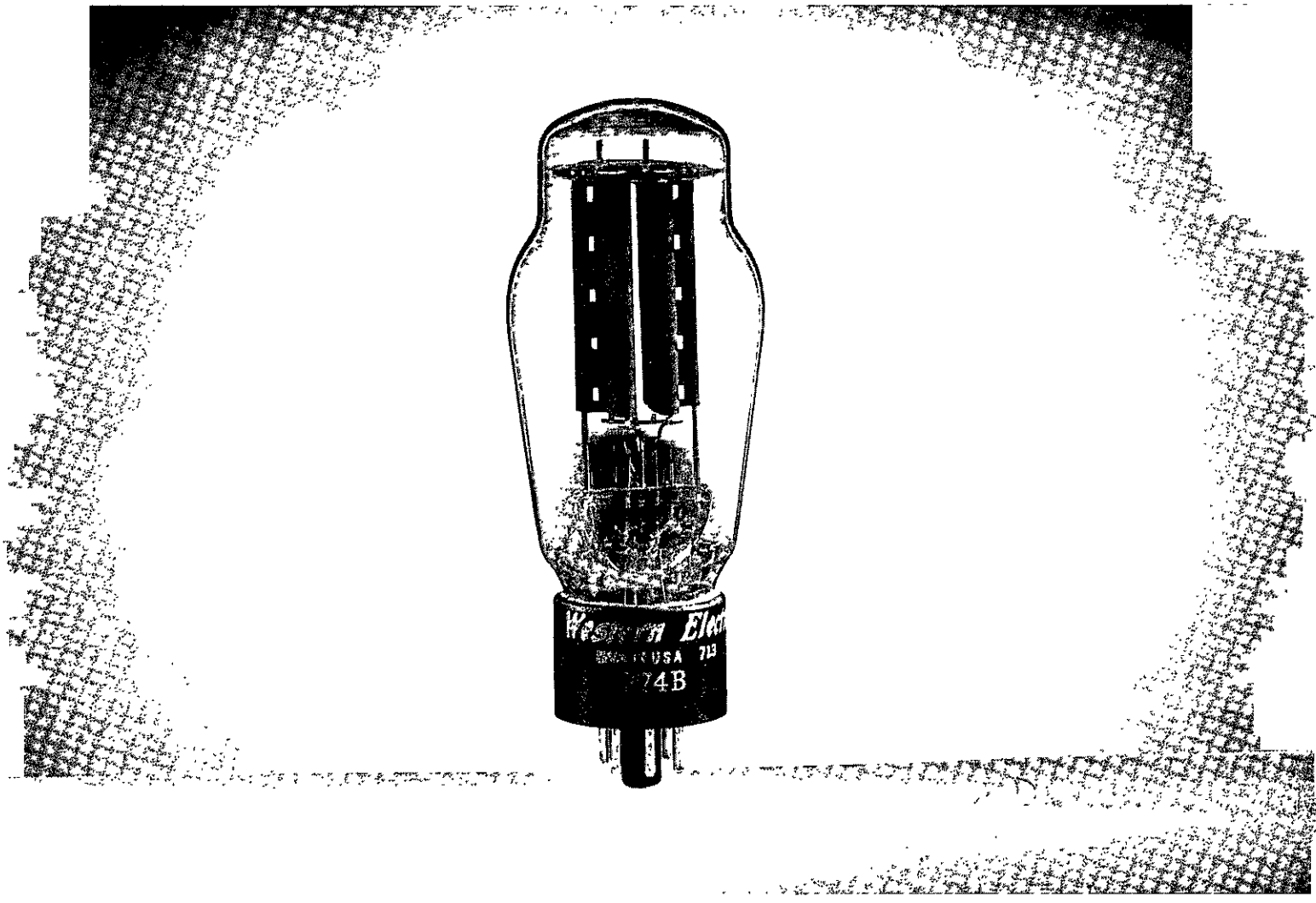


RECTIFIER
FULL-WAVE, HIGH VACUUM

Western Electric

DESCRIPTION

The 274B is a filamentary, octal based, full-wave rectifier designed to supply direct current from an alternating current source.

