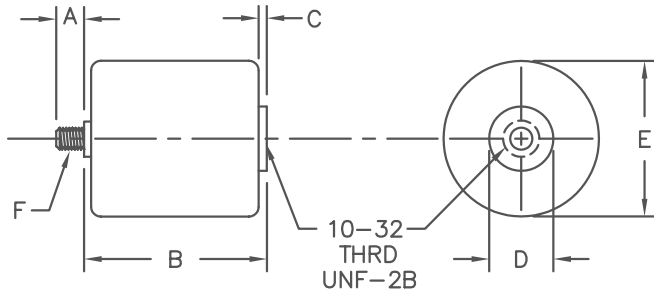


# High Voltage Stacks Standard and Fast Recovery UFB, UFS, USB & USS Series



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.230	.235	5.84	5.97	
B	.980	1.10	24.89	27.94	
C	.020	.040	0.51	1.02	
D	.320	.330	8.13	8.38	
E	0.97	1.00	24.64	25.40	
F	----	----	----	----	10-32 UNF-2A

- Notes:
1. Type number marked on unit.
  2. Polarity - Cathode connected to stud.

Microsemi Catalog Number	Working Peak Reverse Voltage VRRM
USS series	5kV to 15kV
USB series	2.5kV to 10kV
UFS series	5kV to 10kV
UFB series	2.5kV to 7.5kV

- Current ratings to 2.3A
- VRRM to 15kV
- Only fused-in-glass diodes used
- 150°C junction temperature
- Surge ratings to 80A
- Recovery time to 350nS
- Modular design for easy stacking
- MIL-PRF-19500 Similarity

## Electrical Characteristics

	VRRM	Maximum Forward Voltage Drop	Maximum Leakage Current	Maximum Reverse Recovery Time	Maximum Average D.C. Output Current		Non-Repetitive Sinusoidal Surge (8.3ms)	Maximum Leakage Reverse Transient Energy Absorption
					T <sub>C</sub> = 25°C Air	T <sub>C</sub> = 50°C Oil		
Standard Recovery	kV		uA	nS	Amps	Amps	Amps	Joules
USS 5	5.0	9V @ 0.6A		----	0.60	1.1		1.5
USS 7.5	7.5	13V @ 0.5A	5	----	0.45	0.91	25	2.5
USS 10	10	17V @ 0.3A		----	0.35	0.71		3.0
USS 15	15	25V @ 0.2A		----	0.25	0.51		5.0
<u>Standard Recovery</u>								
USB 2.5	2.5	5V @ 1.1A		----	1.1	2.30		3.0
USB 5	5.0	9V @ 0.7A	10	----	0.68	1.50	80	6.0
USB 7.5	7.5	13V @ 0.5A		----	0.53	1.20		9.0
USB 10	10	17V @ 0.4A		----	0.43	1.00		12
<u>Fast Recovery</u>								
UFS 5	5.0	12V @ 0.5A		*500	0.50	0.90		1.5
UFS 7.5	7.5	18V @ 0.4A	5	**350	0.38	0.75	20	2.5
UFS 10	10	23V @ 0.3A			0.30	0.58		3.0
<u>Fast Recovery</u>								
UFB 2.5	2.5	6V @ 0.9A		*500	0.90	2.00		3.0
UFB 5	5.0	12V @ 0.6A	10	**350	0.58	1.30	70	6.0
UFB 7.5	7.5	18V @ 0.4A			0.45	1.00		9.0

\* Measured in reverse recovery circuit switching from 1.0A forward to 1.0A current recovering to 0.5A.

\*\* Measured in reverse recovery circuit switching from 0.5A forward to 1.0A current recovering to 0.25A.

## Thermal and Mechanical Characteristics

Storage temp range	T <sub>STG</sub>	-65°C to 150°C
Operating junction temp range	T <sub>J</sub>	-65°C to 150°C
Weight - typical USS & UFS Series		28 grams
Weight - typical USB & UFB Series		31 grams

