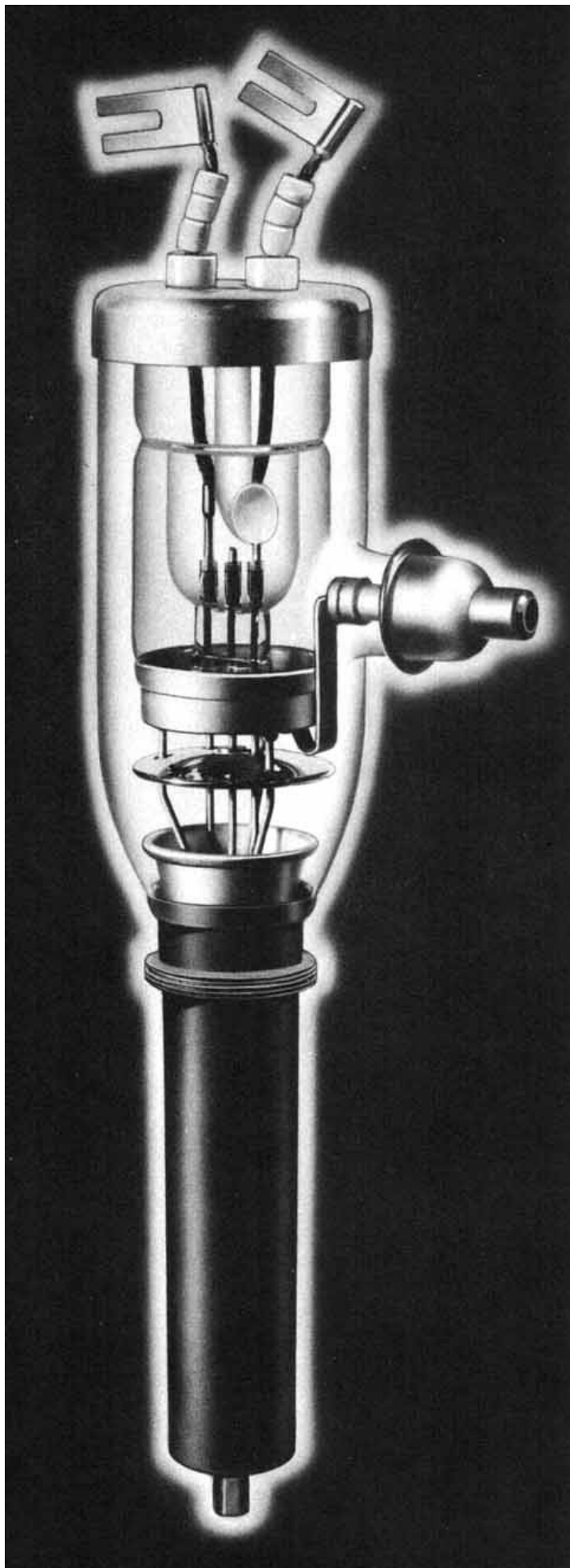


FEDERAL

F-110-X TRANSMITTING TUBE



TECHNICAL DATA

Main Use	R-F Power Amplifier, Oscillator
Number of Electrodes	3
Filament Voltage	28 volts
Current	51 amperes
Type	Tungsten
Thermionic Emission	12.5 amperes

Average Characteristic Values calculated at
 $E_b=10000$ volts, $I_b=1.0$ ampere, $E_f=28$ volts.

Grid Voltage (approximate)	0 volts
Amplification Factor	40
Mutual Conductance	6700 micromhos
Plate Resistance	6000 ohms

Approximate Direct Inter-electrode Capacitances

Plate to Grid	27 mmf.
Grid to Filament	19 mmf.
Plate to Filament	3 mmf.

