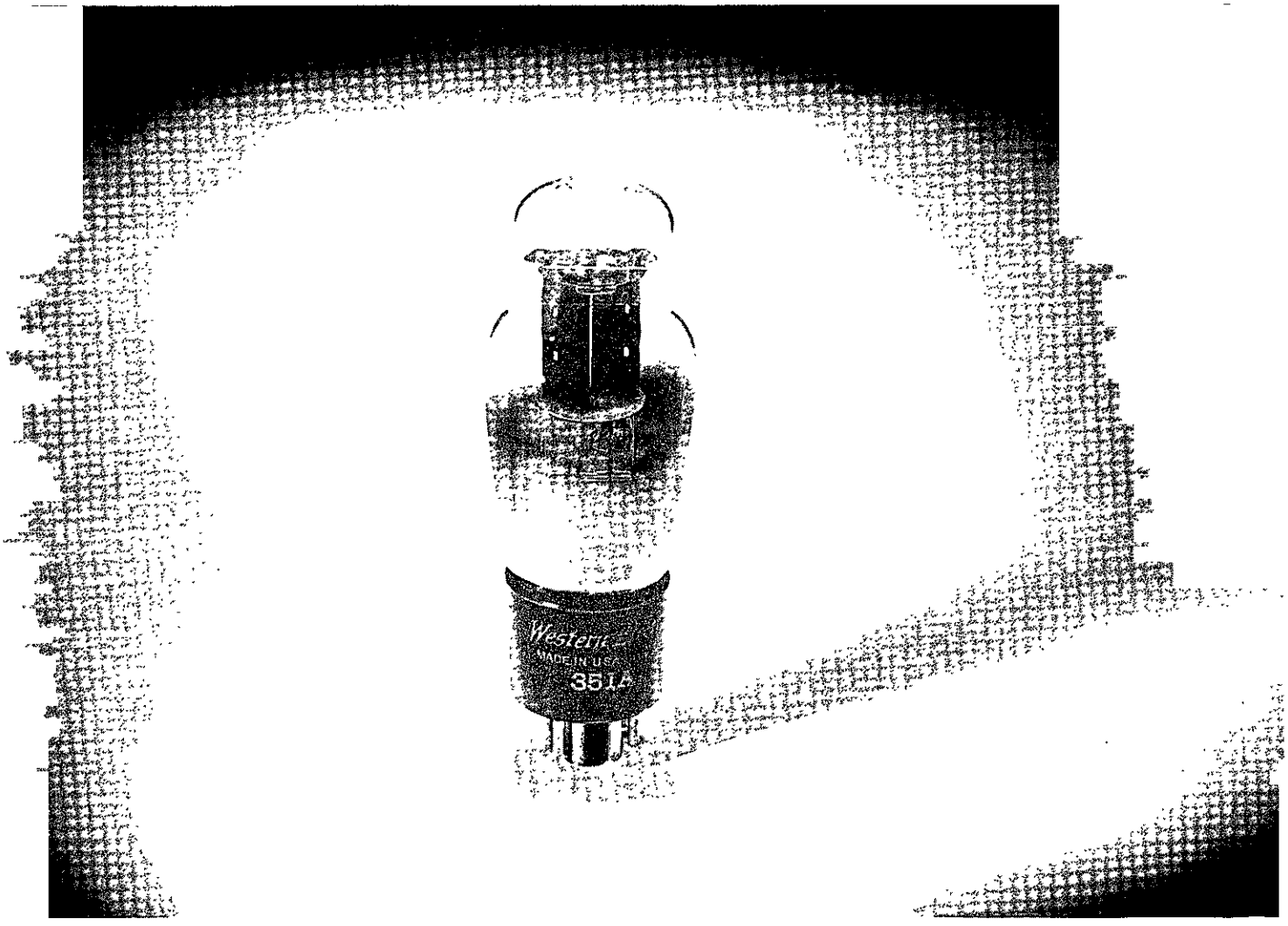


RECTIFIER
FULL-WAVE, HIGH VACUUM

Western Electric

DESCRIPTION

The 351A is an octal based full-wave rectifier with indirectly heated cathodes. It is designed to supply direct current from an alternating current source or to rectify radio-frequency currents for feedback purposes in broadcast transmitters.

