

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

422A-Page 2

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.

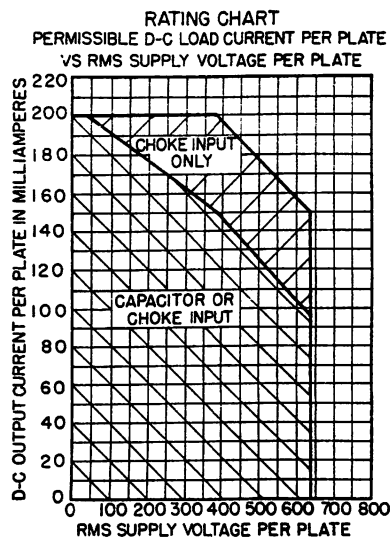
RATINGS, Design-Center Values

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 Temperature¹ - - - - - 150 centigrade

TYPICAL OPERATING CONDITIONS

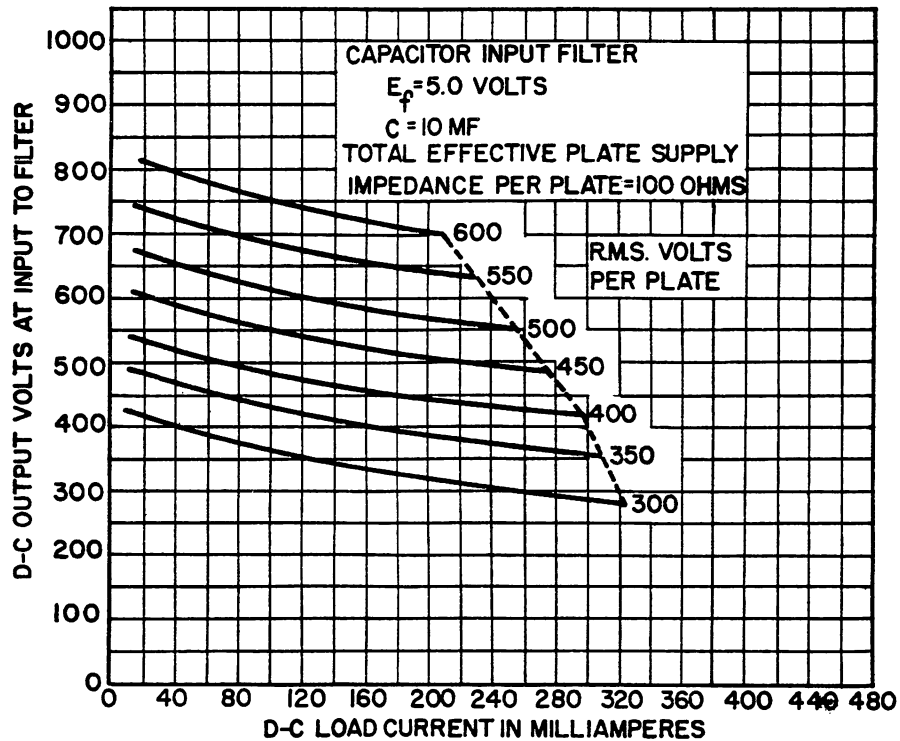
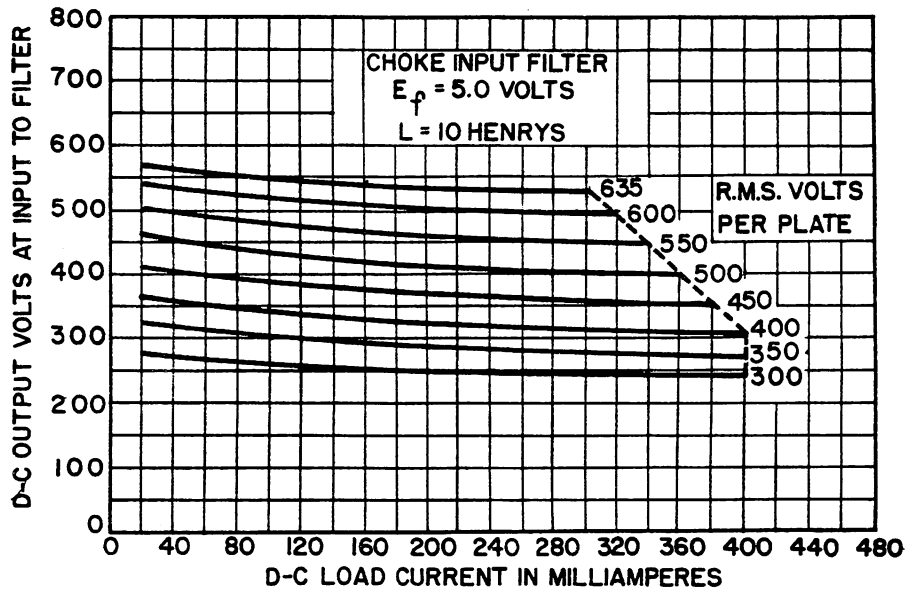
Full Wave Rectifier

