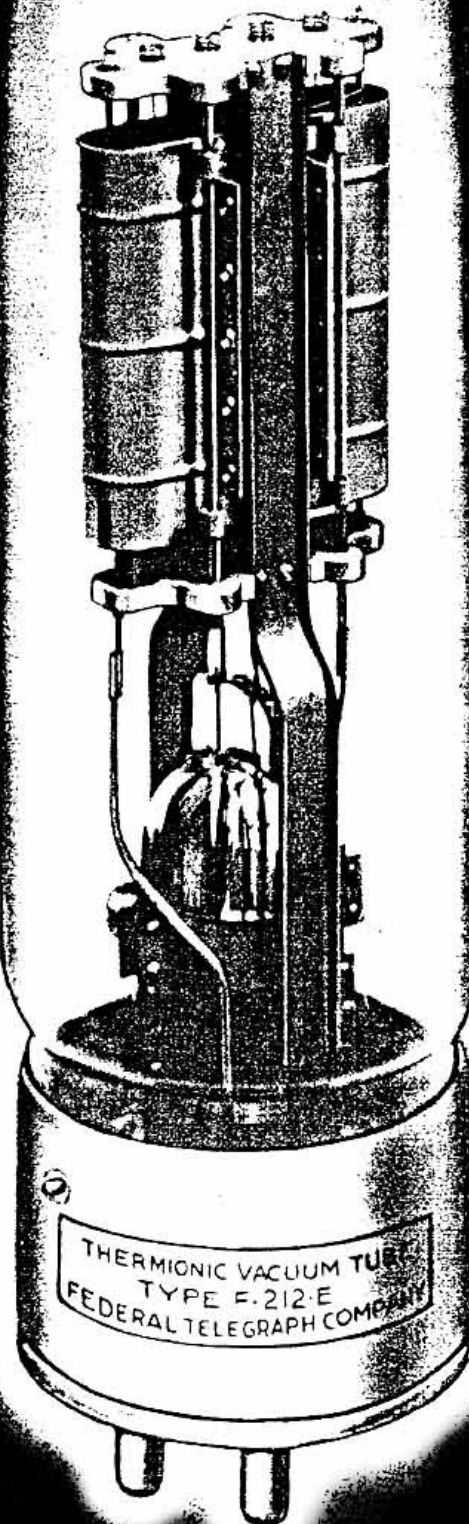


FEDERAL

F-212-E TRANSMITTING TUBE



TECHNICAL DATA

Main Use	R-F Power Amplifier, Oscillator, A-F Power Amplifier, Class B Modulator	
Number of Electrodes	3	
Filament	Voltage	14 volts
	Current	6.0 amperes
	Type	Thoriated Tungsten
Available Thermionic Emission	4.0 amperes	
Average Characteristic Values calculated at $E_b=2000$, $I_b=0.150$ ampere, $E_f=14$ D-C volts.		
Grid Voltage (approximate)		-90 volts
Amplification Factor		16
Mutual Conductance		8500 micromhos
Plate Resistance		1900 ohms
Approximate Direct Inter-electrode Capacitances		
Plate to Grid		19 mmf.
Grid to Filament		14.5 mmf.
Plate to Filament		8 mmf.
Type of Cooling	Air	
Type Base	Large 4-pin bayonet	
Mounting Socket	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.

Maximum Ratings

F-212-E Transmitting Tube

For maximum frequency of 4.5 megacycles

CLASS A AUDIO AMPLIFIER OR MODULATOR

D-C Plate Voltage	1500 volts
Plate Input	250 watts
Plate Dissipation	250 watts

CLASS B AUDIO AMPLIFIER OR MODULATOR

D-C Plate Voltage	2000 volts
Max. Signal D-C Plate Current	0.350 ampere
Max. Signal Plate Input	600 watts
Plate Dissipation	250 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	2000 volts
D-C Plate Current	0.300 ampere
R-F Grid Current	5.0 amperes
Plate Input	400 watts
Plate Dissipation	275 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	1500 volts
D-C Plate Current	0.300 ampere
D-C Grid Current	0.075 ampere
R-F Grid Current	5.0 amperes
Plate Input	450 watts
Plate Dissipation	190 watts

CLASS C R-F POWER AMPLIFIER AND OSCILLATOR—TELEGRAPHY

(Key-down conditions per tube without modulation)

D-C Plate Voltage	2000 volts
D-C Grid Voltage	—500 volts
D-C Plate Current	0.350 ampere
D-C Grid Current	0.075 ampere
R-F Grid Current	5.0 amperes
Plate Input	700 watts
Plate Dissipation	275 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

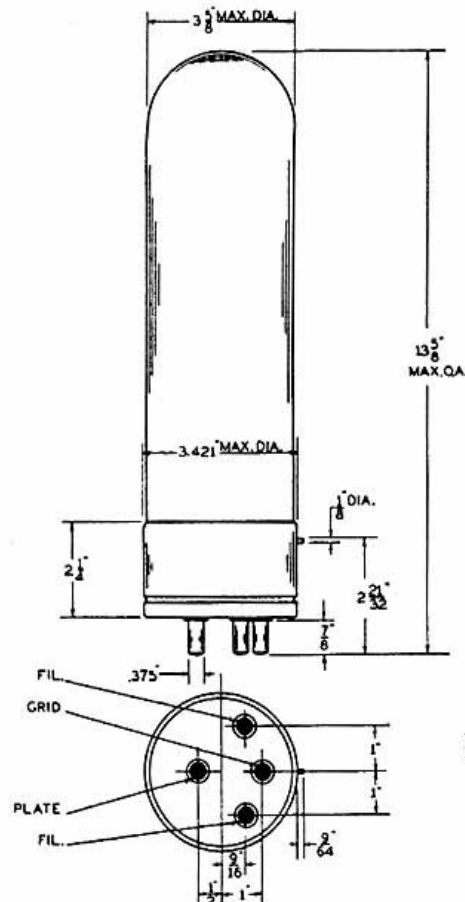
F-212-E Transmitting Tube

CLASS B R-F POWER AMPLIFIER

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

Filament Voltage	14 volts
D-C Plate Voltage	1600 volts
D-C Grid Voltage	—97 volts (approx.)
Peak R-F Grid Input Voltage	124 volts (approx.)
D-C Plate Current	0.250 ampere
D-C Grid Current	0.003 ampere
Driving Power *	21 watts (approx.)
Load Impedance	1785 ohms
Power Output	137 watts (approx.)

* At crest of A-F cycle



Dimensional
Data