CHARACTERISTICS

Heater Voltage	6.3 volts
Maximum Plate Voltage (RMS) per Plate	400 volts
Maximum D-C Output Current	100 milliamperes

GENERAL CHARACTERISTICS

ELECTRICAL DATA

Heater Voltage	6.3 volts
Heater Current	1.0 ampere

MECHANICAL DATA

Cathode	Coated unipotential
Bulb	ST12
Base	Small shell octal
Mounting Position	Any

Dimensions and pin connections shown in outline drawing on Page 4

MAXIMUM RATINGS, Design-Center Values

Peak Inverse Voltage	1250 volts
Peak Plate Current per Plate	300 milliamperes
Peak Transient Plate Current per Plate	1.0 ampere
Peak Heater-Cathode Voltage	450 volts

With Choke-Input Filter:

A-C Plate Voltage per Plate (RMS)	400 volts
D-C Output Current	100 milliamperes
Minimum Input-Choke Inductance	4 henrys

With Condenser-Input Filter:

A-C Plate Voltage per Plate (RMS)	350 volts
D-C Output Current	100 milliamperes
Minimum Total Effective Plate-Supply Impedance per Plate	75 ohms

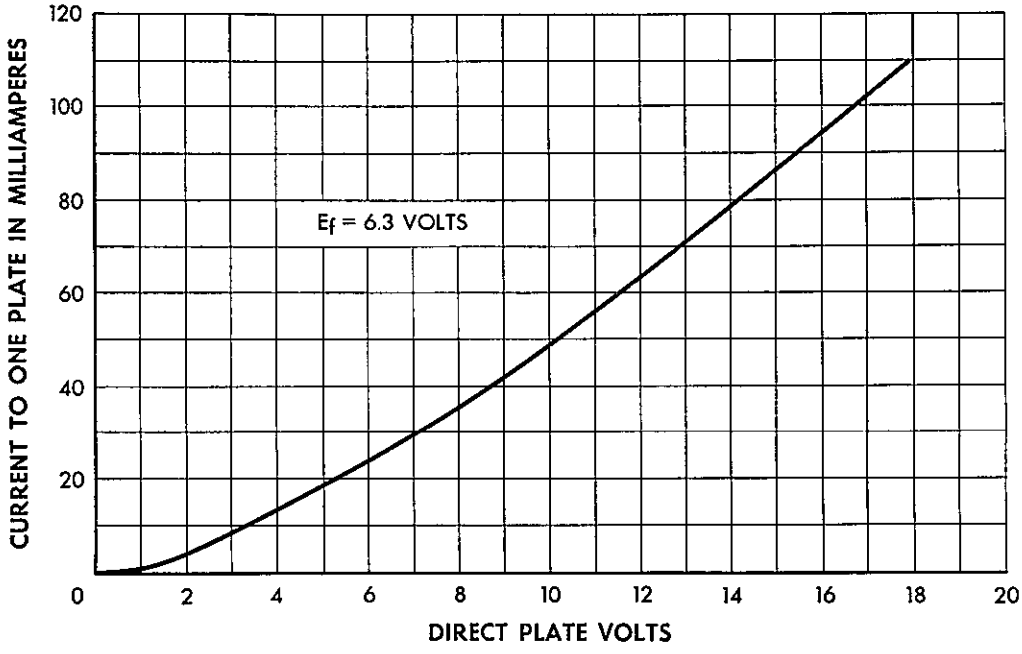
TYPICAL OPERATING CONDITIONS

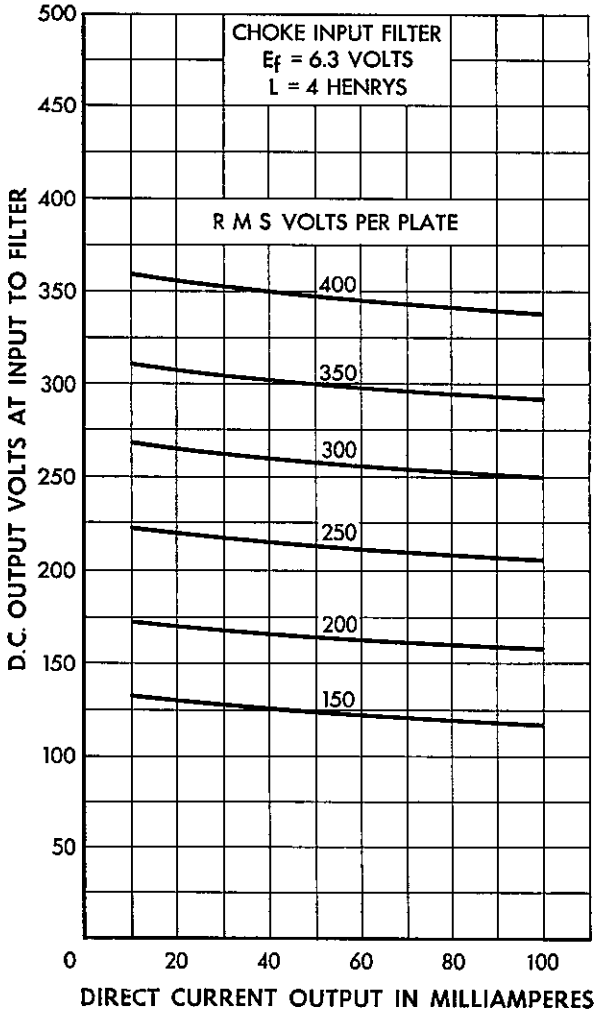
With Choke-Input Filter:

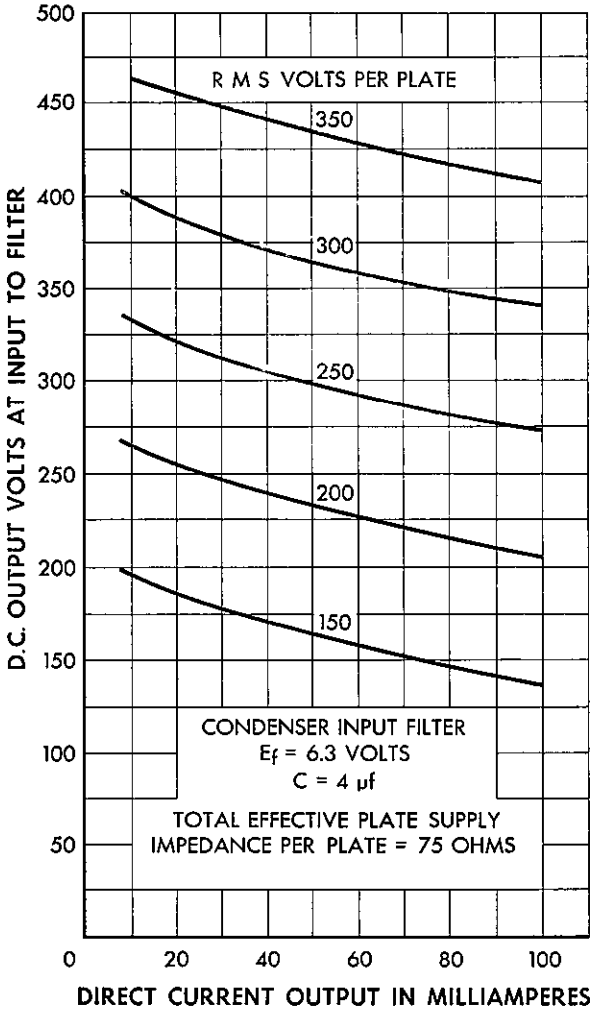
A-C Plate Voltage per Plate (RMS)	350 volts
D-C Output Current	100 milliamperes
D-C Output Volts, Approximate, at Input to Filter	290 volts
Filter Input Choke	6 henrys

