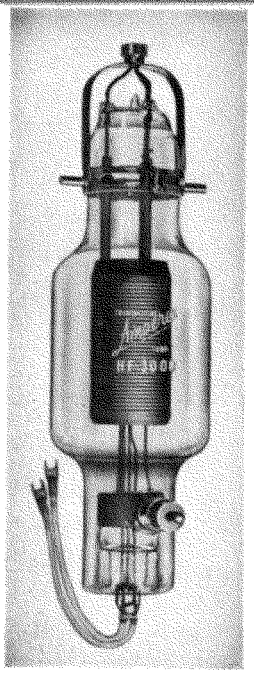
AMPEREX TRANSMITTING TUBE HF-3000

An all glass radiation—air cooled high power transmitting triode.



MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

Plate Modulated R.F. Power Amplifier Class C

(Carrier conditions for use with a maximum modulation factor of 1.0)

	For operation at mc. carrier frequencies up to		
	10	20	40
D.C. Plate Voltage	7000	6000	4000
D.C. Grid Voltage	—2000	—1200	—700
D.C. Plate Current (amps.)	.75	.75	.75
D.C. Grid Current (ma.)	150	150	150
Plate Power Input (kw.)	5	4.5	3.0
Plate Dissipation (kw.)	1.5	1.5	1.5
Nominal Carrier Plate Power Output (kw.)	4.0	3.25	1.8

Typical Operation

(Per tube in the final stage of a two tube 5 KW Broadcast Transmitter)

A.C. Filament Voltage	21.5	21.2
D.C. Plate Voltage	5000	6000
D.C. Grid Voltage obtained by Fixed Biasing Voltage	—925 —225	—1000 —250
Plus Grid Leak Resistor (ohms)	7000	10000
Plate Load Resistance (ohms)	3250	5000
Peak R.F. Grid Voltage	1500	1500
D.C. Plate Current (ma.)	710	575
D.C. Grid Current (ma.)	100	75
Driving Power (watts)	140	110
Plate Power Output (watts)	2700	2700

R.F. Power Amplifier—Class C

Unmodulated, Negatively Modulated or Frequency Modulated Services

	Maximum Rating for Operation at mc. frequencies up to				
	10	20	30	40	50
D.C. Plate Voltage	10000	8000	6000	5000	4000
D.C. Grid Voltage	—2000	—1500	—1200	—900	—700
D.C. Plate Current (amps.)	1.25	1.25	1.25	1.25	1.25

GENERAL CHARACTERISTICS

Filament Voltage	21 to 22
Filament Current (amps)	40.5
Filament Emission (amps)	6
Amplification Factor	16
Grid to Plate Transconductance at plate current of 1 ampere	6500 micromhos
Direct Interelectrode Capacitances:	
Grid to Plate	10 $\mu\mu f$
Grid to Filament	13 $\mu\mu f$
Plate to Filament	4 $\mu\mu f$
Dimensions:	
Maximum Overall Length	23"
Diameter of Bulb	6"

R.F. Power Amplifier—Class C

Unmodulated, Negatively Modulated or Frequency Modulated Services

(Continued)

	Maximum Rating for Operation at mc. frequencies up to				
	10	20	30	40	50
D.C. Grid Current (ma.)	150	150	150	150	150
Plate Power Input (kw.)	10	8	6	5	4
Plate Dissipation (kw.)	2.5	2.5	2.25	2	2
Nominal Carrier Plate Power Output (kw.)	8.0	6.0	4.0	3	2

Typical Operation

A.C. Filament Voltage	21.5	21.5
D.C. Plate Voltage	6000	8000
D.C. Grid Voltage	—800	—1100
Plate Load Resistance (ohms)	2900	4200
Peak R.F. Grid Voltage	1500	1800
D.C. Plate Current (amps.)	1.0	.95
D.C. Grid Current (ma.)	130	125
Driving Power (watts)	190	220
Plate Power Output (watts)	4600	6100

COOLING: Though this tube may in emergencies, and under conditions of low anode dissipation be operated without forced air cooling, an air flow of 200 to 400 cubic feet a minute broadly directed at the bottom of the tube and flowing upward around the bulb will assure optimum life.

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