RECTIFIER ASSEMBLIES

Single Phase Bridges, 25 Amp, Military Approved

JAN SPA25
JAN SPB25
JAN SPC25
JAN SPD25

FEATURES

- Qualified to MIL-S-19500/446
- Current Rating: to 25A
- PIV: from 100 to 600V
- Surge Ratings of 150A
- Only Fused-in-Glass Diodes Used
- Controlled Avalanche Characteristics
- Aluminum Heat Sink Case, Electrically Insulated

DESCRIPTION

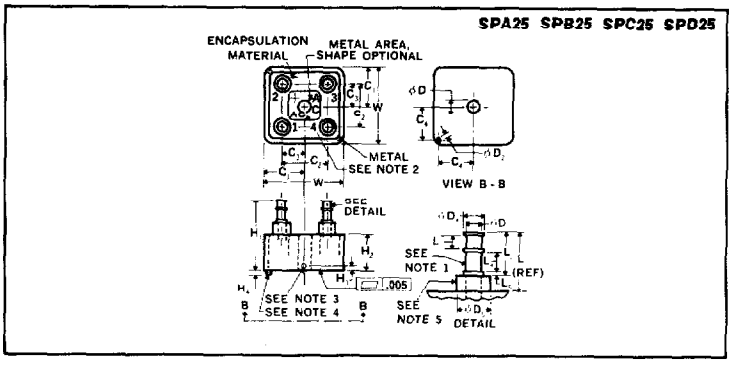
This series of military high-current single-phase bridges offer the utmost in reliability as required in military system designs. This series is assembled with diodes which have been subjected to 100% screening tests.

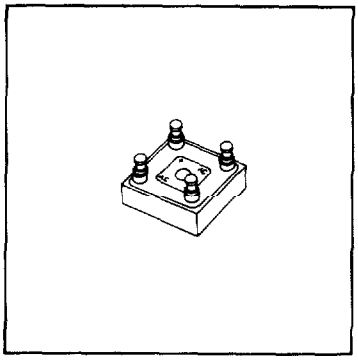
ABSOLUTE MAXIMUM RATINGS

Peak Inverse Voltage	100 to 600V
Maximum Average D.C. Output Current	
@ T_C = 55°C	25A
@ T_C = 100°C	15A
Non-Repetitive Sinusoidal Surge (8.3ms)	
@ T_C = 55°C	150A
Operating and Storage Temperature Range, T_C	−65°C to +150°C
Thermal Resistance Junction to Ambient	20°C/W
Junction to Case	2.5°C/W

Ltr	Dimensions			
	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
C_1	.552	.572	14.02	14.53
C_2	.624	.760	15.85	19.30
C_3	.312	.380	7.92	9.65
C_4	.495	.512	12.57	13.00
ϕD_1	.189	.195	4.80	4.95
ϕD_2	.057	.067	1.45	1.70
ϕD_3	.108	.118	2.74	3.00
ϕD_4	.141	.151	3.58	3.84
ϕD_5	.225	.235	5.72	5.97
H_1	.669	1.060	17.53	26.92
H_2	.300	.500	7.62	12.70
H_3	.040	.060	1.02	1.52
H_4	.042	.062	1.07	1.57
L_1	.370	.560	9.40	14.22
L_2	.307	.365	7.80	9.27
L_3	.089	.099	2.26	2.49
L_4	.132	.142	3.35	3.61
L_5	.026	.036	.66	.91
W	1.104	1.144	28.04	29.06

MECHANICAL SPECIFICATIONS





NOTES:

1. Terminals shall be hot tin dipped or silver plated.
2. Polarity shall be marked on terminal side of device.
3. Point at which Tc is read (must be in metal part of case).
4. Locating pin shall be adjacent to positive terminal.
5. Insulating sleeve shall be alumina (AL_2O_3) or equivalent.

