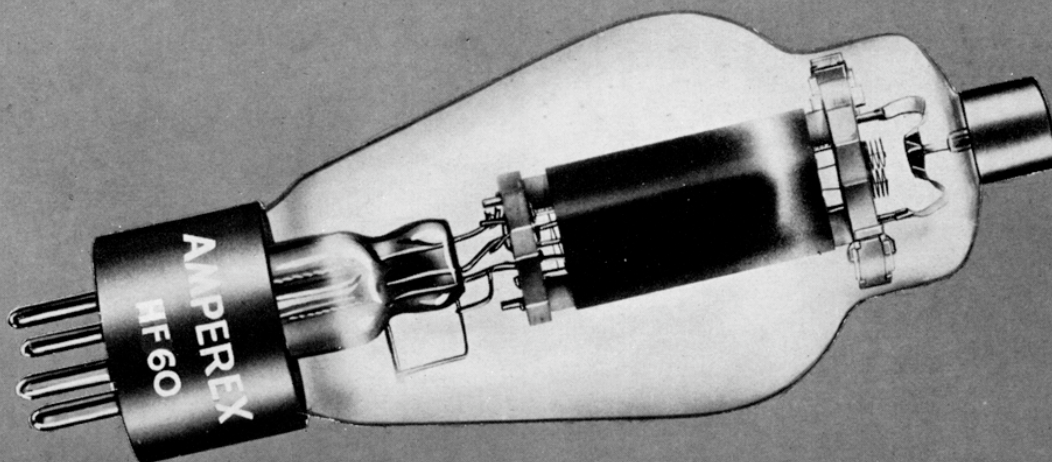


AMPEREX TRANSMITTING TUBE HF-60



AF Power Amplifier and Modulator RF Power Amplifier and Oscillator

GENERAL CHARACTERISTICS

RADIATION COOLED TRIODE

ELECTRICAL

Filament	Thoriated Tungsten
Voltage	10.0 volts
Current	2.5 amperes
Amplification Factor	28
Grid to Plate Transconductance	5000 micromhos
Direct Interelectrode Capacitances	
Grid to Plate	5.2 $\mu\mu\text{f}$
Grid to Filament	5.4 $\mu\mu\text{f}$
Plate to Filament	1.5 $\mu\mu\text{f}$

MECHANICAL

Maximum Overall Dimensions	
Length	6 $\frac{13}{16}$ inches
Diameter	2 $\frac{7}{16}$ inches
Base	Standard medium 4 pin bayonet
Mounting Position—Vertical	Base down
Horizontal	With plane of electrodes vertical
Net Weight (approx.)	3 ounces
Shipping Weight (approx.) (one tube)	1 $\frac{3}{4}$ pounds

HF-60

HF-60 — AMPEREX TRANSMITTING TUBE

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

A.F. Power Amplifier or Modulator—Class B

Unless otherwise specified, values are for 2 tubes

Typical Operation:	Maximum Rating per Tube		
	1450	1600	1600
D.C. Plate Voltage	1450	1600	1600
D.C. Grid Voltage ¹	-65	-75	....
Load Resistance (ohms) (per tube)	2850	3450	....
Effective Load Resistance (ohms) (pl-pl)	11400	13800	....
Peak A.F. Grid to Grid Voltage	290	310	....
Zero Sig. D.C. Plate Current (ma)	10	50	....
Max. Sig. D.C. Plate Current (ma)	261	248	160 ²
Max. Sig. Plate Input (watts)	....	....	255 ²
Plate Dissipation (watts)	....	....	75 ²
Driving Power (watts) (approx.)	2	3	....
Max. Sig. Plate Power Output (watts) (approx.)	233	262	....

R.F. Power Amplifier—Class B—Telephony

Carrier conditions per tube for use with maximum modulation factor of 1.0

Typical Operation:	Maximum Rating per Tube	
	100	50
Plate Volts & Input Max. %	100	50
For Frequencies Indicated (mc)	30	100
D.C. Plate Voltage	1600	1600
D.C. Grid Voltage ¹	-65	....
Peak R.F. Grid Voltage	70	....
D.C. Plate Current (ma)	72	100
D.C. Grid Current (ma) (approx.)	0.2	....
Plate Input (watts)	115	115
Driving Power (watts) (approx.) ³	0.8	....
Plate Dissipation (watts)	75	75
Plate Power Output (watts) (approx.)	41	....

