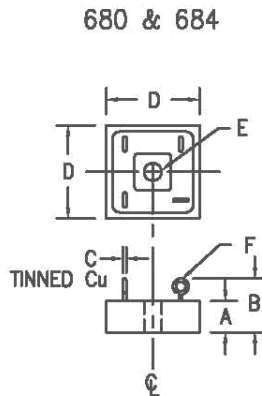
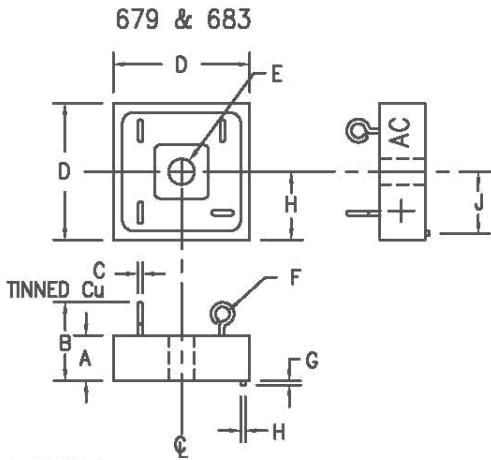


# 679, 680, 683, 684 Series



**MARKING:**

Alternating Current Input: AC  
 Cathode Positive Output: +  
 Anode Negative: -  
 Part Number is printed on the body

**679 & 683 Series**

Dim.	Inches	Millimeter
A	.328 MAX.	8.33 MAX.
B	.750 MAX.	19.05 MAX.
C	0.04	1.02
D	1.125 MAX.	28.58 MAX.
E	.193 DIA.	4.90 DIA.
F	.09 DIA.	2.29 DIA.
G	.062	1.57
H	.062	1.57
J	.50	12.7

**680 & 684 Series**

Dim.	Inches	Millimeter
A	.250 MAX.	6.10 MAX.
B	.570 MAX.	14.45 MAX.
C	.04	1.02
D	.750 MAX.	19.05 MAX.
E	.140 DIA.	3.56 DIA.
F	.09 DIA.	2.29 DIA.

Microsemi Catalog Number	Microsemi Catalog Number	Working Peak Reverse Voltage VRRM
679-1, 680-1	683-1, 684-1	100V
679-2, 680-2	683-2, 684-2	200V
679-3, 680-3	683-3, 684-3	300V
679-4, 680-4	683-4, 684-4	400V
679-5, 680-5	683-5, 684-5	500V
679-6, 680-6	683-6, 684-6	600V

- Current ratings to 25A
- VRRM to 600V
- Fuse-in-glass diodes used
- 150°C junction temperature
- Surge ratings to 150A
- Recovery times to 500ns
- Electrically isolated Aluminum case
- Controlled avalanche characteristics
- MIL-PRF-19500 Similarity
- Sn/Pb terminations

**Electrical Characteristics**

	679	680	683	684
Maximum DC output current— $T_C = 55^\circ\text{C}$	25A	10A	20A	10A
Maximum DC output current— $T_C = 100^\circ\text{C}$	18.5A	6A	14A	6A
Maximum surge current— $T_C = 100^\circ\text{C}$	150A	50A	150A	50A
Max peak forward voltage per leg @ 25°C	1.2V @ 10A*	1.2V @ 2A*	1.2V @ 6A*	1.2V @ 2A*
Max peak reverse current @ 25°C, at Vrrm	10uA	2uA	10uA	5uA
Max peak reverse current @ 100°C, at Vrrm	200uA	50uA	200uA	100uA
Max. recovery time 1A, 1A, 0.5A	---	---	500ns	500ns

\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

**Thermal and Mechanical Characteristics**

Storage temperature range	TSTG	-65°C to 150°C
Operating temperature range	TJ	-65°C to 150°C
Maximum thermal resistance	R $\theta$ JC	20°C/W
Maximum thermal resistance per package	R $\theta$ JC	4.0°C/W
Weight - typical 679, 683 series		20 grams
Weight - typical 680, 684 series		10 grams



