

FEDERAL

F-898

TRANSMITTING TUBE



TECHNICAL DATA

Main Use	R-F Power Amplifier Class B Modulator
Number of Electrodes	3
Filament Voltage per strand	17.3 Volts
Current per strand	71.5 Amperes
Type	Multistrand Tungsten
Excitation	DC, 1, 3 or 6 ϕ AC
Thermionic Emission	35 amperes
Average Characteristic Values calculated at $E_b=10500$ volts, $I_b=2.0$ amp., $E_f=17.3$ volts per strand	
Grid Voltage (approximate)	0
Amplification Factor	39
Mutual Conductance	15000 micromhos
Plate Resistance	2600 ohms
Approximate Direct Inter-Electrode Capacitances	
Plate to Grid	79 mmf.
Grid to Filament	63 mmf.
Plate to Filament	6 mmf.
Overall Dimensions	
Maximum Length	$60\frac{3}{8}$ inches
Maximum Radius	$7\frac{3}{8}$ inches
Type of Cooling	Water
Water Jacket	Standard

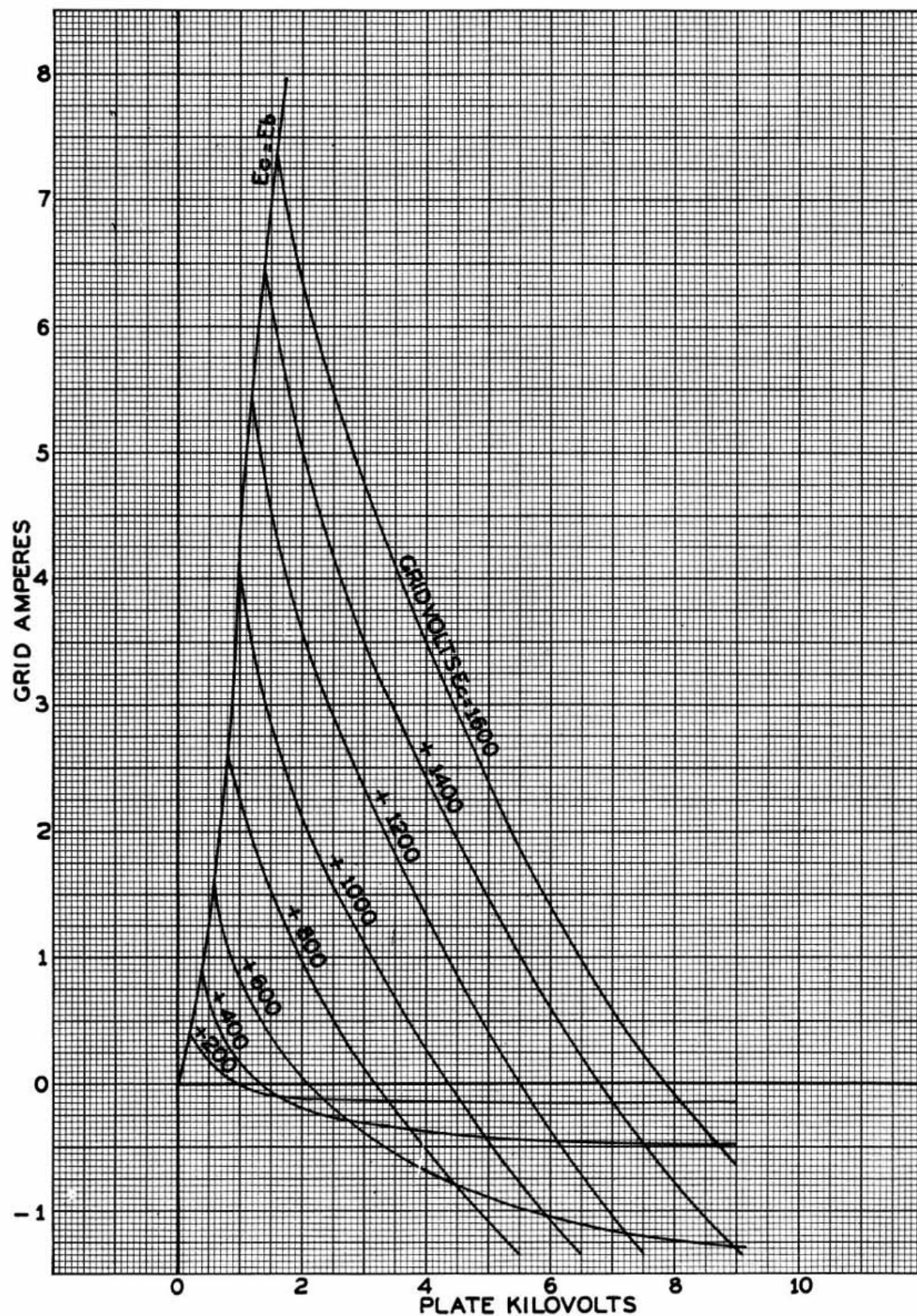
The information above and in the following pages by no means represents exact conditions of operation to be imposed for any particular situation. Since tubes are used under many widely different conditions the manufacturer will gladly furnish information regarding characteristics for design purposes.