Plate Modulated R.F. Power Amplifier Class C—Telephony

Carrier conditions per tube for use with a maximum modulation factor of 1.0

Plate Volts & Input Max. %	100	50
For Frequency Indicated (mc)	30	100

(continued from previous column)

Typical Operation:	Maximum Rating per Tube		
	1000	1250	1250
D.C. Plate Voltage	1000	1250	1250
D.C. Grid Voltage ¹	....	....	....
Total Bias	-160	-190	-250
Fixed Bias	-30	-60	....
From Grid Resistor (ohms)	15700	16250	....
Peak R.F. Grid Voltage	280	310	....
D.C. Plate Current (ma)	120	113	120
D.C. Grid Current (ma) (approx.)	8	8	....
Plate Input (watts)	120	141	145
Plate Dissipation (watts)	35	31	50
Driving Power (watts) (approx.)	2.0	2.5	....
Plate Power Output (watts) (approx.)	85	110	....

R.F. Power Amplifier and Oscillator—Class C Telegraphy

Key-down conditions without modulation⁴

Plate Volts & Input Max. %	100	50
For Frequencies Indicated (mc)	30	100

Typical Operation:	Maximum Rating per Tube			
	1000	1300	1600	1600
D.C. Plate Voltage	1000	1300	1600	1600
D.C. Grid Voltage ¹	-110	-145	-190	-300
Peak R.F. Grid Voltage	240	275	330	....
D.C. Plate Current (ma)	155	153	158	160
D.C. Grid Current (ma) (approx.)	10.5	9.5	12.0	....
Plate Input (watts)	155	199	252	255
Plate Dissipation (watts)	46	49	52	75
Driving Power (watts) (approx.)	2.3	2.2	3.5	....
Power Output (watts) (approx.)	109	150	200	....

NOTES:

¹Grid voltages are given with respect to the mid-point of the filament operated on A.C. If D.C. is used, each stated value of grid voltage should be decreased by 5 volts and the circuit returns made to the negative end of the filament.

