RECTIFIER ASSEMBLIES

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

JAN 1N5597
JAN 1N5600
JAN 1N5603

3

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

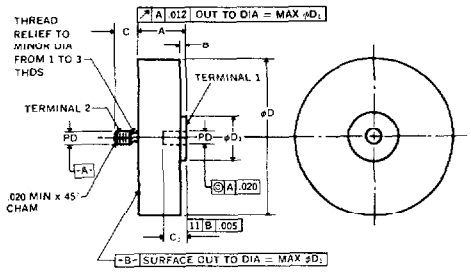
DESCRIPTION

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°C	1A	2A	5A
Non-Repetitive Sinusoidal Surge (8.3ms) @ T_C = 75°C	30A	80A	200A
Operating and Storage Temperature Range, T_C	−65°C to +150°C		

MECHANICAL SPECIFICATIONS



JAN 1N5597 JAN 1N5600

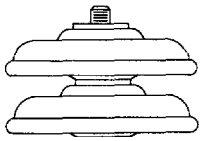
Ltr	Dimensions in inches with metric equivalents (mm) in parentheses		NOTES
	Minimum	Maximum	
A	.73 (18.54)	.83 (21.08)	8
B		.080 (2.03)	
C	.240 (6.10)	.264 (6.71)	2,6
C_1	.265 (6.73)	.400 (10.16)	4
øD	1.85 (46.99)	1.95 (49.53)	
$øD_1$	.57 (14.48)	.67 (17.02)	

JAN 1N5603

Ltr	Dimensions in inches with metric equivalents (mm) in parentheses		NOTES
	Minimum	Maximum	
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_1	.318 (8.08)	.400 (10.16)	5,7
øD	3.450 (87.63)	3.650 (92.71)	
$øD_1$	.95 (24.13)	1.290 (31.75)	

DE

DF



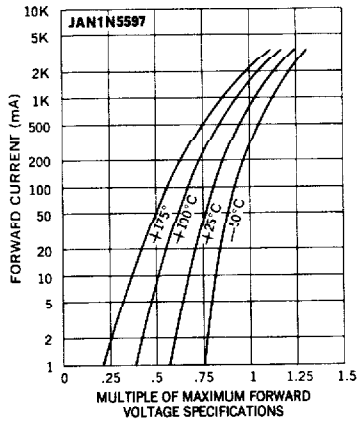
1. All marking shall be on cathode side of module.
2. Threaded stud ¼-28UNF-2A.
3. Threaded stud ⅜-24UNF-2A.
4. Threaded insert ¼-28UNF-2B.
5. Threaded insert ⅜-24UNF-2B.
6. Cathode connected to terminal 2.
7. Cathode connected to terminal 1.
8. Module contour within dimension A is not specified.

Microsemi Corp.
Watertown
The diode experts

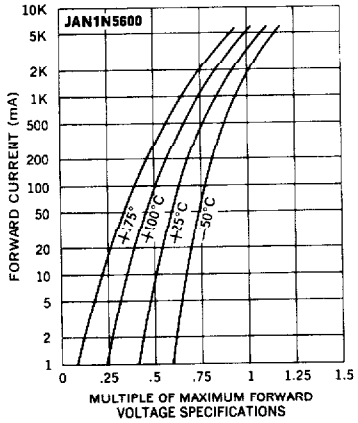
Electrical Specifications (at 25°C unless noted)

Type	PIV	Forward Voltage Drop		Maximum Leakage Current @ PIV		Capacitance @ V_R = 100V		Maximum Reverse Transient Energy Absorption
		Min.	Max.	T_A = 25°C	T_A = 100°C	Min.	Max.	
	kV			μA	μA	pf	pf	joules
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

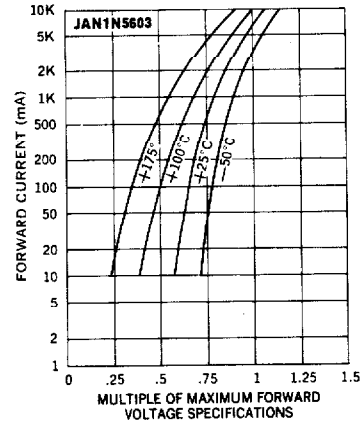
Typical Forward Voltage vs. Forward Current



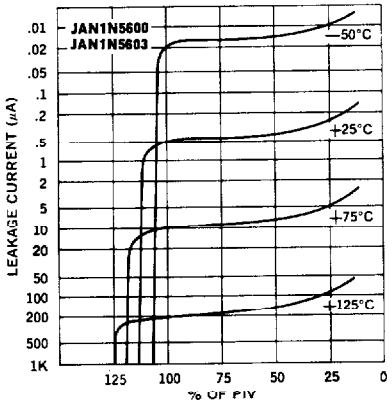
Typical Forward Voltage vs. Forward Current



Typical Forward Voltage vs. Forward Current



Typical Leakage Current vs. PIV



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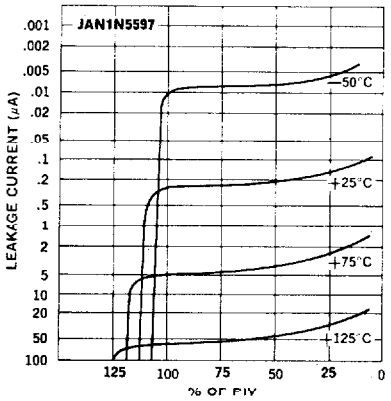
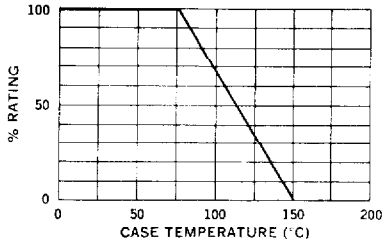
Typical Leakage Current vs. PIV



Current Derating Curve



Discrete diode inspection lot.

100% process conditioning of discrete diodes
1. High-temperature storage
2. Thermal Shock (temperature cycling)
3. Reverse-recovery time

100% Burn-In of discrete diodes
1. Measurement of specified parameters
2. Reverse bias burn-in
3. Measurement of specified parameters to determine delta
4. Lot rejection criteria based on rejects from burn-in test

Assembly and encapsulation of discrete diodes into bridge assembly

Inspection test to verify LTPD
Group A
Group B
Group C

Review of groups A, B, and C data for lot accept or reject.

Preparation for delivery

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