Manufactured by

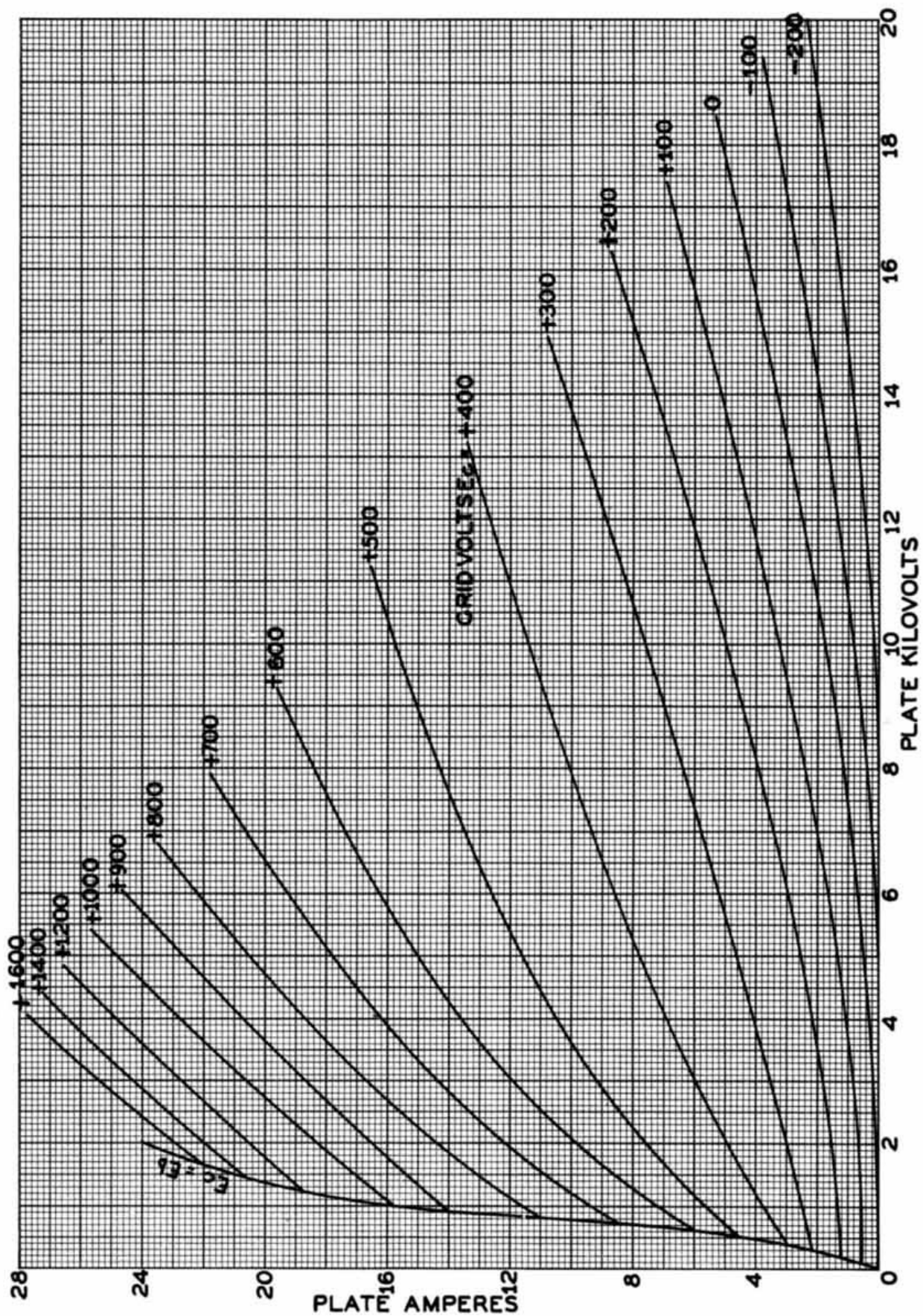
FEDERAL TELEGRAPH CO.