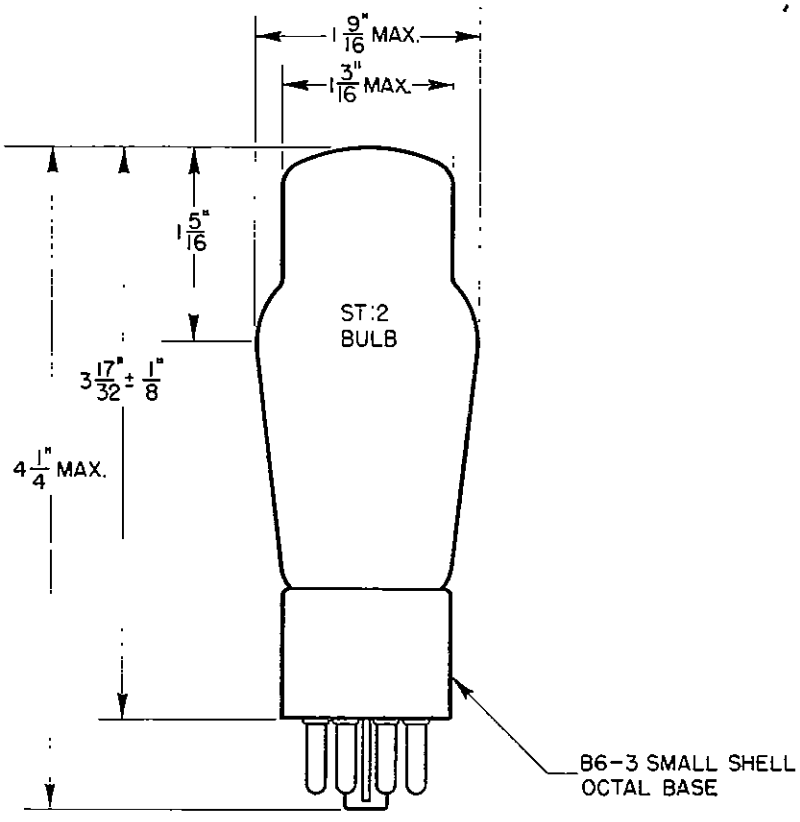
With Condenser-Input Filter:

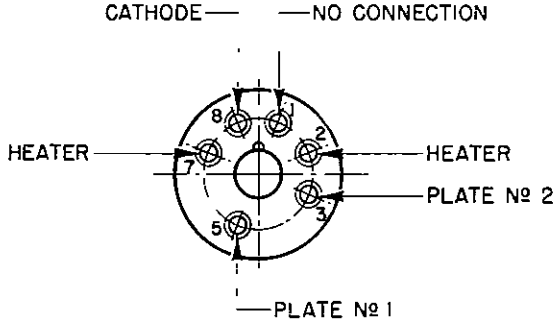
A-C Plate Voltage per Plate (RMS)	300 volts
D-C Output Current	90 milliamperes
D-C Output Volts, Approximate, at Input to Filter	340 volts
Total Effective Plate-Supply Impedance per Plate	150 ohms
Filter Input Condenser	4 microfarads


CURRENT TO ONE PLATE IN MILLIAMPERES
120
100
80
60
40
20
0
2
4
6
8
10
12
14
16
18
20
Ef = 6.3 VOLTS
DIRECT PLATE VOLTS


D.C. OUTPUT VOLTS AT INPUT TO FILTER
500
450
400
350
300
250
200
150
100
50
0
20
40
60
80
100
CHOKE INPUT FILTER
Ef = 6.3 VOLTS
L = 4 HENRYS
R M S VOLTS PER PLATE
400
350
300
250
200
150
DIRECT CURRENT OUTPUT IN MILLIAMPERES


D.C. OUTPUT VOLTS AT INPUT TO FILTER
500
450
400
350
300
250
200
150
100
50
0
20
40
60
80
100
R M S VOLTS PER PLATE
350
300
250
200
150
CONDENSER INPUT FILTER
Ef = 6.3 VOLTS
C = 4 µf
TOTAL EFFECTIVE PLATE SUPPLY
IMPEDANCE PER PLATE = 75 OHMS
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