8700 East Thomas Road, P.O. Box 1390  
 Scottsdale, AZ 85252  
 PH: (480) 941-6300  
 FAX: (480) 947-1503

6-10-10 Rev. 4

# 679, 680, 683 & 684

Figure 1  
Typical Forward Characteristics – Per Leg  
679 Series

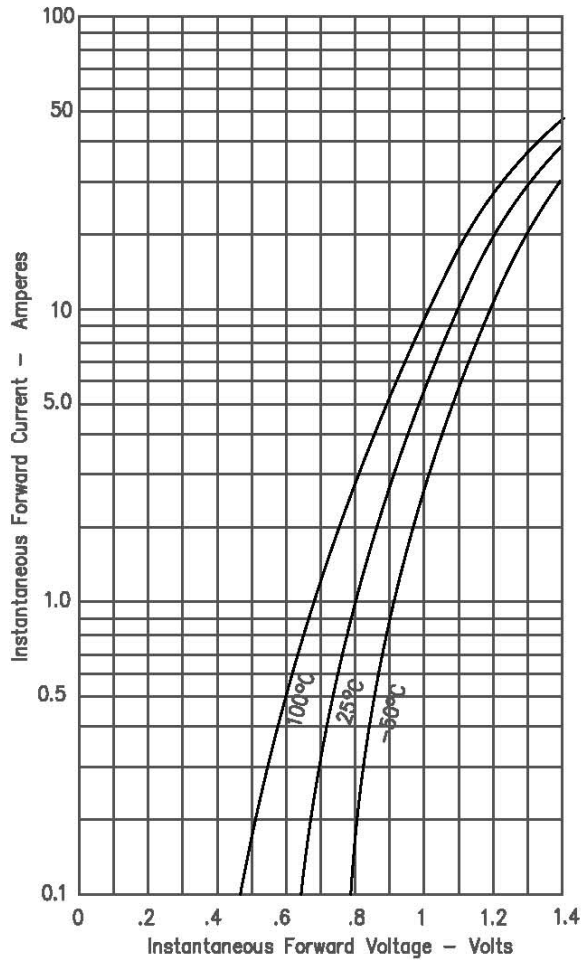


Figure 3  
Typical Forward Characteristics – Per Leg  
683 Series

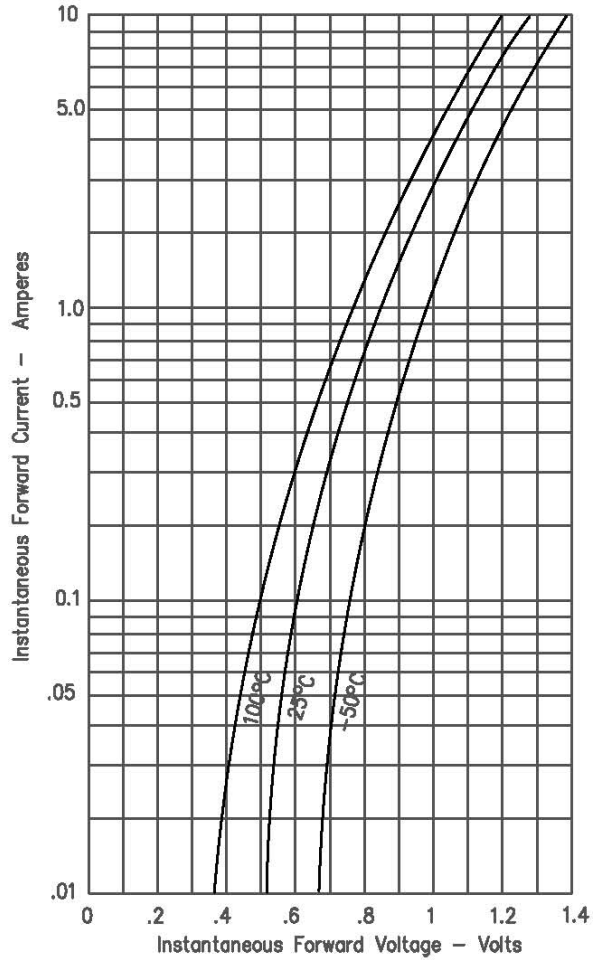


Figure 2  
