

Rectifier Summary						
Type	Heater (volts)	Heater Current Requirement (amps)	Current Supplied (ma)	Voltage Drop (Volts)	approximate voltage increase * example: 1/2AC x 1.3 (GZ34) = voltage to plates	Pin/ base type
5Y3	5	2	125	60	1.1	8/5T
5Y3GT	5	2	125	20	1.1	8/5T
5AR4	5	1.9	225-250	30	1.3	8/5L
5R4 GYA/GYB	5	2	250	63-67	1.1 ?	8/5T
5U4G	5	3	225	44	1.2	8/5T
5U4GA	5	3	250	44	1.2	8/5T
5U4GB	5	3	275 ?	50	1.2	8/5T
5V4	5	2	175	25	1.2	8/5L
GZ34	5	1.9	250	30	1.3	8/5L
EZ80/6V4	6.3	.6	90	22	?	9
EZ81/6CA4	6.3	1	150	28	1.3	9/9M
6X4	6.3	.36a	70	22	1.1	9/5BS
6X5	6.3	.6	70	22	1.1	8/6S
6AX5GT	6.3	1.2	125	50	1.1	8
pair of diodes solid state					1/AC x 1.4 =	

Use this table as a "ballpark" guideline only.
See page 2 for calculations.

Tube Summary usage in Guitar Amps			
Tube type	Plate voltages used in guitar amps (Typical Vdc)	Heater Current Requirement (Amps @ 6.3vdc)	Typical Current requirement per pair (push/pull) (unless otherwise noted) (ma)
6V6	330v-425	.45	70
6L6	365v-475	.9	140
EL84/6QB5	250v-350	.76	90
EL34/6CA7	385v-475	1	120-160
6AQ5	250v-275	.45	80
5881	350v-420	.9	140
6550	400v-600	1.6	273
12AX7	130-160-200 ("typical" V1 position) 110-400 (other positions)	.3	pre-amp around 1-2 phase inverter 5-10

Per the datasheets,
the specified or calculated equivalent plate resistances
of common rectos are:

5Y3GT 50 V @ 125 mA => 400R
5R4WGB 35 V @ 100 mA => 350R
5U4G 58 V @ 225 mA => 270R
5U4GB 44 V @ 225 mA => 200R
5V4GA 25 V @ 175 mA => 150R
6CA4 20 V @ 150 mA => 110R
5AR4 16 V @ 200 mA => 82R

What is the voltage drop across a 5AR4 with 250 mA per plate?
Per Ohm's law $U = R * I = 82 * .25 = 20.5 \text{ V}$. Etc.