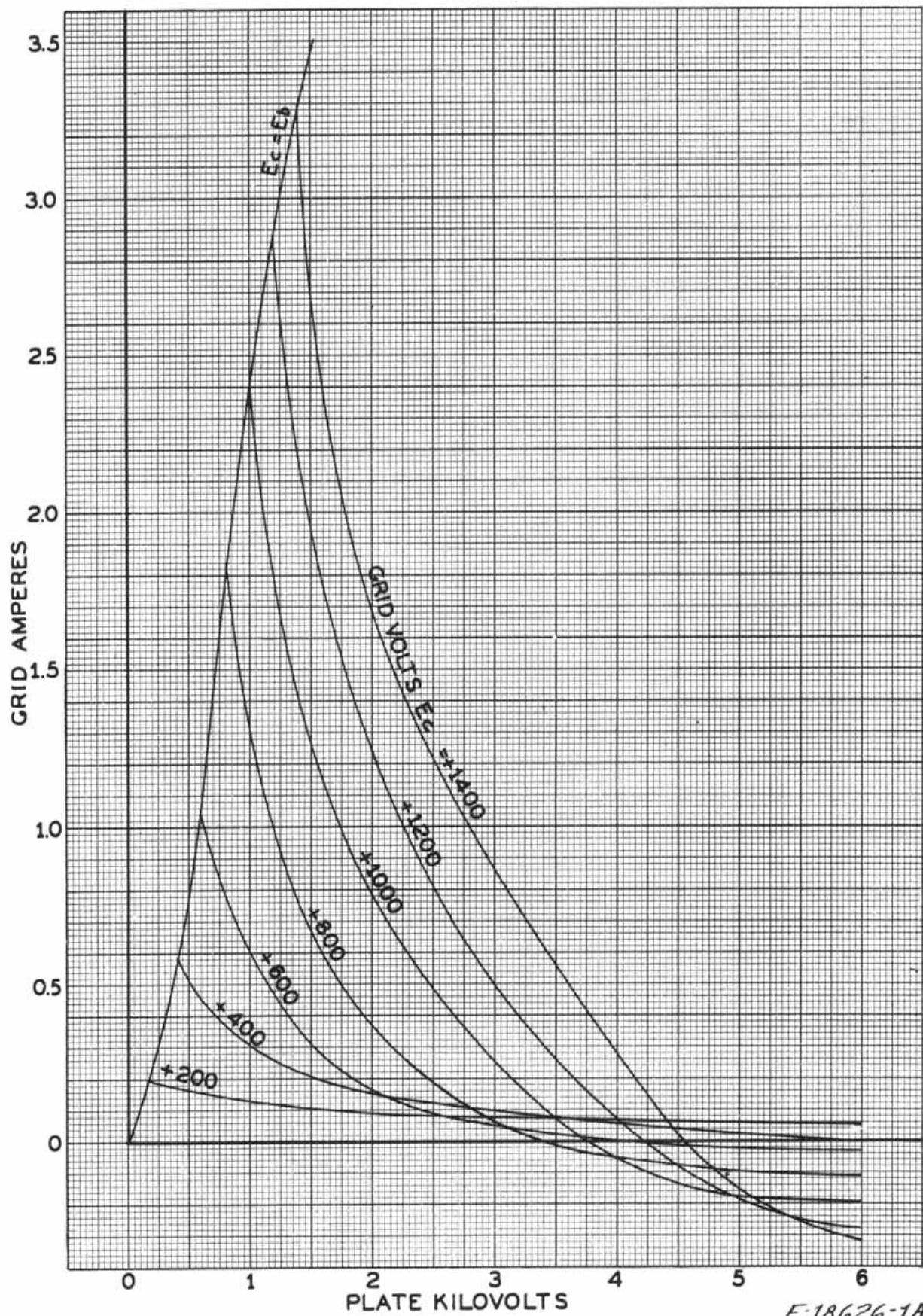
Type of Cooling Water

Water Jacket Federal Type 1001-A

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.

