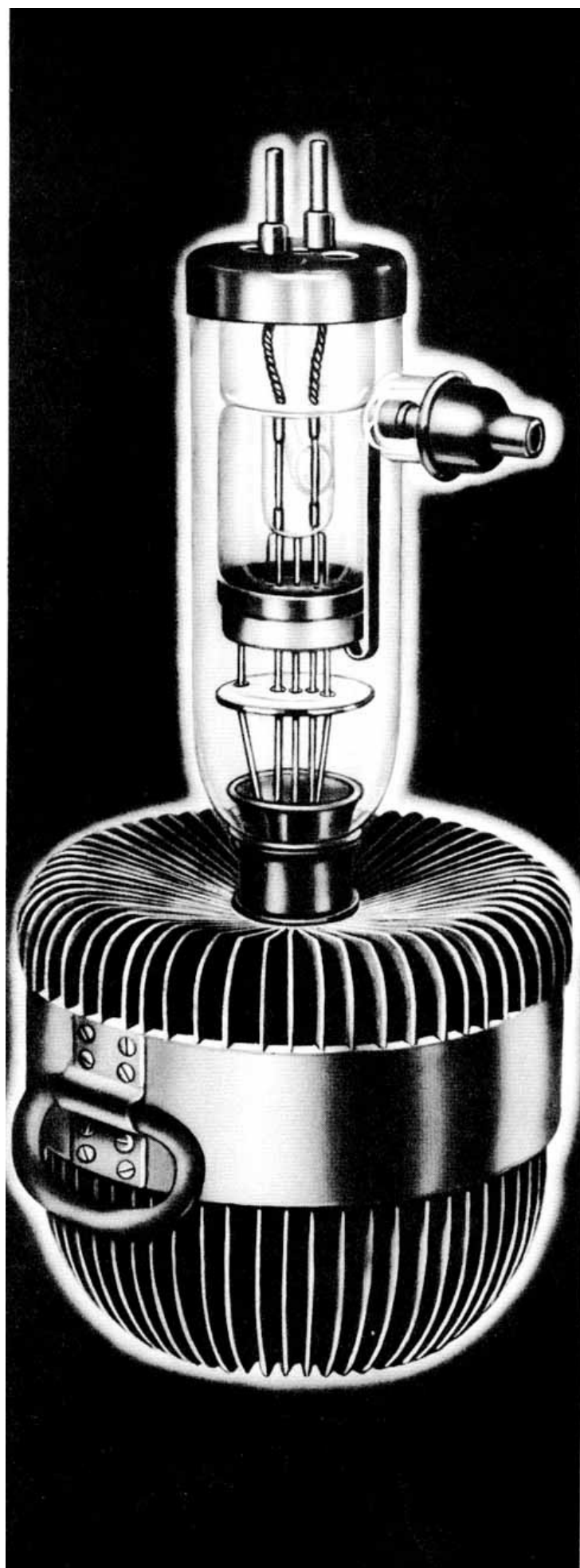


FEDERAL

F-342-R TRANSMITTING TUBE



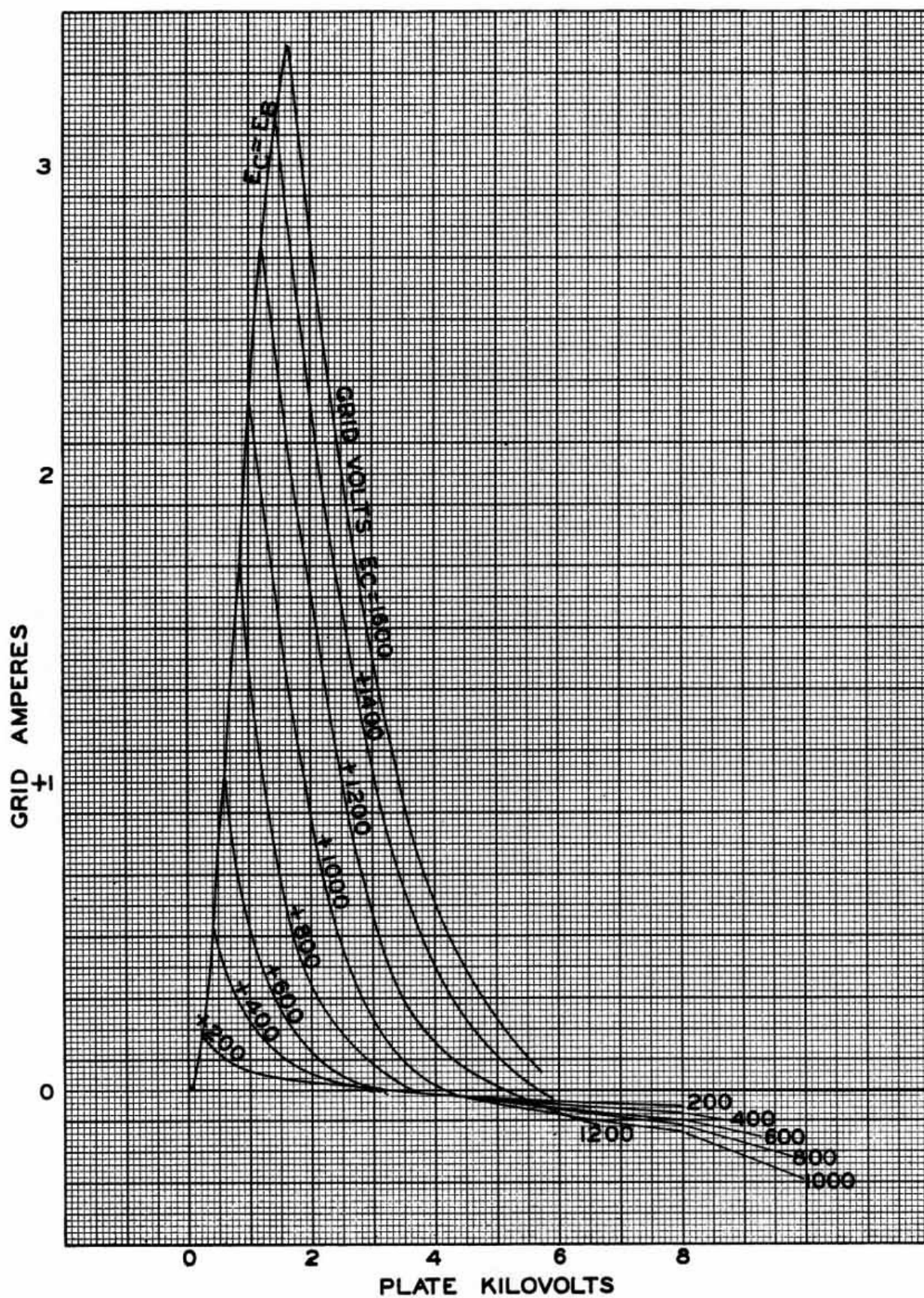
TECHNICAL DATA

Main Use	R-F Power Amplifier, Oscillator
Number of Electrodes	3
Filament Voltage	20 volts
Current	71 amperes
Type	Tungsten
Thermionic Emission	13.5 amperes
Average Characteristic Values calculated at $E_b=10000$, $I_b=0.9$ ampere, $E_f=20$ volts.	
Grid Voltage (approximate)	0 volts
Amplification Factor	40
Mutual Conductance	6900 micromhos
Plate Resistance	5800 ohms
Approximate Direct Inter-electrode Capacitances	
Plate to Grid	27 mmf.
Grid to Filament	19 mmf.
Plate to Filament	2.5 mmf.
Type of Cooling	Forced Air
Mounting	Special