CHARACTERISTICS

Filament Voltage	5.0 volts
Maximum Plate Voltage (RMS) per Plate	660 volts
Maximum D-C Output Current	225 milliamperes

GENERAL CHARACTERISTICS

ELECTRICAL DATA

Filament Voltage	5.0 volts
Filament Current	2.0 amperes

MECHANICAL DATA

Cathode	Coated filament
Bulb	ST16
Base	Medium 5-pin, octal
Mounting Position	Preferably vertical; if horizontal, pins #1 and #4 should be in vertical plane

Dimensions and pin connections shown in outline drawing on Page 4

MAXIMUM RATINGS, Design-Center Values

Peak Inverse Voltage	1500 volts
Peak Plate Current per Plate	675 milliamperes
Peak Transient Plate Current per Plate	2.5 amperes

With Choke-Input Filter:

A-C Plate Voltage per Plate (RMS)	660 volts
D-C Output Current	225 milliamperes
Minimum Input-Choke Inductance	3 henrys

With Condenser-Input Filter:

A-C Plate Voltage per Plate (RMS)	450 volts
D-C Output Current	160 milliamperes
Minimum Total Effective Plate-Supply Impedance per Plate	100 ohms

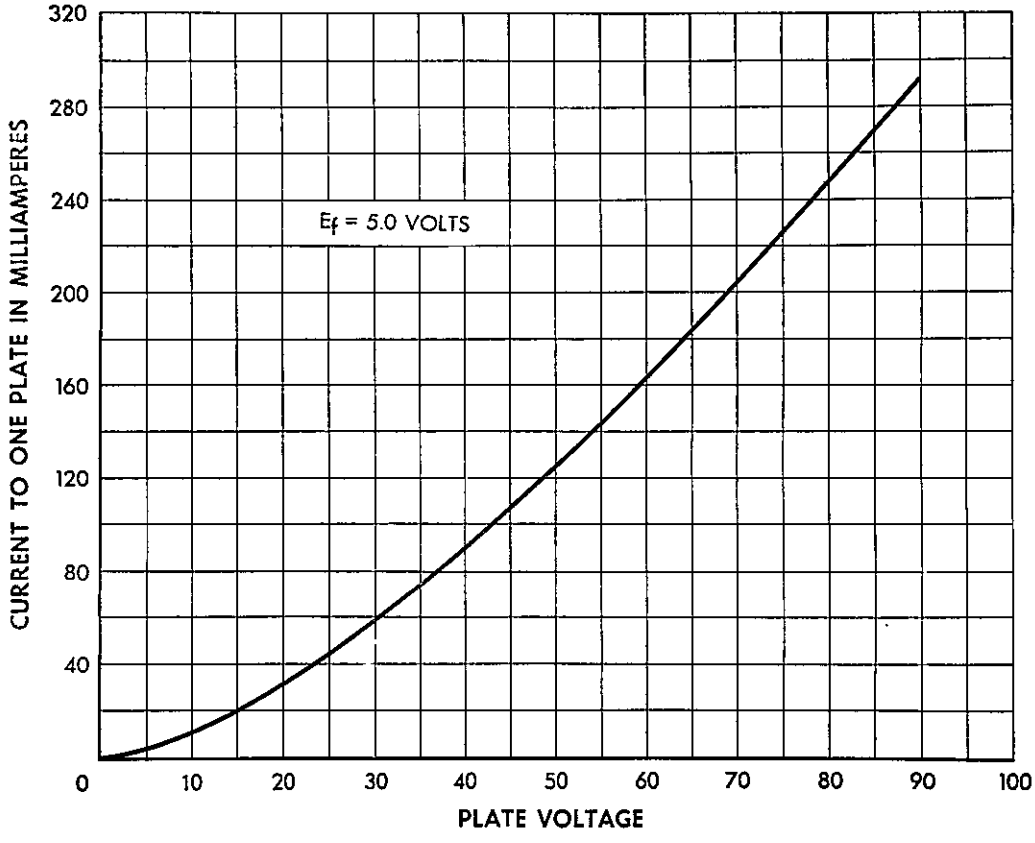
TYPICAL OPERATING CONDITIONS

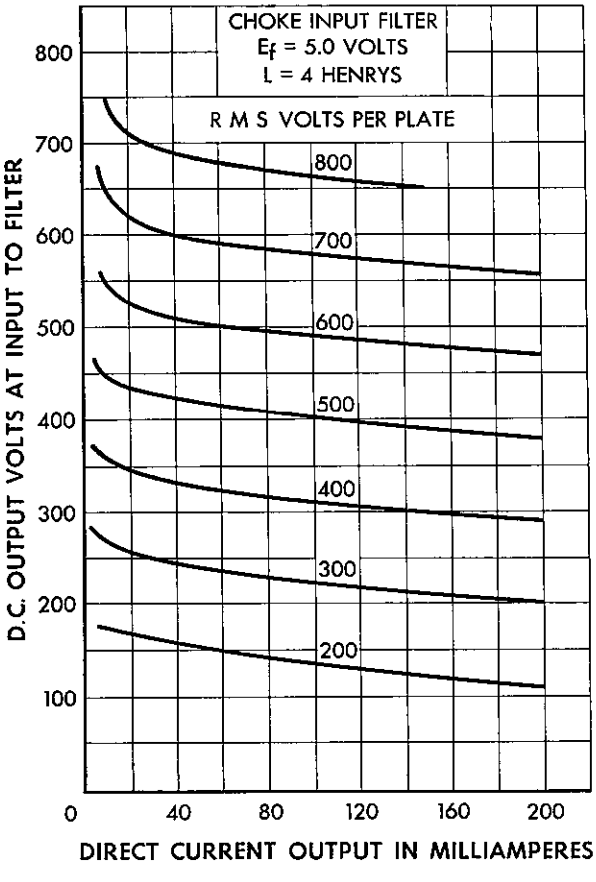
With Choke-Input Filter:

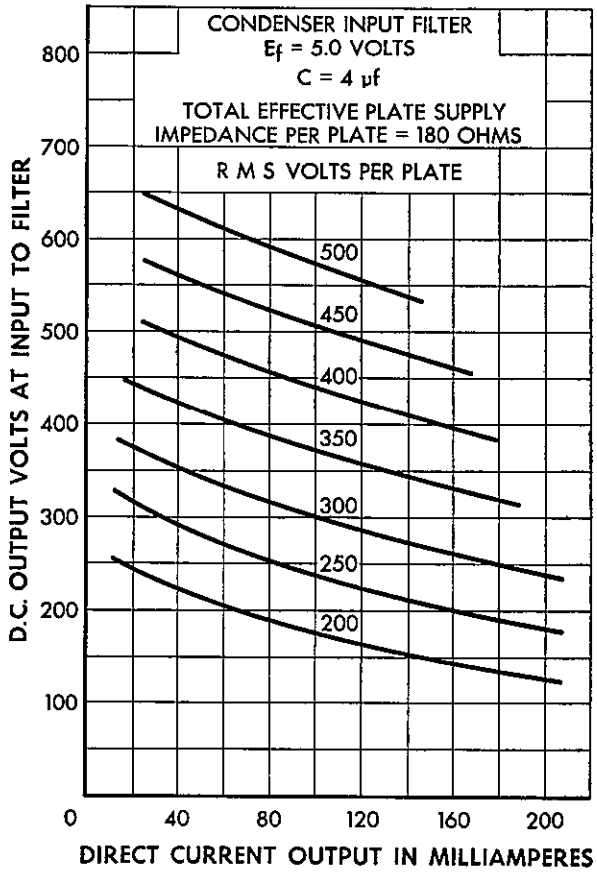
A-C Plate Voltage per Plate (RMS)	550 volts
D-C Output Current	160 milliamperes
D-C Output Voltage, Approximate, at Input to Filter	430 volts
Filter Input Choke	5 henrys