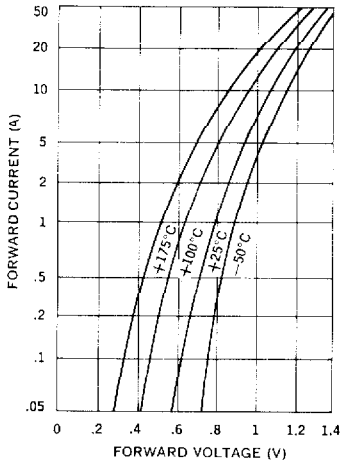
Microsemi Corp.
Watertown
The diode experts

Electrical Specifications (at 25°C unless noted)

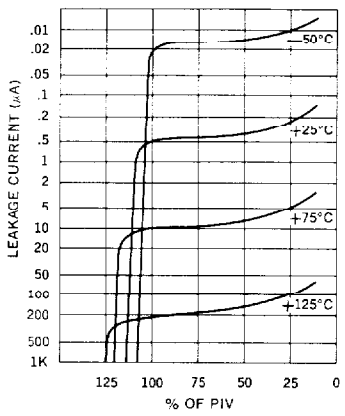
Type	PIV Per Leg	Peak Forward Voltage Drop*		Maximum Reverse Recovery Time†	Maximum Leakage Current Per Leg @ PIV	
					T_C = 25°C	T_C = 100°C
	Volts	Minimum	Maximum	μS	μA	μA
JAN SPA25 JAN SPB25 JAN SPC25 JAN SPD25	100 200 400 600	0.9V @ 39A(pk)	1.4V	2	2	150

*Peak forward voltage drop is measured at a pulse width of 8.3ms.
†Measured in a reverse recovery circuit switching from 0.5A forward to 1.0A reverse current recovery to 0.5A.

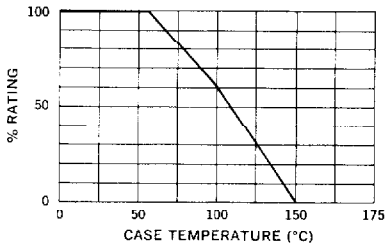
Typical Forward Voltage Per Leg vs. Forward Current

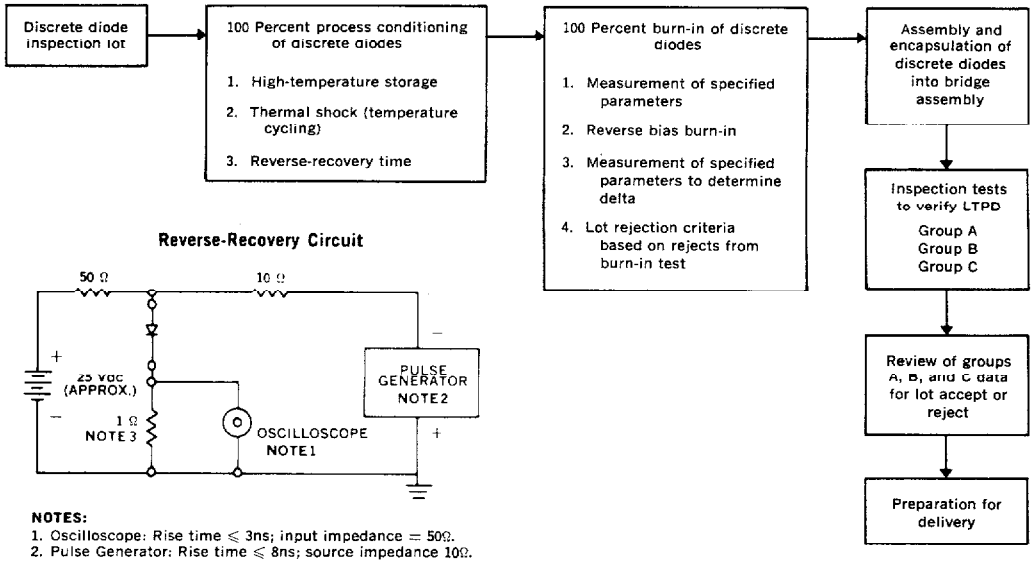


Typical Leakage Current vs. PIV



Current Derating Curve





Reverse-Recovery Circuit

NOTES:
1. Oscilloscope: Rise time ⩽ 3ns; input impedance = 50Ω.
2. Pulse Generator: Rise time ⩽ 8ns; source impedance 10Ω.
3. Current viewing resistor, non-inductive, coaxial recommended.

580 PLEASANT STREET • WATERTOWN, MA 02172
TEL. (617) 926-0404 • FAX (617) 924-1235

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