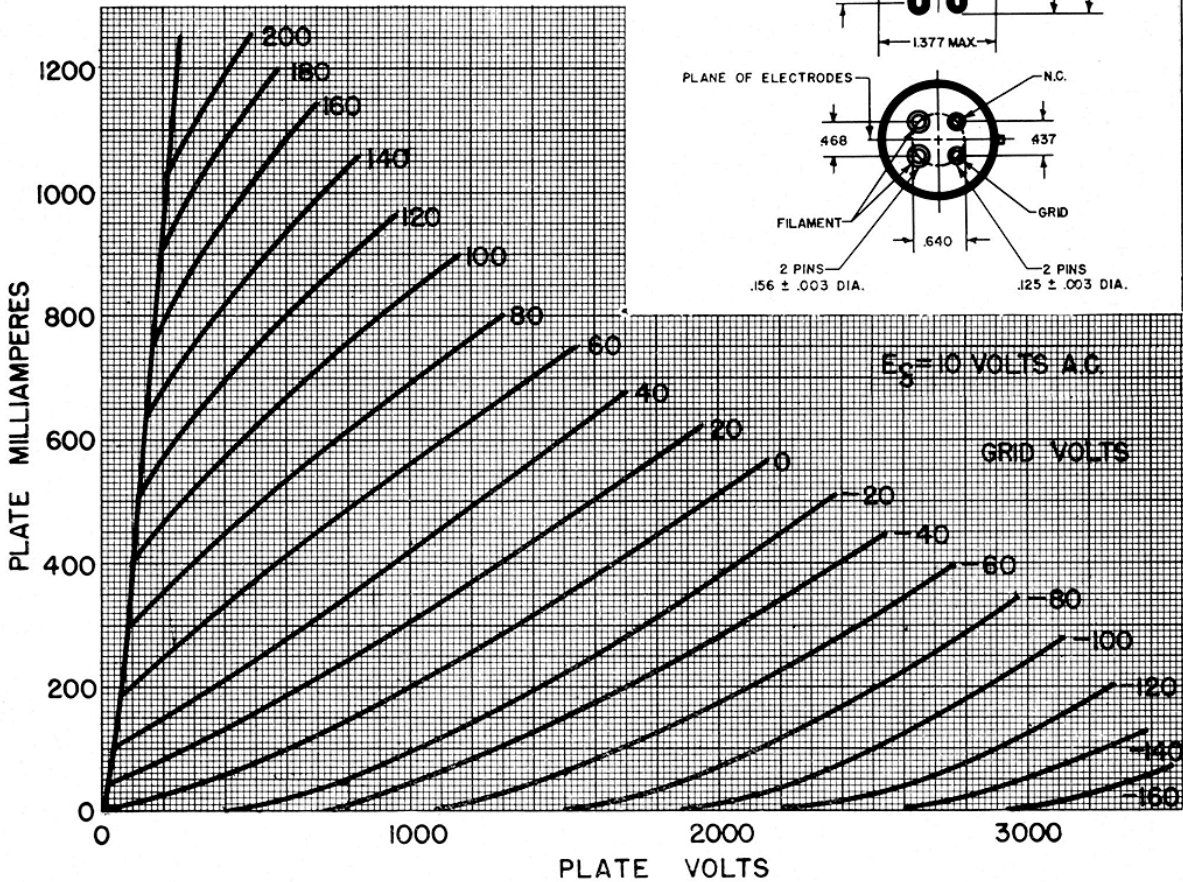
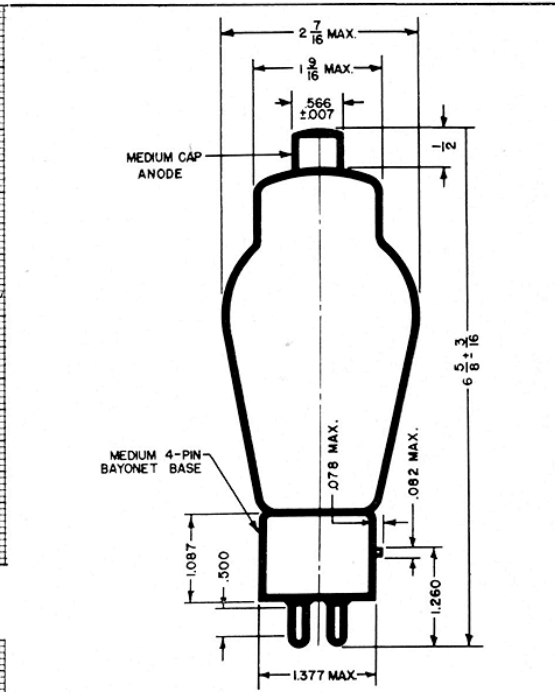
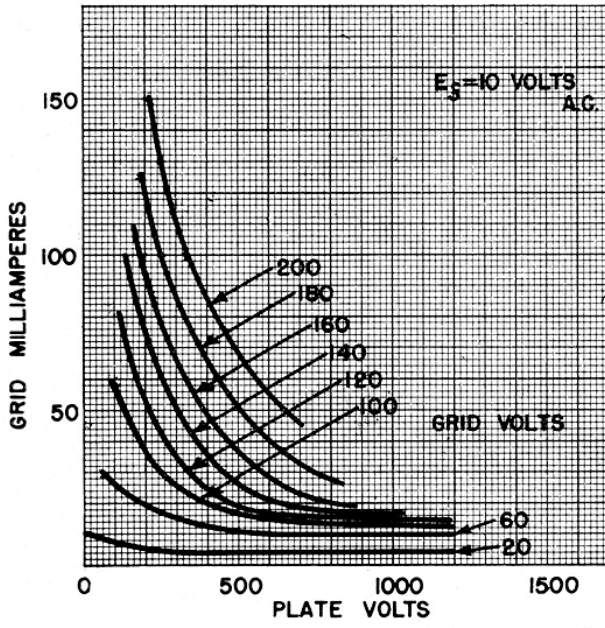
²Averaged over any audio-frequency cycle of sine-wave form.

