

# RECTIFIER ASSEMBLIES

High Voltage Stacks, 1 Amp to 5 Amp,  
Military Approved

JAN 1N5597  
JAN 1N5600  
JAN 1N5603

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## FEATURES

- Qualified to MIL-S-19500/404A
- PIV: to 10kV
- Surge Ratings: to 200A
- Current Ratings: to 5A
- Only Fused-in-Glass Diodes Used
- Controlled Avalanche Characteristics
- Modular Package For Easy Stacking

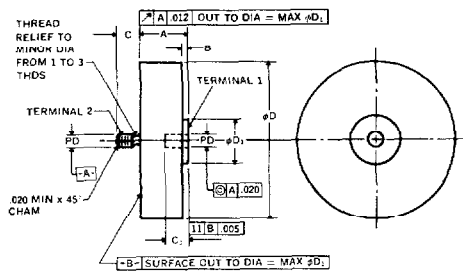
## DESCRIPTION

This series of military high-voltage high-current stacks offers the utmost in reliability as required in military system designs. The rectifiers are assembled with diodes which have been subjected to TX type screening tests.

## ABSOLUTE MAXIMUM RATINGS

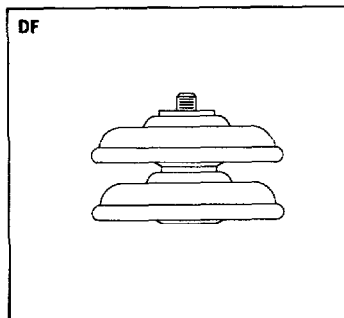
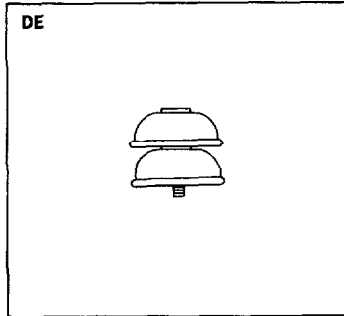
	JAN 1N5597	JAN 1N5600	JAN 1N5603
Peak Inverse Voltage .....	10kV	5kV	5kV
Maximum Average D.C. Output Current			
@ $T_C = 75^\circ\text{C}$ .....	1A	2A	5A
Non-Repetitive Sinusoidal Surge (8.3ms)			
@ $T_C = 75^\circ\text{C}$ .....	30A	80A	200A
Operating and Storage Temperature Range, $T_C$ .....	-65°C to +150°C		

## MECHANICAL SPECIFICATIONS



Ltr	JAN 1N5597		NOTES
	Dimensions in inches with metric equivalents (mm) in parentheses	Minimum	
A	.73 (18.54)	.83 (21.08)	8
B		.080 (2.03)	
C	.240 (6.10)	.264 (6.71)	2, 6
C <sub>1</sub>	.265 (6.73)	.400 (10.16)	4
phi D	1.85 (46.99)	1.95 (49.53)	
phi D <sub>1</sub>	.37 (9.40)	.67 (17.02)	

Ltr	JAN 1N5603		NOTES
	Dimensions in inches with metric equivalents (mm) in parentheses	Minimum	
A	.970 (24.64)	1.020 (25.91)	8
B	.050 (1.27)	.080 (2.03)	
C	.307 (7.80)	.317 (8.05)	3
C <sub>1</sub>	.318 (8.08)	.400 (10.16)	5, 7
phi D	3.450 (87.63)	3.650 (92.71)	
phi D <sub>1</sub>	.35 (8.89)	1.250 (31.75)	



1. All marking shall be on cathode side of module.
2. Threaded stud 1/4-28UNF-2A.
3. Threaded stud 3/8-24UNF-2A.
4. Threaded insert 1/4-28UNF-2B.

5. Threaded insert 3/8-24UNF-2B.
6. Cathode connected to terminal 2.
7. Cathode connected to terminal 1.
8. Module contour within dimension A is not specified.

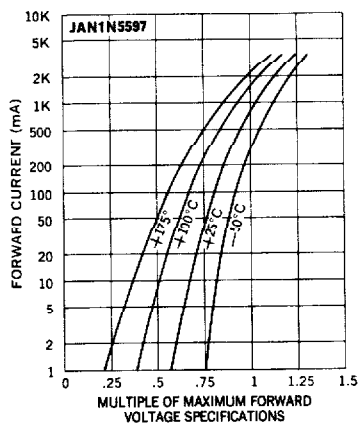
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**Microsemi Corp.**  
**Watertown**  
The diode experts

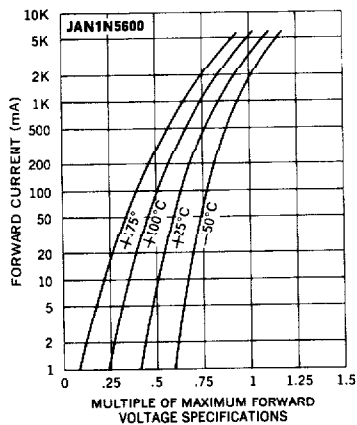
Electrical Specifications (at 25°C unless noted)

Type	PIV kV	Forward Voltage Drop		Maximum Leakage Current @ PIV		Capacitance @ $V_R = 100V$		Maximum Reverse Transient Energy Absorption joules
		Min.	Max.	$T_A = 25^\circ C$	$T_A = 100^\circ C$	Min.	Max.	
				$\mu A$	$\mu A$	pf	pf	
JAN 1N5597	10	13V @ 1A	19V @ 1A	1	75	5	30	2
JAN 1N5600	5	6V @ 2A	10V @ 2A	5	100	7	30	6
JAN 1N5603	5	6V @ 5A	10V @ 5A	5	100	15	40	12

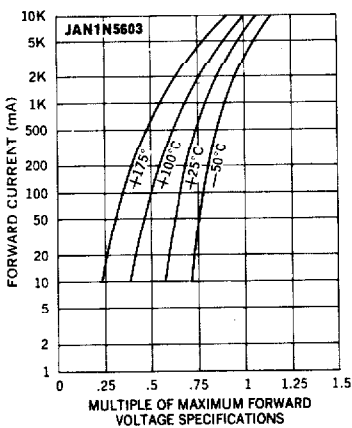
Typical Forward Voltage vs. Forward Current



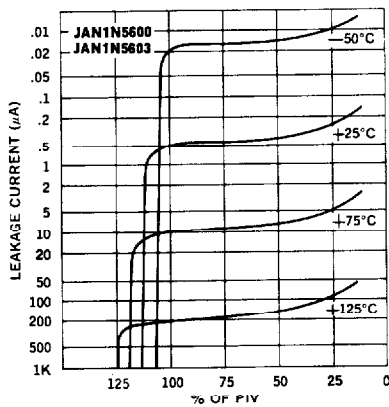
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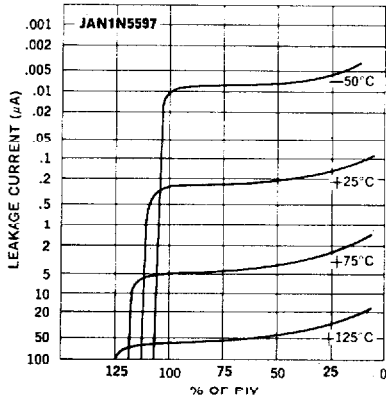
Typical Forward Voltage vs. Forward Current



Typical Leakage Current vs. PIV



Typical Leakage Current vs. PIV



Current Derating Curve