200 Mt. Pleasant Avenue Newark, N. J., U.S.A.

AVERAGE GRID CHARACTERISTICS F-898 Transmitting Tube



AVERAGE PLATE CHARACTERISTICS F-898 Transmitting Tube



Maximum Ratings

Type F-898 Transmitting Tube

For maximum frequency of 1.6 megacycles

CLASS C R-F POWER AMPLIFIER— TELEPHONY—PLATE MODULATED

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

D-C Plate Voltage	14000 volts
D-C Plate Current	5 amperes
D-C Grid Current	1.25 amperes
R-F Grid Current	50 amperes
Plate Input	60000 watts
Plate Dissipation	50000 watts

CLASS C R-F POWER AMPLIFIER TELEGRAPHY

(Key-down conditions per tube without modulation)*

D-C Plate Voltage	20000 volts
D-C Grid Voltage	-3000 volts
D-C Plate Current	10 amperes
D-C Grid Current	1.25 amperes
R-F Grid Current	50 amperes
Plate Input	200000 watts
Plate Dissipation	100000 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.

CLASS B AUDIO AMPLIFIER OR MODULATOR

D-C Plate Voltage	20000 volts
Max. Signal D-C Plate Current	7.5 amperes
Max. Signal Plate Input	100000 watts
Plate Dissipation	50000 watts

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	5 amperes
R-F Grid Current	50 amperes
Plate Input	100000 watts
Plate Dissipation	75000 watts

Typical Operation Data

F-898 Transmitting Tube

CLASS BR-F POWER AMPLIFIER

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

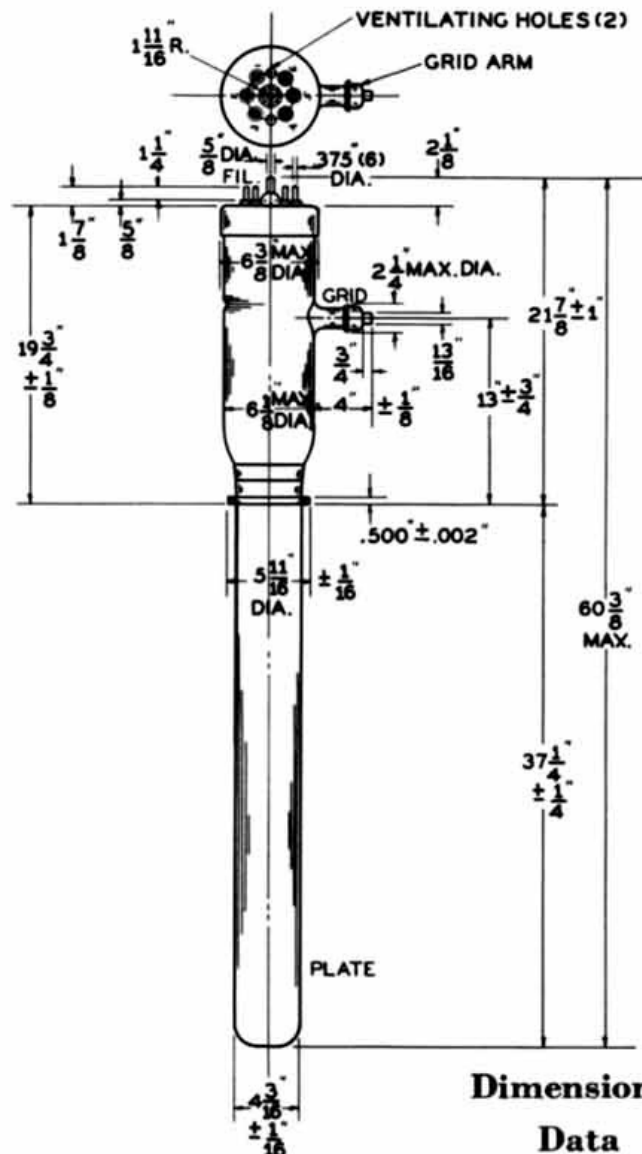
Filament Voltage	17.3 volts per strand
D-C Plate voltage	17500 volts
D-C Grid Voltage	-400 volts (approx.)
Peak R-F Grid Input Voltage	860 volts (approx.)
D-C Plate Current	3.65 amperes
D-C Grid Current	-0.14 amperes
Driving Power*	1030 watts (approx.)
Load Impedance	1310 ohms
Power Output	25000 watts (approx.)

* At Crest of A-F Cycle.

CLASS C R-F POWER AMPLIFIER PLATE MODULATED

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

Filament Voltage	17.3 volts per strand
D-C Plate Voltage	12000 volts
D-C Grid Voltage	-1100 volts (approx.)
Peak R-F Grid Input Voltage	2180 volts (approx.)
D-C Plate Current	4.4 amp.
D-C Grid Current	0.25 amperes
Driving Power	565 watts (approx.)
Power Output	40000 watts (approx.)



Dimensional
Data