³At crest of aud'o-frequency cycle with modulation factor of 1.0.

⁴Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.

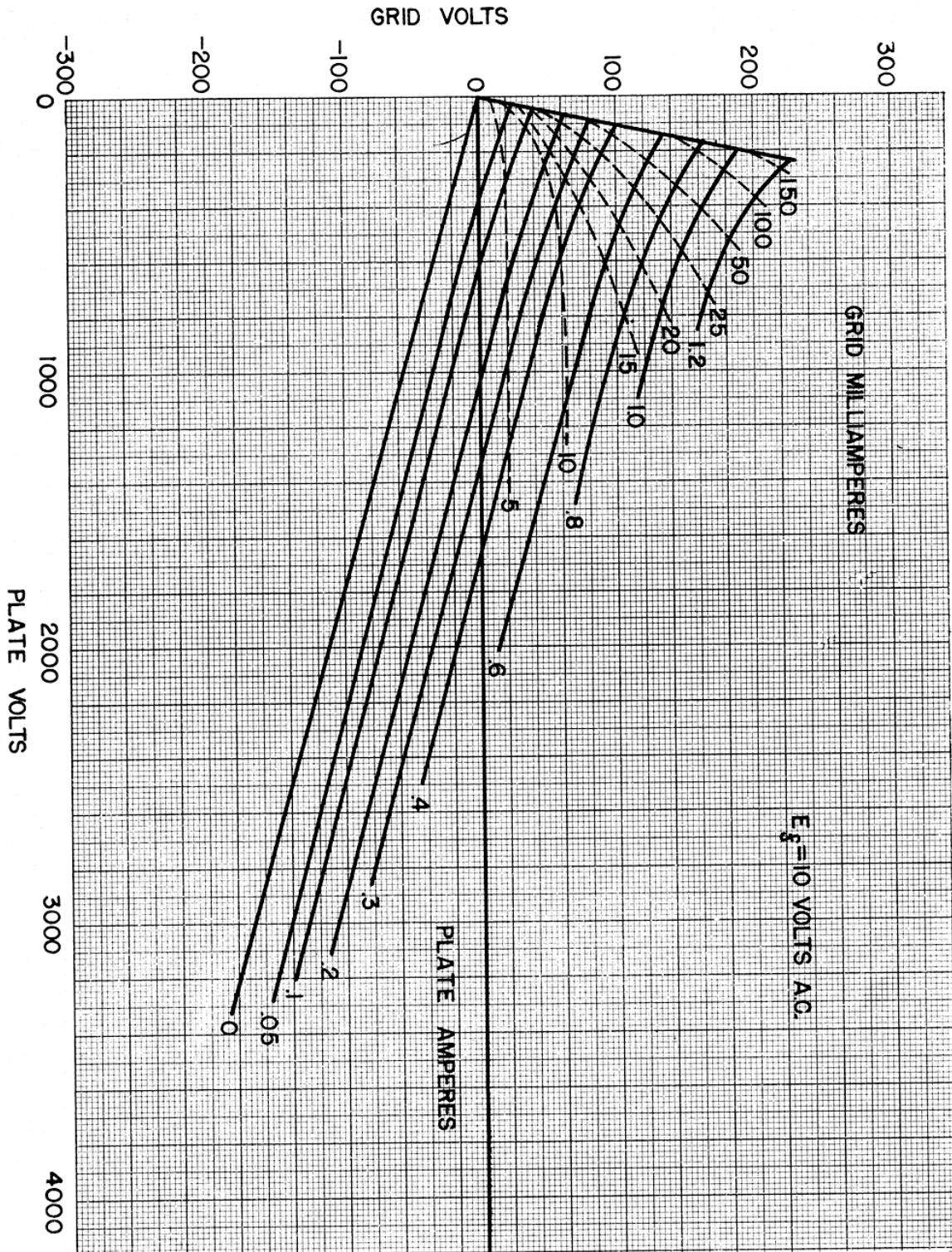
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