# UFB, UFS, USB & USS

Figure 1  
Typical Forward Characteristics  
USB Series

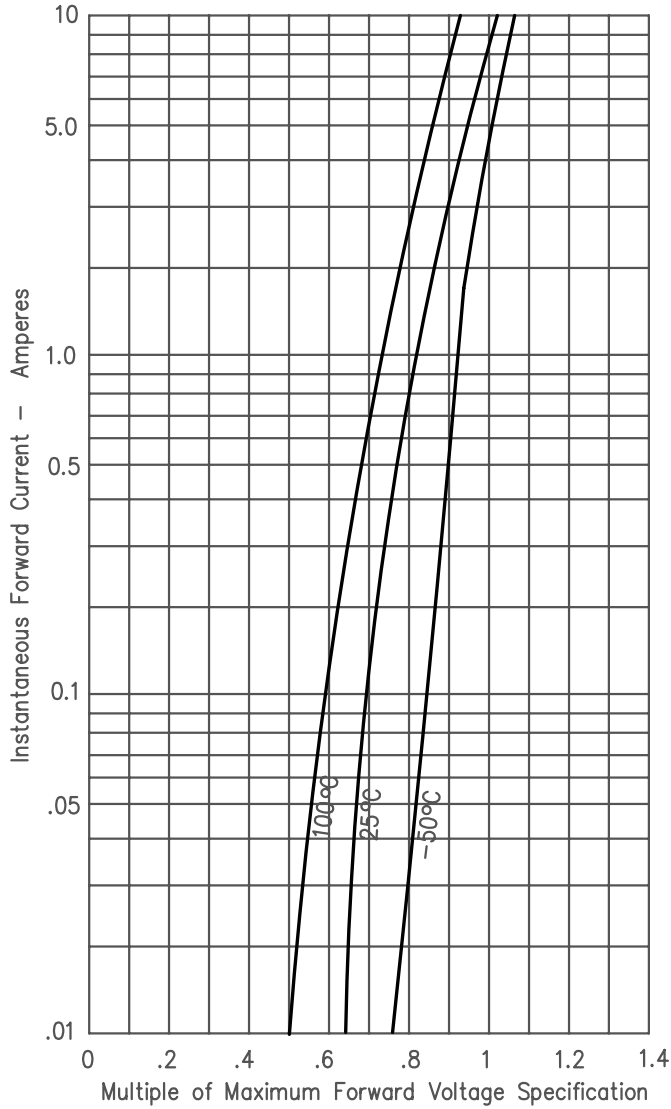


Figure 3  
Current Derating – Natural Convection

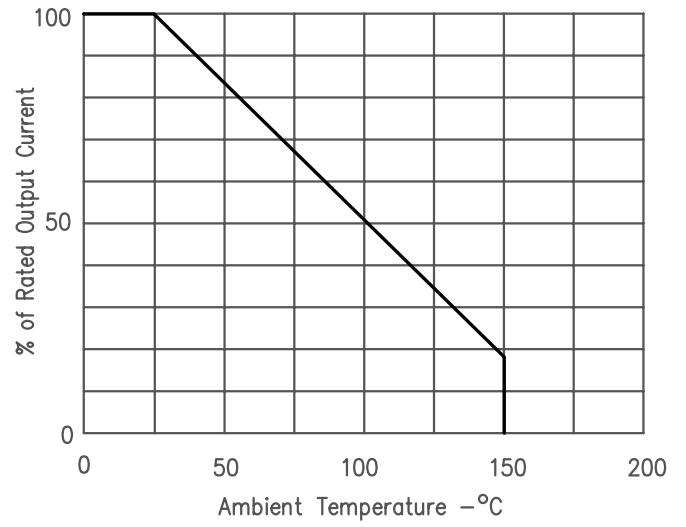
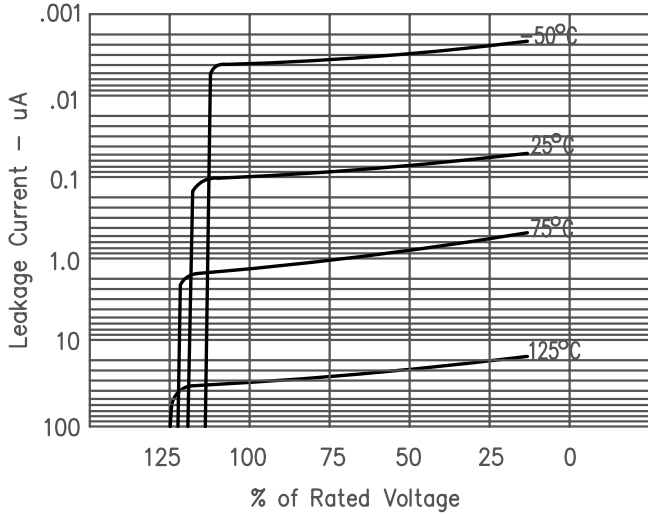