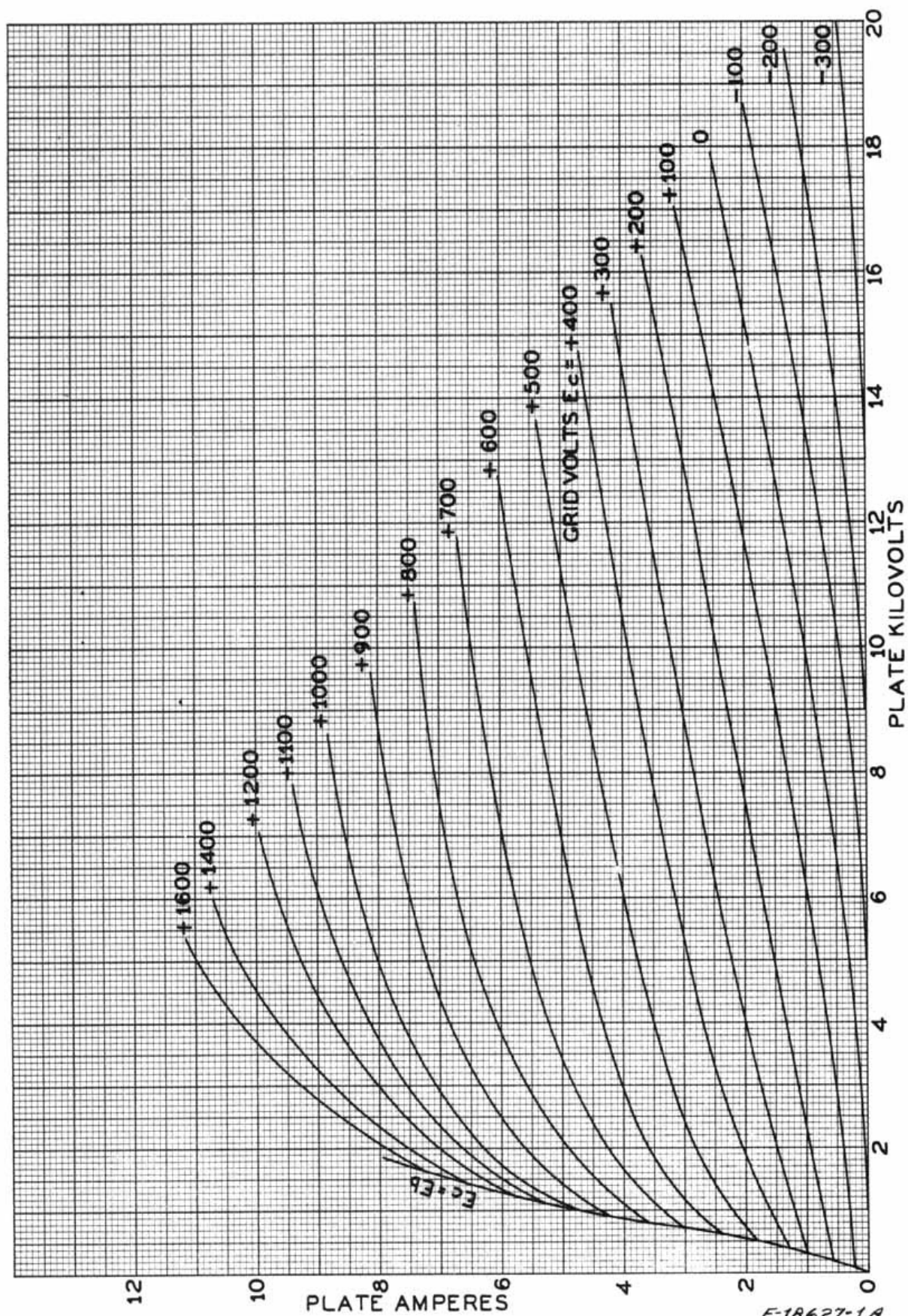
Manufactured by
FEDERAL TELEGRAPH CO.
200 Mt. Pleasant Avenue Newark, N. J., U.S.A.