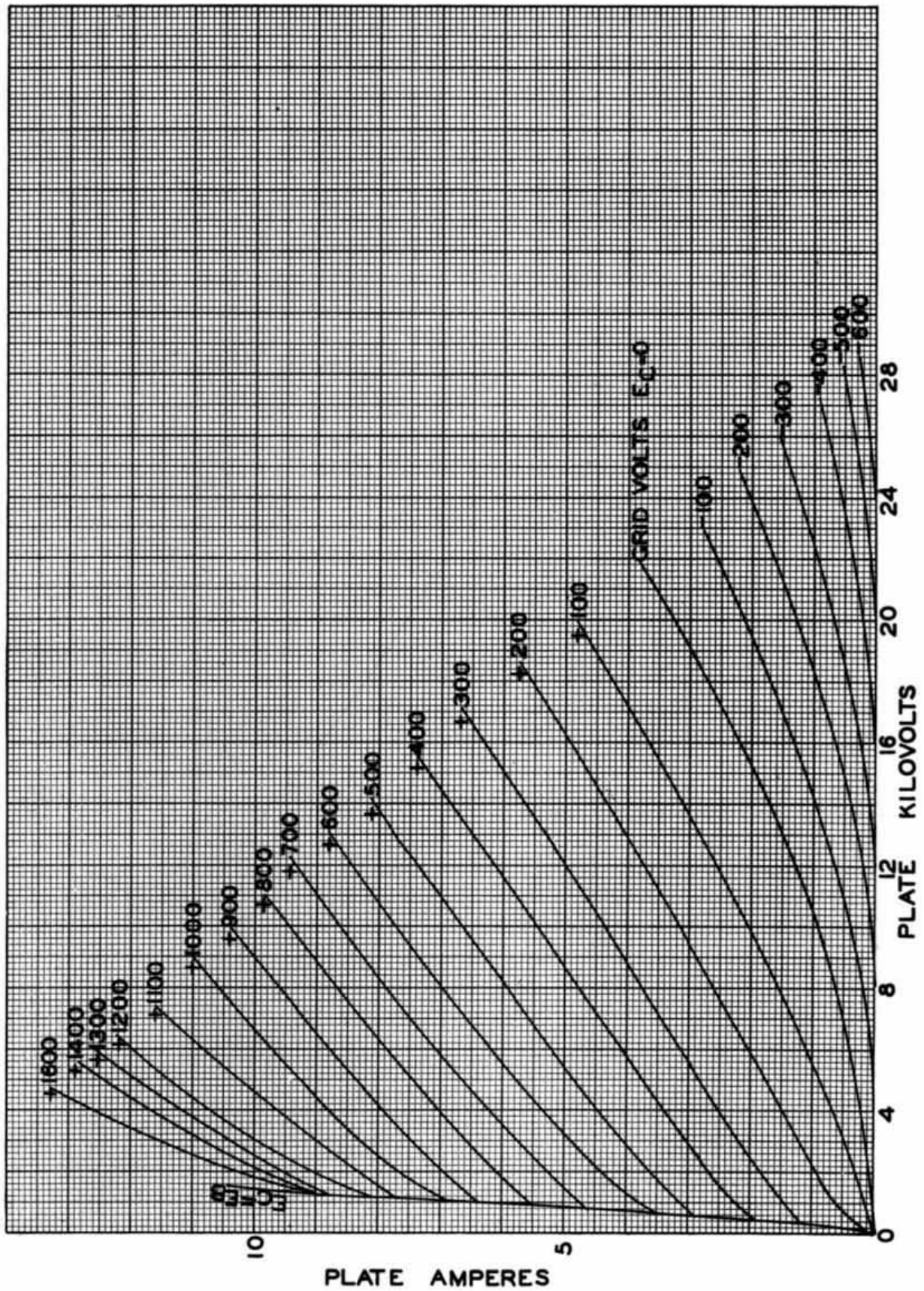
The information above and in the following pages by no means represents exact conditions of operation to be imposed for any particular situation. Since tubes are used under many widely different conditions the manufacturer will gladly furnish information regarding characteristics for design purposes.

Manufactured by
FEDERAL TELEGRAPH CO.
200 Mt. Pleasant Avenue Newark, N. J., U.S.A.