Figure 2  
Typical Reverse Leakage Current  
USB Series



# UFB, UFS, USB & USS

Figure 1  
Typical Forward Characteristics  
USS Series

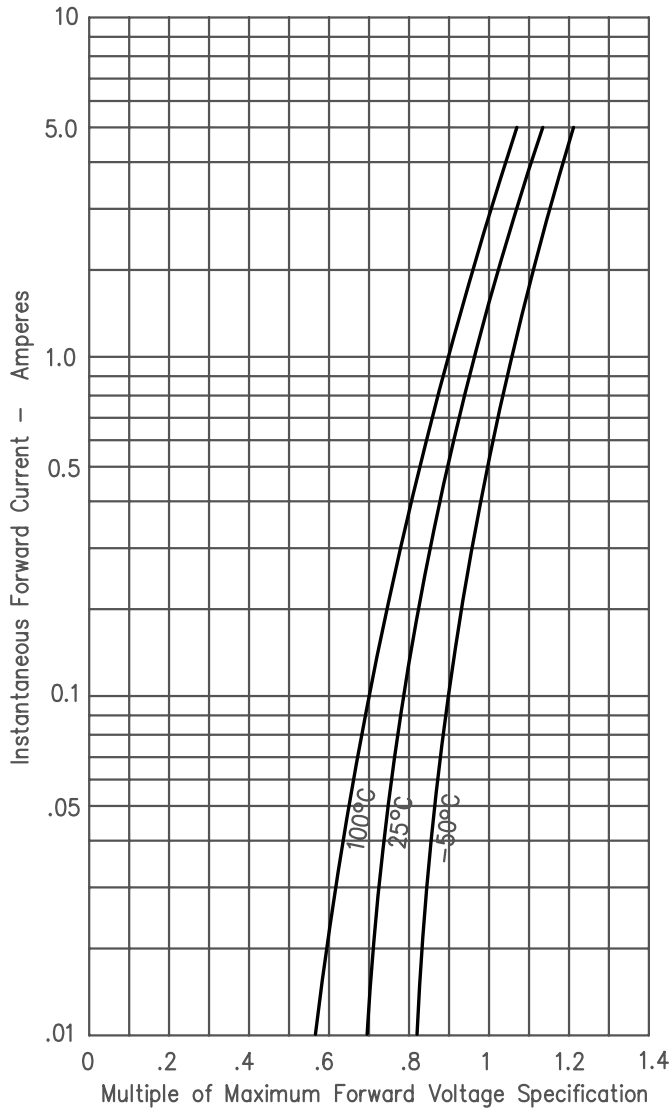


Figure 3  
Current Derating – Oil Cooled

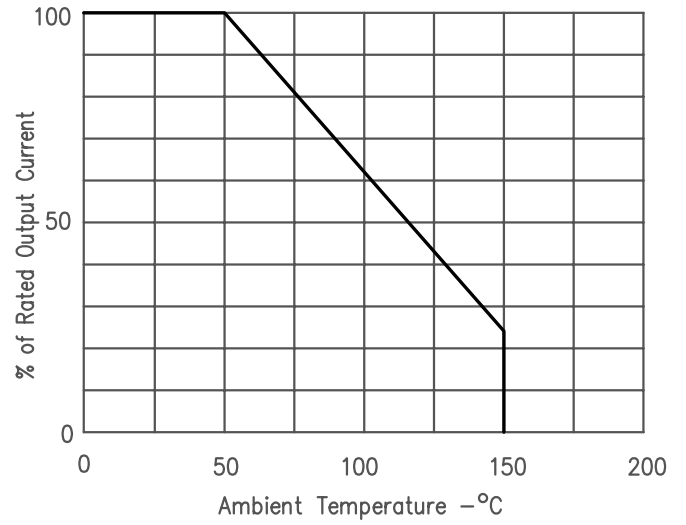
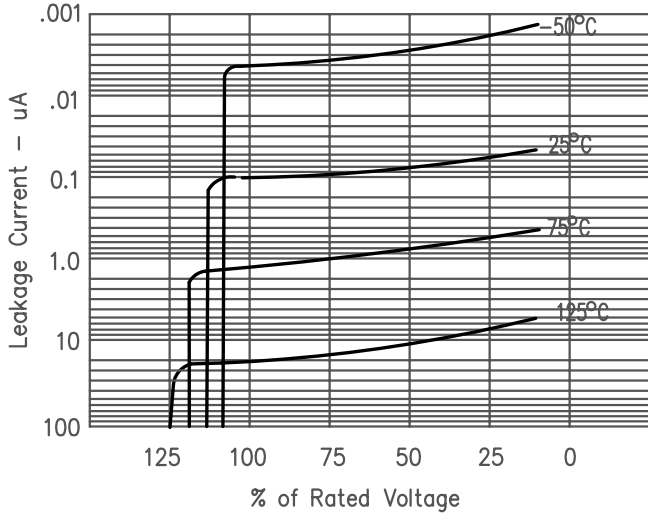


