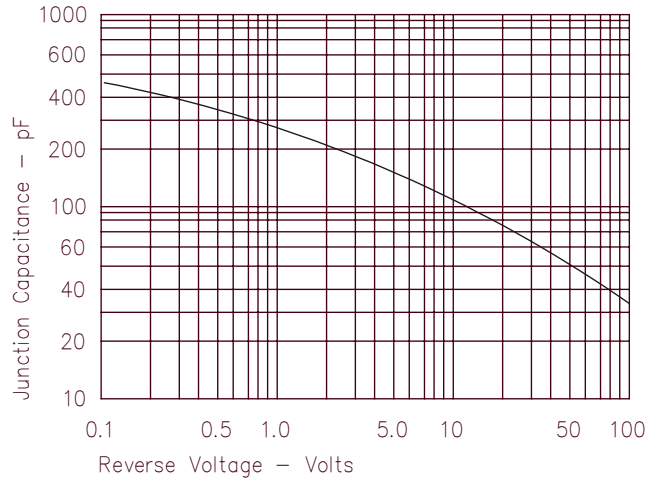


Figure 4  
Forward Current Derating – Per Leg

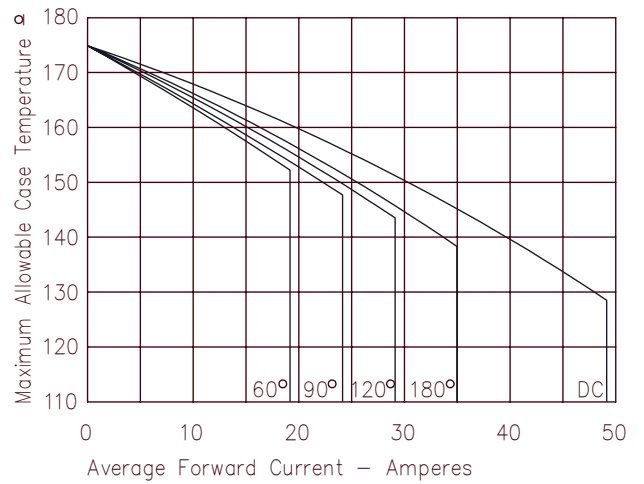


Figure 2  
Typical Reverse Characteristics – Per Leg

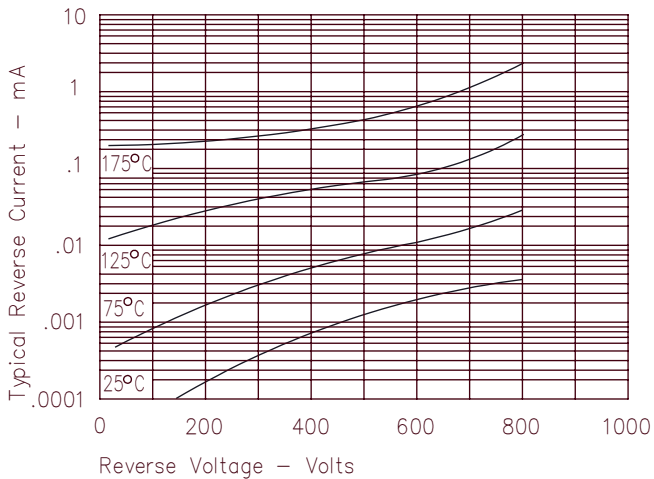


Figure 5  
Maximum Forward Power Dissipation – Per Leg

