

AMPEREX TUBE TYPE HF-201-A

R.F. Power Amplifier and Oscillator AF Power Amplifier and Modulator

The HF-201A is another of the highly proficient high frequency generators of original Amperex design and development. The outstanding features of low voltage, high current and a high ratio of transconductance to interelectrode capacitance are also properties of this tube.

GENERAL CHARACTERISTICS

RADIATION COOLED TRIODE

ELECTRICAL

Filament	Thoriated Tungsten
Voltage	10 to 11 volts
Current	4 amperes
Amplification Factor	18
Transconductance (grid to plate) $I_p = 100$ ma	4000 micromhos
Direct Interelectrode Capacitances	
Grid to Plate	7.0 $\mu\mu\text{f}$
Grid to Filament	8.8 $\mu\mu\text{f}$
Plate to Filament	1.2 $\mu\mu\text{f}$
Frequency for Maximum Ratings	30 megacycles

MECHANICAL

Overall Dimensions

Length	10 $\frac{7}{8}$ inches
Maximum Diameter	3 $\frac{1}{16}$ inches
Base	Skirted Jumbo 4-Pin Bayonet
Mounting Position—Vertical	Base up or down
Horizontal	Plane of electrodes vertical
Net Weight (approx.)	10 $\frac{1}{2}$ ounces
Shipping Weight (approx.) (one tube)	4 pounds

HF-201-A

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

Audio Frequency Power Amplifier or Modulator—Class B

	Maximum Rating per Tube	Typical Operation Two Tubes		
A.C. Filament Voltage	....	10	10	10
D.C. Plate Voltage	2500	2000	2500	2500
D.C. Grid Voltage	....	-100	-130	-130
Load Resistance (per Tube) (ohms)	....	2800	4000	4000
Effective Load Resistance (Plate to Plate) (ohms)	....	11200	16000	16000
Zero Signal D.C. Plate Current (ma)	....	60	60	60
Peak A.F. Grid to Grid Voltage	....	420	410	460
Max. Signal D.C. Plate Current (ma)	200	380	320	360
Max. Signal Plate Input (watts)	450	....	....	....
Plate Dissipation (watts)	160	....	....	....
Max. Signal Driving Power (Approx.) (watts)	....	9	2.5	8
Max. Signal Plate Power Output (Approx.) (watts)	....	500	500	600

R.F. Power Amplifier—Class B—Telephony

(Carrier conditions for use with modulation factors up to 1.0)

	Maximum Rating per Tube	Typical Operation One Tube	
A.C. Filament Voltage	....	10.5	10.5
D.C. Plate Voltage	2500	2000	2500
D.C. Grid Voltage	....	-110	-140
Peak R.F. Grid Voltage	....	125	130
D.C. Plate Current (ma)	150	110	90
Plate Input (watts)	250	220	225
D.C. Grid Current (Approx.) (ma)	....	.5	0
R.F. Grid Current (amps)	10	....	....
Plate Dissipation (watts)	150	140	145
Driving Power at Peak of Modulation (watts) (Approx.)	....	6	4
Plate Power Output (Approx.) (watts)	....	80	80
F.C.C. Broadcast Rating (watts)	50	....	....
(Nearest Classification for Final Stage Use)			

R.F. Power Amplifier—Class C—Telegraphy

	Maximum Rating per Tube	Typical Operation One Tube	
A.C. Filament Voltage	....	10.5	10.5
D.C. Plate Voltage	2500	2000	2500
D.C. Grid Voltage	-500	-250	-300
Peak R.F. Grid Voltage	....	410	455

(continued from previous column)

D.C. Plate Current (ma)	200	200	200
Plate Input (watts)	500	400	500
D.C. Grid Current (Approx.) (ma)	50	23	18
R.F. Grid Current (amps)	12	....	....
Plate Dissipation (watts)	150	100	120
Driving Power (Approx.) (watts)	....	9	8
Plate Power Output (Approx.) (watts)	....	300	380
Frequency Limit for Above Operation (mc)	20	....	....