Figure 2  
Typical Reverse Leakage Current  
USS Series



# UFB, UFS, USB & USS

Figure 1  
Typical Forward Characteristics  
UFB Series

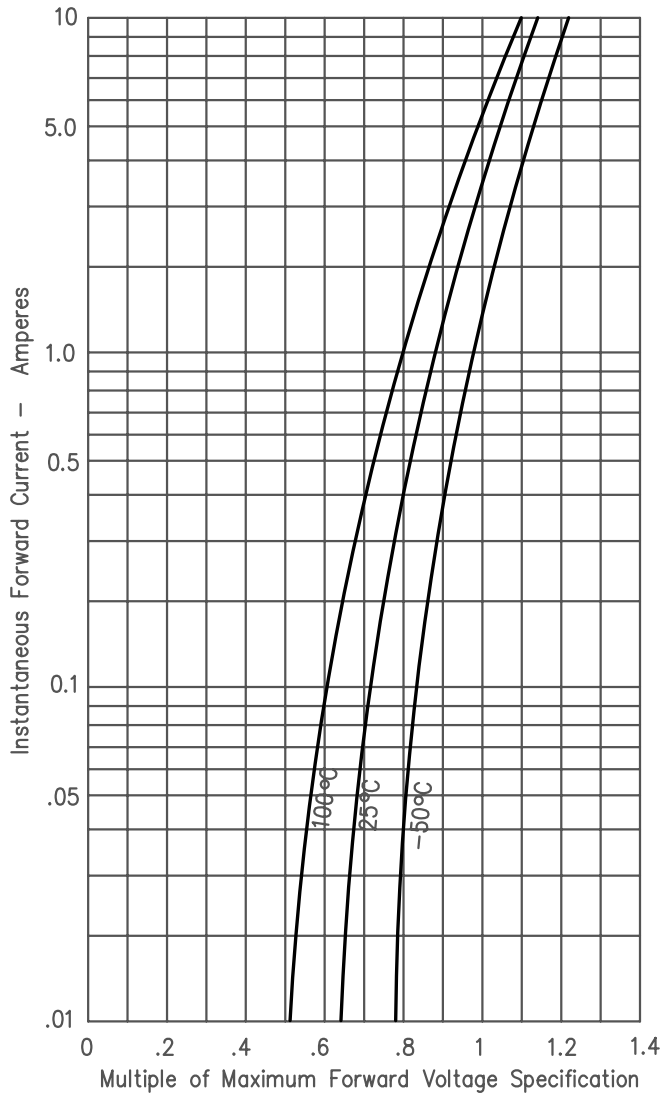


Figure 3  
Output Current vs. Air Flow

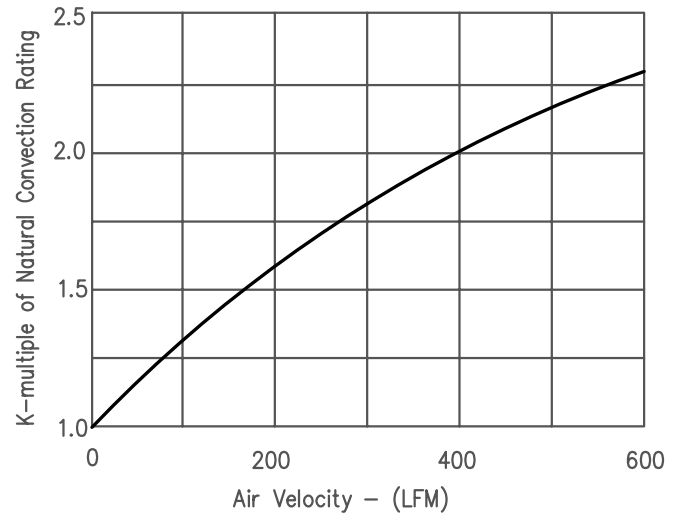