Typical Reverse Leakage Current – Per Leg  
679 & 683 Series

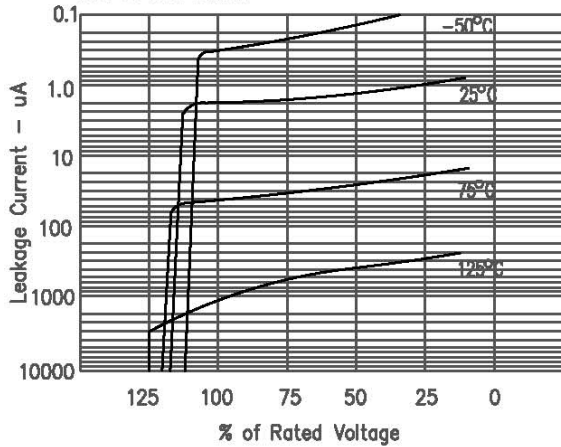
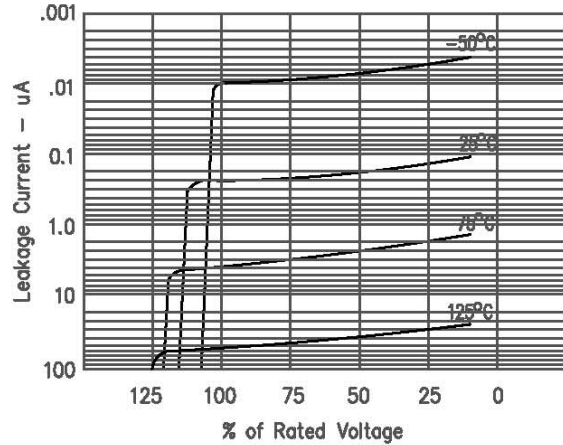


Figure 4  
Typical Reverse Leakage Current – Per Leg  
680 Series



# 679, 680, 683 & 684

Figure 1  
Typical Forward Characteristics - Per Leg  
680 & 684 Series

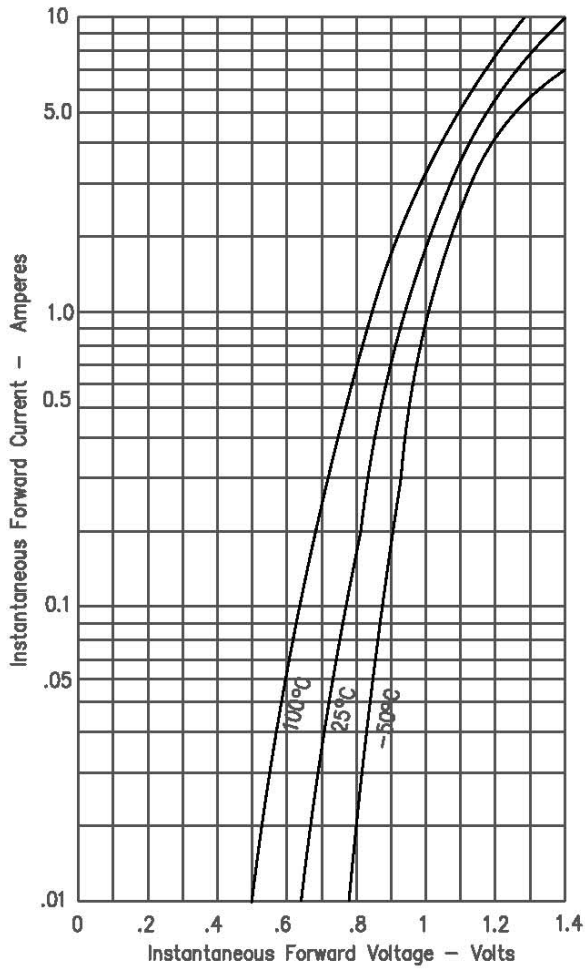


Figure 2  
Typical Reverse Leakage Current - Per Leg  
684 Series