	<u>Input To Filter</u>	
	<u>Capacitor</u>	<u>Choke</u>
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

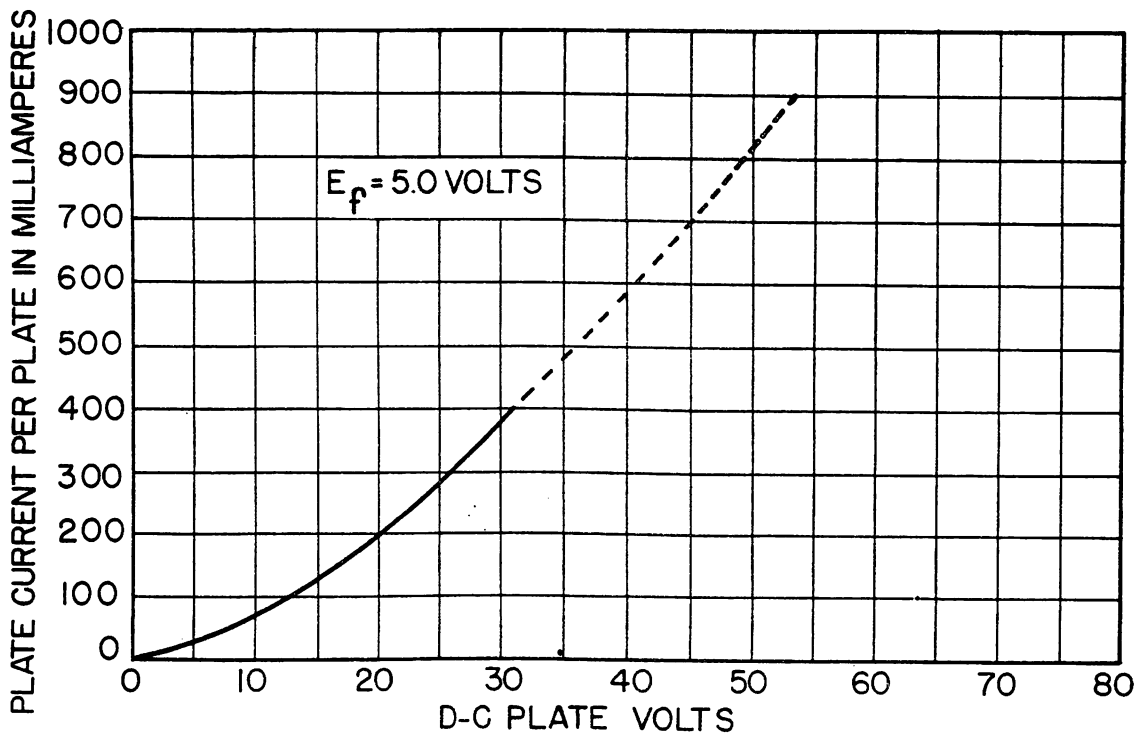
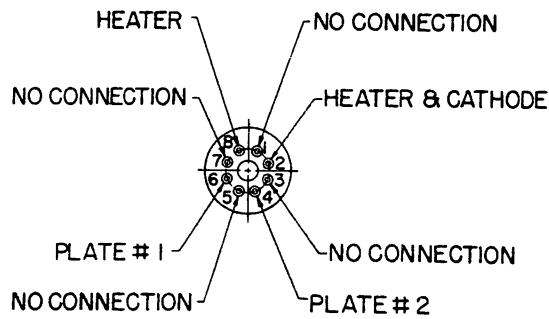
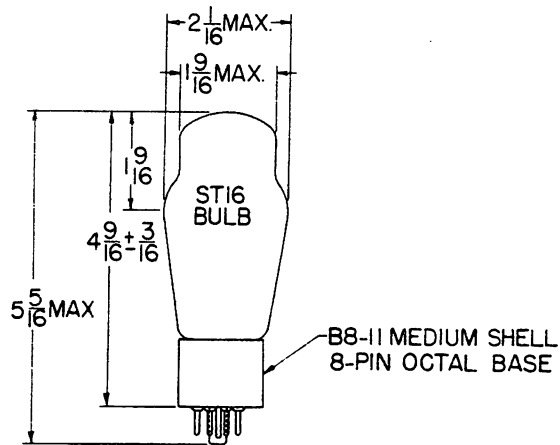


Note: Operating point for capacitor input to filter must be within the lower cross-hatched area designated "Capacitor or Choke Input" while that for choke input to filter must be at some point within either cross-hatched area.

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.



422A-Page 4



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