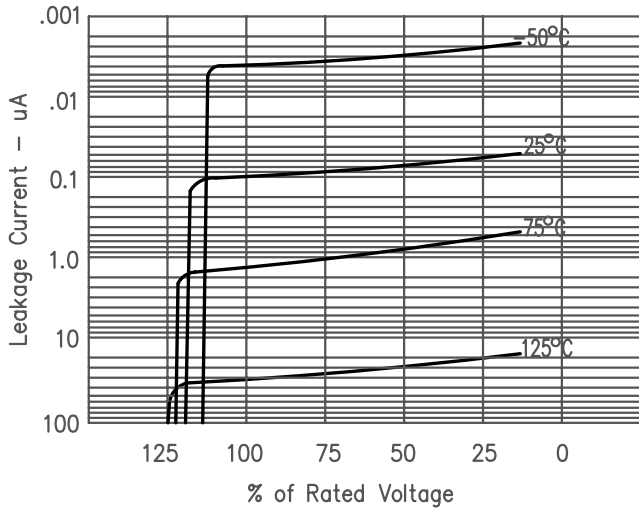


Figure 2  
Typical Reverse Leakage Current  
UFB Series



# UFB, UFS, USB & USS

Figure 1  
Typical Forward Characteristics  
UFS Series

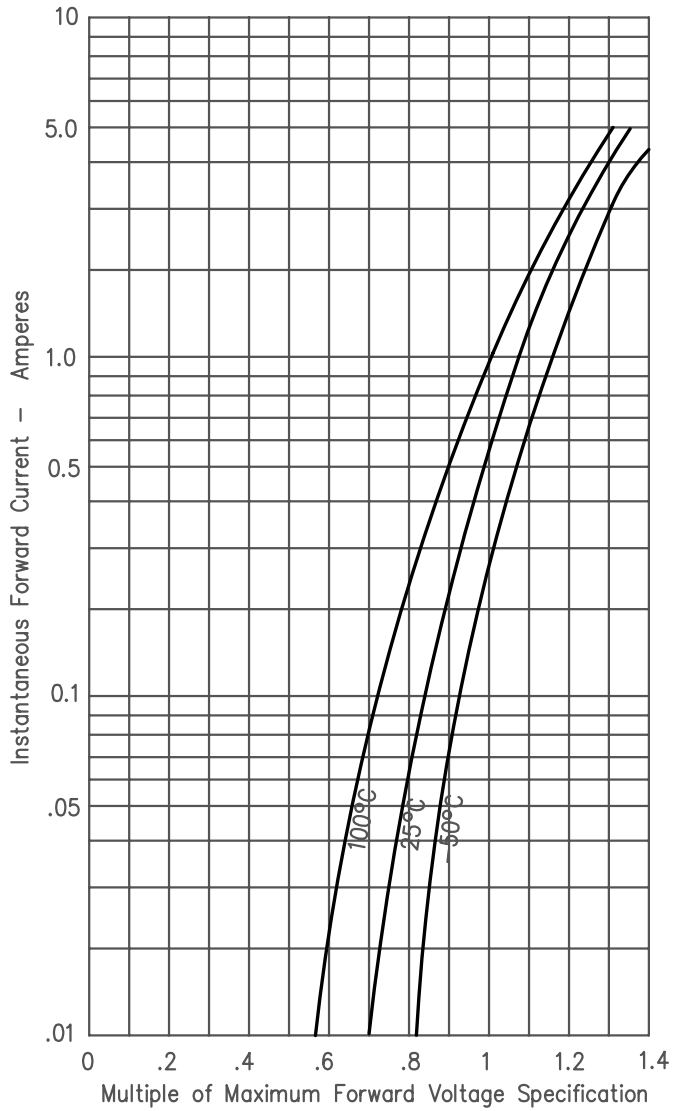


Figure 2  
Typical Reverse Leakage Current  
UFS Series