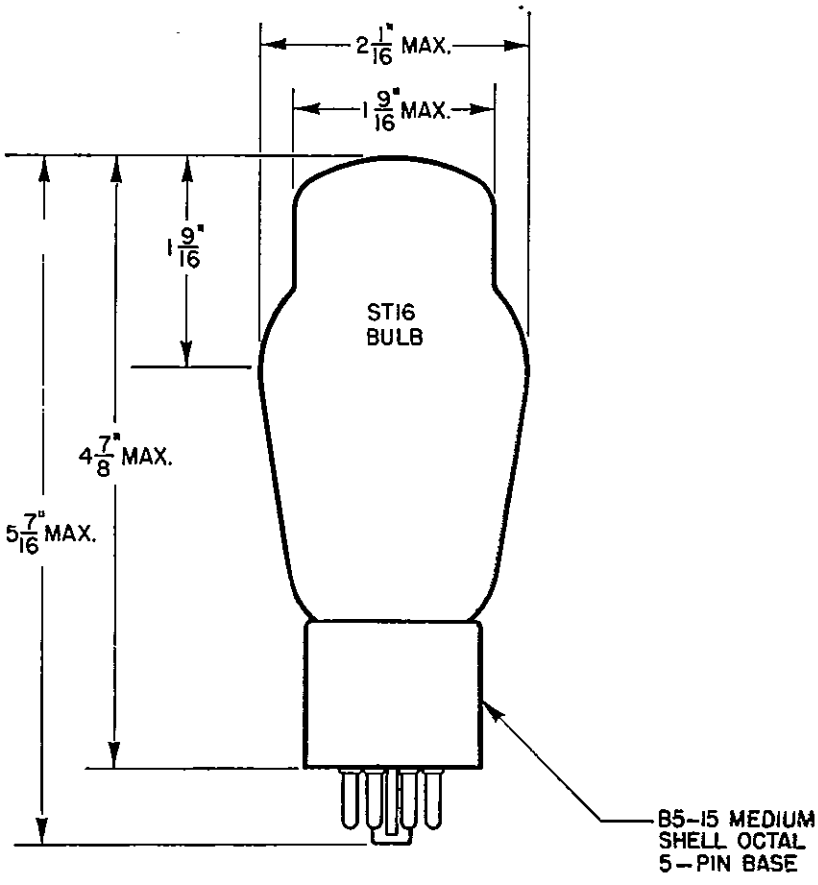
With Condenser-Input Filter:

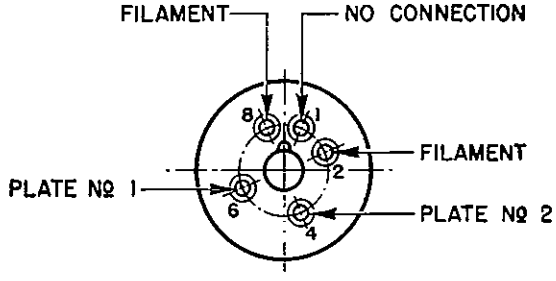
A-C Plate Voltage per Plate (RMS)	450 volts
D-C Output Current	140 milliamperes
D-C Output Voltage, Approximate, at Input to Filter	475 volts
Total Effective Plate-Supply Impedance per Plate	180 ohms
Filter Input Condenser	4 microfarads


CURRENT TO ONE PLATE IN MILLIAMPERES
320
280
240
200
160
120
80
40
0
Ef = 5.0 VOLTS
10
20
30
40
50
60
70
80
90
100
PLATE VOLTAGE


CHOKE INPUT FILTER
Ef = 5.0 VOLTS
L = 4 HENRYS
R M S VOLTS PER PLATE
800
700
600
500
400
300
200
D.C. OUTPUT VOLTS AT INPUT TO FILTER
800
700
600
500
400
300
200
100
0
40
80
120
160
200
DIRECT CURRENT OUTPUT IN MILLIAMPERES


CONDENSER INPUT FILTER
Ef = 5.0 VOLTS
C = 4 µf
TOTAL EFFECTIVE PLATE SUPPLY
IMPEDANCE PER PLATE = 180 OHMS
R M S VOLTS PER PLATE
500
450
400
350
300
250
200
D.C. OUTPUT VOLTS AT INPUT TO FILTER
800
700
600
500
400
300
200
100
0
40
80
120
160
200
DIRECT CURRENT OUTPUT IN MILLIAMPERES





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