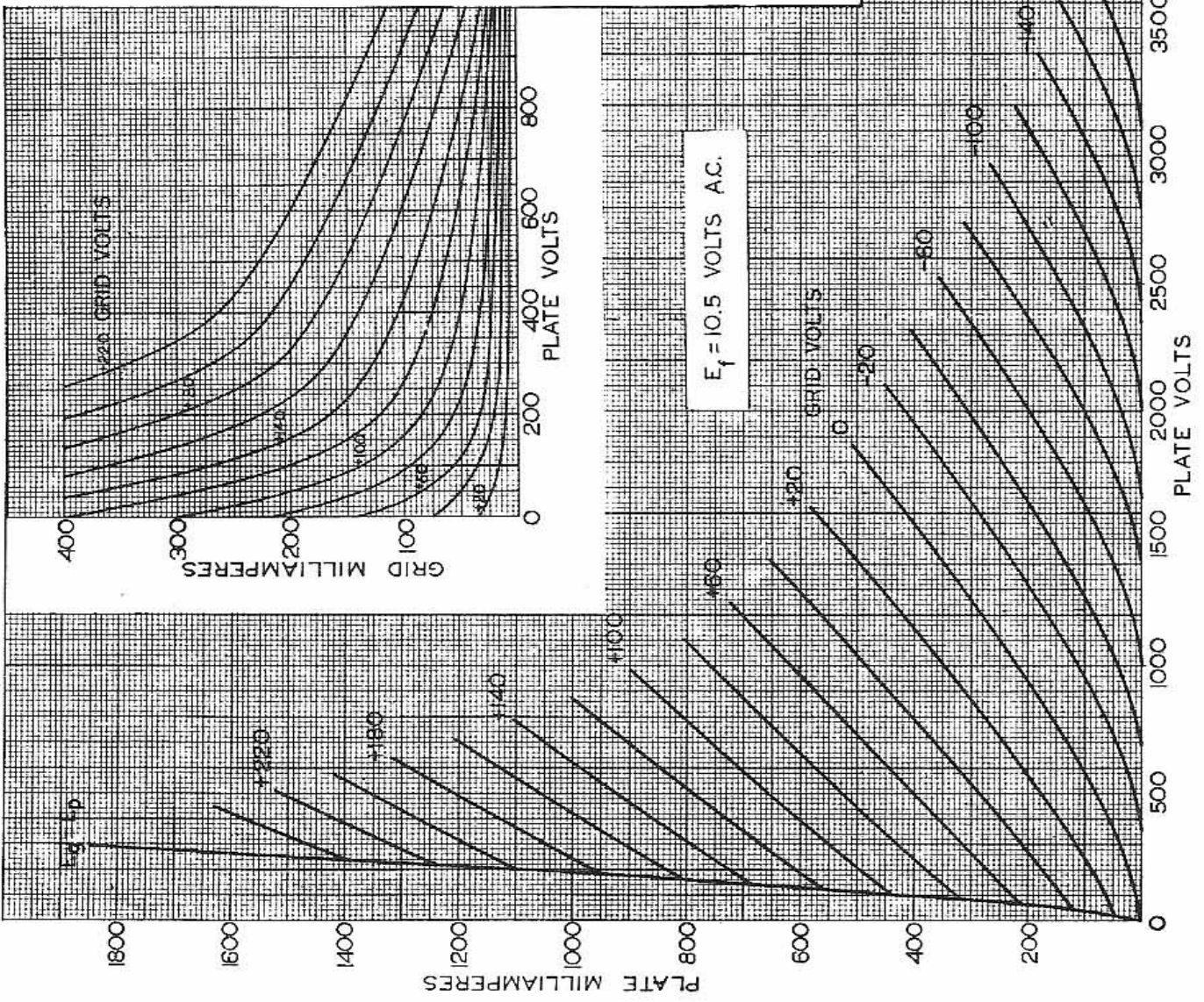
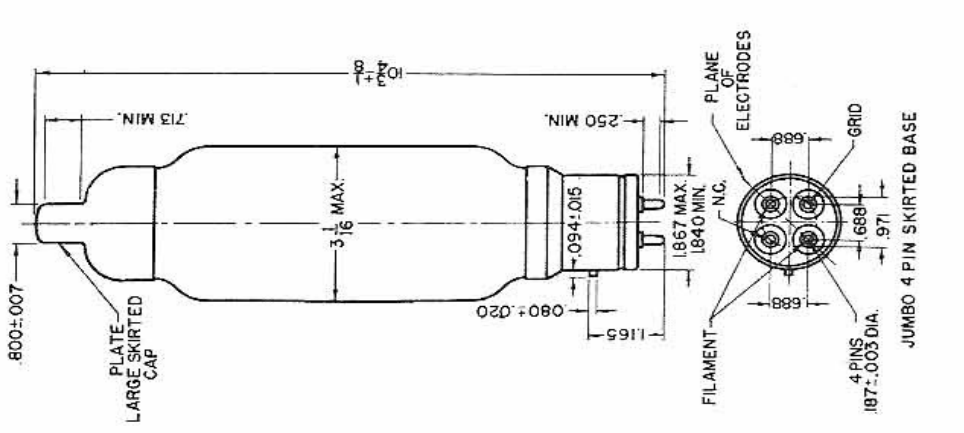
Plate Modulated R.F. Power Amplifier—Class C—Telephony (Carrier conditions for use with modulation factors of 1.0)

	Maximum Rating per Tube	Typical Operation One Tube	
A.C. Filament Voltage	....	11.0	10.5
D.C. Plate Voltage	2000	1750	2000
D.C. Grid Voltage	-500	....	....
Total Bias	....	-300	-350
Fixed Bias	....	-75	-100
Grid Resistor (ohms)	....	7500	12500
Peak R.F. Grid Voltage	....	475	500
D.C. Plate Current (ma)	200	200	160
Plate Input (watts)	400	350	320
D.C. Grid Current (Approx.) (ma)	50	30	20
R.F. Grid Current (amps)	10	....	....
Plate Dissipation (watts)	120	80	70
Driving Power (Approx.) (watts)	....	14	9
Plate Power Output (Approx.) (watts)	....	270	250
Frequency Limit for Above Operation (mc)	30	....	....
F.C.C. Broadcast Rating (watts)	125	....	....
(Nearest Classification for Final Stage Use)			

Self-Excited High Frequency Oscillator or Power Amplifier—Class C

	Maximum Rating per Tube	Typical Operation One Tube	
A.C. Filament Voltage	....	10.5	10.5
D.C. Plate Voltage	2000	1800	2000
Modulated D.C. Plate Voltage	2000	1800	2000
A.C. Plate Voltage	2500	2000	2250
D.C. Plate Current (ma)	200	200	200
D.C. Grid Bias Voltage	-350	-250	-300
D.C. Grid Current (ma) (approx.)	40	30	30
Plate Dissipation (watts)	150	140	140
Plate Power Output (watts) (approx.)	....	290	340
Frequency Limit for Above Operation (mc)	30	....	....

HF-201-A



HF-201-A

