ELECTRON TUBE DATA SHEET

WESTERN ELECTRIC 422A ELECTRON TUBE

DESCRIPTION

The 422A is a double diode with indirectly heated cathodes. It is used as a full wave rectifier to supply direct current from an alternating current source.

CHARACTERISTICS

Heater Voltage	5 volts
Maximum Peak Inverse Voltage	1800 volts
Maximum D-C Output Current	400 milliamperes

FILE: RECTIFIER SECTION
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GENERAL CHARACTERISTICS

ELECTRICAL DATA

Heater Voltage	5 volts
Heater Current	3 amperes

MECHANICAL DATA

Cathode	Coated unipotential
Bulb	ST16
Base	Medium Shell Octal
Mounting Position	Any

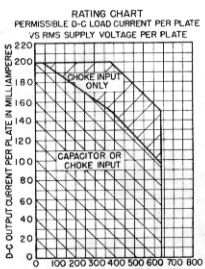
Dimensions and pin connections shown in outlined drawing on page 4.

RATINGS, Design-Center Values

Maximum Peak Inverse Voltage	1800 volts
Maximum Steady State Peak Plate Current per Plate	0.9 ampere
Maximum Transient Peak Plate Current per Plate	4 amperes
Maximum A-C Plate Supply Voltage per Plate	See rating chart
Maximum Steady State D-C Output Current per Plate	See rating chart
Minimum Effective Plate Supply Impedance per Plate	100 ohms
Tube Voltage Drop (at 300 milliamperes per plate)	26 volts
Maximum Bulb Temperature[1]	150 centigrade

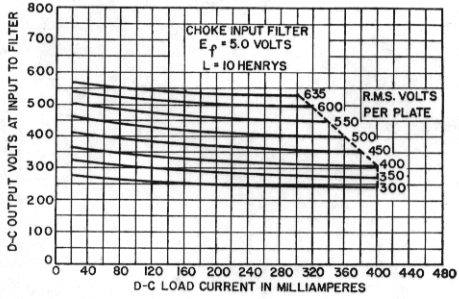
TYPICAL OPERATING CONDITIONS

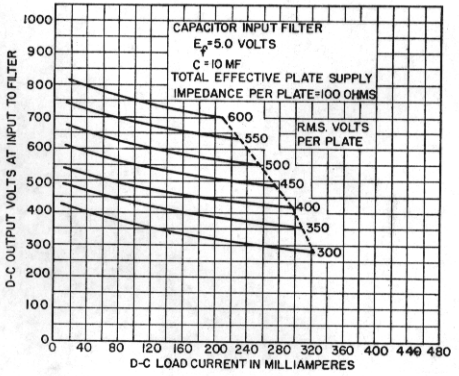
Full Wave Rectifier	Input To Filter	
	Capacitor	Choke
A-C Plate Supply Voltage per Plate	385	450 volts
Input Capacitor	10	--- microfarads
Input Choke (minimum)	---	10 henrys
Effective Plate Supply Impedance per Plate	100	--- ohms
D-C Output Current	300	350 milliamperes
D-C Output Voltage	395	360 volts

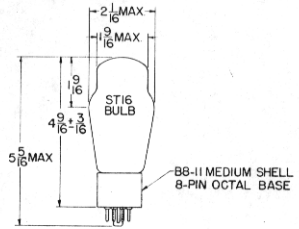


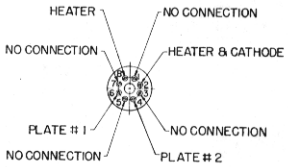
Note: Operating point for capacitor input to filter must be within the lower cross-hatched area designated "Capacitor or Choke Input" while that for choke input to filter must be at some point within either cross-hatched area.

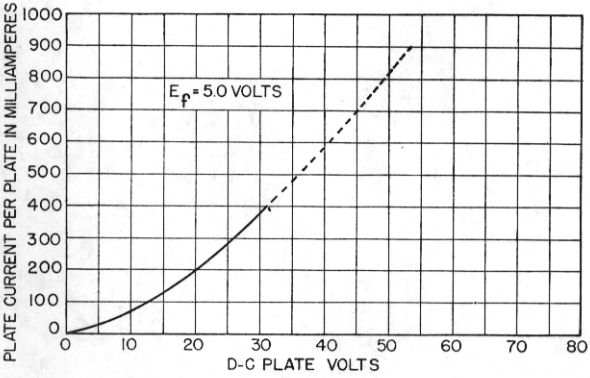
Note 1: Temperature limit given is that required to obtain optimum tube life. Forced-air cooling is necessary to meet this limit. Maximum permissible bulb temperature is 200 centigrade.











A development of Bell Telephone Laboratories, the research laboratories of the American Telephone and Telegraph Company and the Western Electric Company.