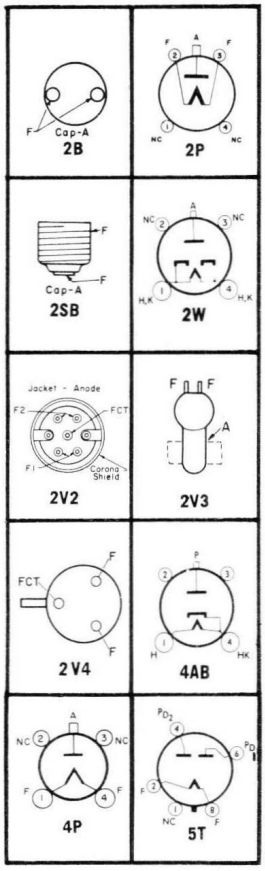
HIGH VACUUM RECTIFIERS

High vacuum rectifiers are two electrode tubes with heated cathodes. Electrons emitted from the cathode are attracted to the plate when it is positive with respect to the cathode. These electrons form the tube current. High vacuum rectifiers are not very efficient for rectifying large currents, since the space charge increases the tube drop, but in applications involving very high voltages at low currents or a linear characteristic they are necessary. The absence of gas provides very high insulation during the inverse half cycle. Pure tungsten or thoriated tungsten filaments are used to permit short delay periods between the application of filament voltage and plate voltage. High vacuum rectifiers are used in high voltage power supplies for electrostatic precipitation of vapors and dust such as the Precipitron® and high voltage testing of materials, to absorb high voltage inverse pulses such as reflected radar pulses, to permit unidirectional capacitor charging in pulse shaping networks, to produce the high accelerating voltages used in x-ray tubes and any other devices requiring small currents at very high voltages.

TUBE TYPE	NOTE	CATHODE		RATINGS				MECHANICAL		
		VOLTS	AMPS	INVERSE KV	PEAK MA	AVG. MA	DROP (3) VOLTS	MAX. OAL	MAX. DIAM.	BASE DWG.
WL-2X2A	(1)	2.5	1.75	12.5	60	7.5	240	4 17/32"	1 9/16"	4AB
WL-5R4-GYB	(1)	5	2	3100	715	150	123	4 1/4"	1 9/16"	5T
WL-102A	(1)	20.0	19	75	750	120	—	16 9/16"	5 1/8"	2B
WL-399	(2)	10.0	11.5	140	—	50	—	9 3/32"	3 9/16"	2B
WL-456	(1)	11.0	20	140	500	60	1760	19"	5 1/8"	2B
WL-481B	(1)	2.5	5	25	150	30	80 (5)	4 7/8"	1 9/16"	4P
WL-579B	(1)	2.5	6	20	270	25	510	7 7/16"	2 1/16"	2P
WL-613	(1)	11.0	10	140	200	20	1040	19"	5 1/8"	2SB
WL-836	(1)	2.5	5	5	1000	250	1800	6 9/16"	2 7/16"	2W
WL-5575	(1)	20.0	24	150	1000	160	525	25 1/4"	6 1/8"	2B
WL-5576	(1)	20.0	32	150	2500	400	1000	25 1/4"	6 1/8"	2B
WL-5859/5860	(2)	10.0	11.5	140	—	100	—	7 7/8"	2 9/16"	2B
WL-5934	(1)	2.5	6	20	270	25	520	6 7/8"	2 1/16"	4P
WL-5973	(1)	16.0	19.1	75	5000	1000	950	19 1/2"	6 1/8"	2B
WL-7658	(6)	4.0	6.8	125	750	150	900	8"	2 9/16"	2B
WL-8094	(1)	12.0	23	110	10000	650	2500	25 1/4"	6 1/8"	2B
WL-22800	(7)	7	250	50	60A	20A	850	14 1/2"	10 1/16"	2V2
WL-22801	(7)	5	125	30	30A	10A	950	11"	6 7/32"	2V3
WL-22802	(8)	7	250	50	60A	20A	850	15"	8 1/8"	2V2
WL-23095(9)	(8)	9	132	30	—	3.5A	Note 9	12 15/16	4 5/8"	2V3
WL-23102/102A	(1)	20	19	75	750	120	1800	16 7/8"	5 1/8"	2B
WL-23178(9)	(8)	16	32	15	—	2A	Note 9	9 1/2"	4 1/2"	2V4



Notes

1. Air cooled.
2. Oil cooled for X-ray applications.
3. At bogey filament conditions and peak current.
4. Excluding leads.
5. Measured at 30 ma.
6. Oil cooled.
7. Forced air cooled.
8. Water cooled.
9. Control diode.