AVERAGE GRID CHARACTERISTICS F-342-R Transmitting Tube



AVERAGE PLATE CHARACTERISTICS F-342-R Transmitting Tube



Maximum Ratings

F-342-R Transmitting Tube
For Maximum Frequency of 4.0 Megacycles

CLASS B R-F POWER AMPLIFIER TELEPHONY

(Carrier conditions per tube for use with modulation factor up to 1.0)

D-C Plate Voltage	20000 volts
D-C Plate Current	2.0 amperes
R-F Grid Current	40 amperes
Plate Dissipation	10000 watts

CLASS C R-F POWER AMPLIFIER TELEPHONY-PLATE MODULATED

(Carrier conditions per tube for use with modulation factor up to 1.0)

D-C Plate Voltage	14000 volts
D-C Plate Current	2.0 amperes
D-C Grid Current	0.30 ampere
R-F Grid Current	40 amperes
Plate Dissipation	7000 watts

CLASS C R-F POWER AMPLIFIER AND OSCILLATOR-TELEGRAPHY

(Key-down conditions per tube without modulation)*

D-C Plate Voltage	20000 volts
D-C Grid Voltage	-5000 volts
D-C Plate Current	3.0 amperes
D-C Grid Current	0.30 ampere
R-F Grid Current	40 amperes
Plate Input	50000 watts
Plate Dissipation	10000 watts

* Modulation essentially negative, may be used if the positive peak of the audio frequency envelope does not exceed 115% of the carrier condition value.

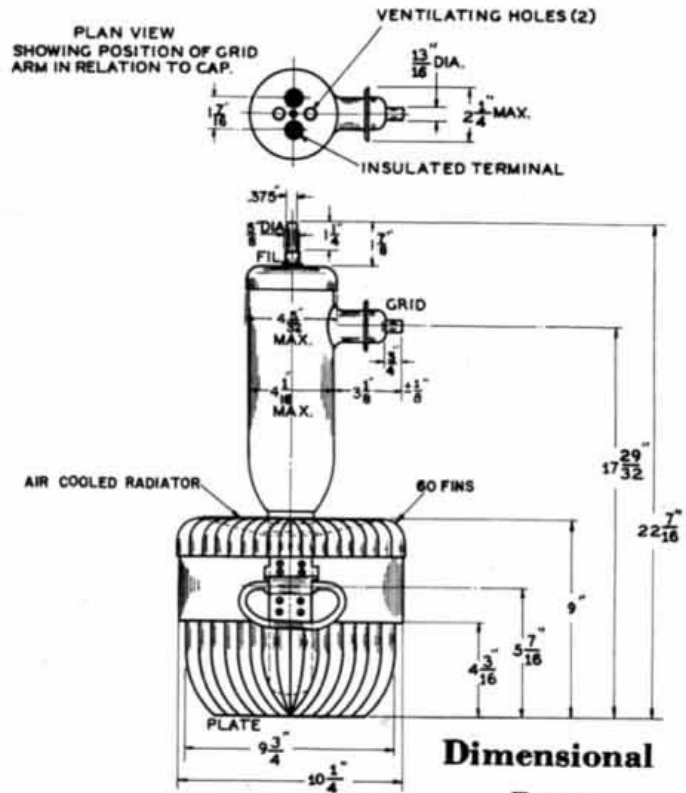
Air Requirements Per Tube

For Max. Inlet Air Temperature = 25° Cent.

Net Anode Dissipation (1) KW	Minimum Recommended Air Flow Cu./ft./min.	Approx. Air Pressure (2) Inches of Water	Average Air Velocity Through Fin. Assembly ft./min.	Approximate Air Temperature Rise Degrees Cent.
5.	520	0.2	1380	22.5
7.5	1000	0.6	2660	16.
10.	1750	1.9	4650	10.

(1) This is anode dissipation exclusive of filament power dissipated through anode.

(2) This pressure is measured at the base of tube mounting. Duct work must be considered to determine pressure against which blower must deliver required amount of air.



**Dimensional
Data**