AVERAGE PLATE CHARACTERISTICS F-110-X Transmitting Tube



F-18626-1A

AVERAGE GRID CHARACTERISTICS F-110-X Transmitting Tube



Maximum Ratings

F-110-X Transmitting Tube

CLASS C R-F POWER AMPLIFIER AND OSCILLATOR—TELEGRAPHY

(Key-down conditions per tube without modulation)*

D-C Plate Voltage (3 megacycles)	20000 volts
D-C Plate Voltage (20 megacycles)	8500 volts
D-C Grid Voltage	—5000 volts
D-C Plate Current	2.5 amperes
D-C Grid Current	0.500 amperes
R-F Grid Current	30 amperes
Plate Input (3 megacycles)	50000 watts
Plate Input (20 megacycles)	21000 watts
Plate Dissipation	25000 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.

Typical Operation Data

F-110-X Transmitting Tube

CLASS C, R-F POWER AMPLIFIER & OSCILLATOR—TELEGRAPHY

(Key-down conditions per tube without modulation)*

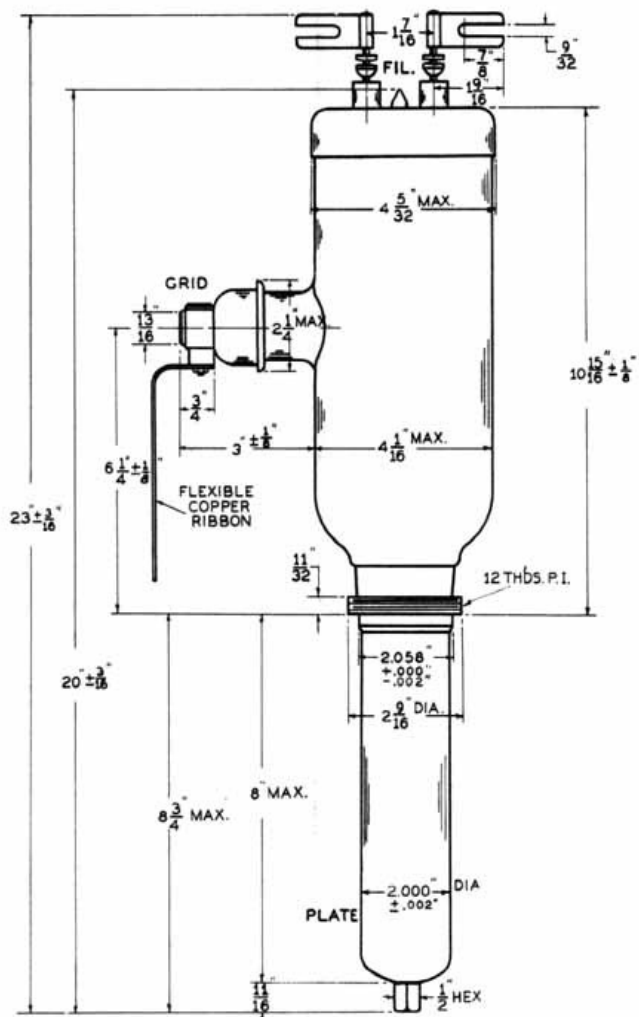
Filament Voltage	28 volts
D-C Plate Voltage	8000 volts
D-C Grid Voltage	—400 volts (approx.)
Peak R-F Grid Input Voltage	1800 volts (approx.)
D-C Plate Current	2.40 amperes
D-C Grid Current	0.360 amperes
Driving Power	600 watts (approx.)
Power Output	12500 watts (approx.)

CLASS C, R-F POWER AMPLIFIER & OSCILLATOR—TELEGRAPHY

(Key-down conditions per tube without modulation)*

Filament Voltage	28 volts
D-C Plate Voltage	10000 volts
D-C Grid Voltage	—360 volts (approx.)
Peak R-F Grid Input Voltage	1760 volts (approx.)
D-C Plate Current	2.5 amperes
D-C Grid Current	0.325 amperes
Driving Power	550 watts (approx.)
Power Output	16800 watts (approx.)

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



Dimensional Data