

## R.F. Power Amplifier, Oscillator, A.F. Power Amplifier or Modulator

### MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

#### A.F. Power Amplifier and Modulator—Class B

	Maximum Rating per Tube		Typical Operation Two Tubes	
A.C. Filament Voltage	—	21	21.5	
D.C. Plate Voltage	6000	5000	6000	
D.C. Grid Voltage	—	-265	-325	
Load Resistance (ohms per tube)	—	2100	1500	
Effective Load Resistance (Plate to Plate) (ohms)	—	8400	6000	
Zero Signal Plate Current (ma.)	—	300	300	
Peak A.F. Grid to Grid Voltage	—	1030	1650	
Max. Signal D.C. Plate Current (amps.)	1.5	1.2	2.2	
Max. Signal Plate Input (kw.)	9	6	13.2	
Plate Dissipation (kw.)	9	1.125*	4.2*	
Max. Signal Driving Power (Approx.) (watts)	—	40	380	
Max. Signal Plate Power Output (watts)	—	3750	9000	

\*Averaged over an audio cycle of sine-wave form under maximum-signal conditions

#### R.F. Power Amplifier—Class B—Telephony

(Carrier conditions for use with modulation factor of 1.0)

	Maximum Rating per Tube		Typical Operation One Tube	
A.C. Filament Voltage	—	21	21.5	
D.C. Plate Voltage	6000	4000	5000	
D.C. Grid Voltage	—	-200	-280	
Plate Load Resistance (ohms)	—	2900	2200	
Peak R.F. Grid Voltage	—	290	415	
D.C. Plate Current (ma.)	750	380	606	
Plate Input (watts)	4500	1515	3030	
Plate Dissipation (watts)	3000	1000	2030	
D.C. Grid Current (Approx.) (ma.)	—	8	6	
Driving Power at Peak Modulation (Approx.) (watts)	—	60	125	
Plate Power Output (watts)	—	515	1000	
Frequency Limit for Above Operation (mc.)	3	10	6	
F.C.C. Broadcast Rating (watts)	1000	500	1000	

### GENERAL CHARACTERISTICS

Filament Voltage	21.5
Filament Current (amps)	41.0
Amplification Factor	17
Grid to Plate Transconductance @ .9 ampere	6500 micromhos
Direct Interelectrode Capacitances:	
Grid to Plate	23.4 $\mu\mu\text{f}$
Grid to Filament	15.0 $\mu\mu\text{f}$
Plate to Filament	3.0 $\mu\mu\text{f}$

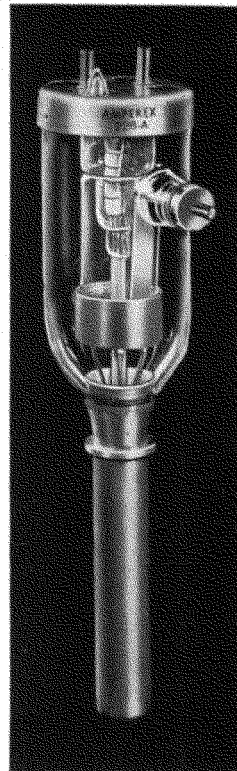
#### Plate Modulated R.F. Power Amplifier Class C—Telephony

(Carrier conditions for use with modulation factor of 1.0)

	Maximum Rating per Tube		Typical Operation One Tube	
A.C. Filament Voltage	—	21.5		
D.C. Plate Voltage	6000	4000		
D.C. Grid Voltage	-1000	-500		
Plate Load Resistance (ohms)	—	1800		
Peak R.F. Grid Voltage	—	1000		
D.C. Plate Current (amps.)	1	.96		
Plate Input (watts)	6000	3840		
Plate Dissipation (watts)	3500	1300		
D.C. Grid Current (Approx.) (ma.)	150	105		
Driving Power (Approx.) (watts)	—	100		
Plate Power Output (watts)	—	2540		
Frequency Limit for Above Operation (mc.)	3	7.5		
F.C.C. Broadcast Rating (watts)	2500	2500		

#### R.F. Power Amplifier or Oscillator—Class C Telegraphy

	Maximum Rating per Tube		Typical Operation One Tube	
A.C. Filament Voltage	—	21		
D.C. Plate Voltage	6000	6000		
D.C. Grid Voltage	-1000	-600		
Plate Load Resistance (ohms)	—	2200		
Peak R.F. Grid Voltage	—	1200		
D.C. Plate Current (amps.)	1.5	1.25		
Plate Input (watts)	9000	7500		
Plate Dissipation (watts)	5000	2400		
D.C. Grid Current (Approx.) (ma.)	150	110		
Driving Power (Approx.) (watts)	—	120		
Plate Power Output (watts)	—	5100		
Frequency Limit for Above Operation (mc.)	3	3		



**AMPEREX**

**228-A**

# 228-A — AMPEREX TRANSMITTING TUBE

