AMPEREX TUBE TYPE 6333

AF Power Amplifier and Modulator
RF Power Amplifier and Oscillator

GENERAL CHARACTERISTICS

WATER COOLED TRIODE

Filament.......................... Tungsten
Two unit type, for single-phase or two-phase A.C., or D.C. operation
Voltage (per unit)................. 11 volts
Current (per unit)............... 60 amperes
Starting current must never exceed 2.0 times the normal current.
Amplification Factor............. 50
Grid to Plate Transconductance at a Plate Current of 0.75 amperes
Direct Inter-electrode Capacitances
Grid to Plate......................... 32 uuf
Grid to Filament................... 17 uuf
Plate to Filament.................. 1.8 uuf

MECHANICAL

Overall Dimensions
Length (approx.).................. 17½ inches
Maximum Dia. (approx.)............ 4 inches
Mounting Position - Vertical: Anode Down
Type of Cooling..................... Water
Water Jacket........................ Ampex Type # DW-1580
Water Flow.......................... 3-8 gal. per min.
Pressure Drop* (approx.)........ 4 lbs. per sq. in.
Max. Outlet Water Temp............... 70°C

ACCESSORIES

Stand-off Insulator................ Ampex Type # SI-5000
External Fil. Lead.................. Ampex Type # S-13484
External Grid Connector............ Ampex Type # Y-13326 (Supplied with tube without charge)

Net Weight (approx.).............. 3 lbs.
Shipping Weight (approx.) (one tube)........ 10 lbs.

1 Rotted water flow must be continuous between the time any voltage is applied and for 5 minutes after voltage is removed.
2 The approximate water pressure is measured directly across the jacket alone and does not include connecting piping.

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

A.F. Power Amplifier and Modulator—Class B

Maximum Rating Typical Operation
per Tube Two Tubes
A.C. Filament Voltage*........... 21 22 22
D.C. Plate Voltage................ 15000 6000 10800 13500
D.C. Grid Voltage.................. 25 120 200
Load Resistance (per tube) (ohms)........ 1050 1500 1500
Effective Load Resistance (plate to plate or chasis) 12000 6400 10000
Zero Signal D.C. Plate Current (amps)........ 0.4 0.4 0.2
Peak A.F. Grid-to-Grid Voltage........ 12000 1620 1580
Max. Signal D.C. Plate Current* (amps)........ 2 2.5 3.2 2.7
Max. Signal Plate Input* (kw)........ 20 15 32 24
Plate Dissipation* (kw)........... 7.5 7.4 12.1 12*
Minimum Grid Input Resistance (approx. ohms)........ 400 500 300
Max. Signal Driving Power (approx. kwatts)........ 150 240 176
Max. Signal Power Output (kw)........ 8 20 23

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

Maximum Rating Typical Operation
per Tube One Tube
A.C. Filament Voltage*........... 22 22 22
D.C. Plate Voltage................ 10000 6000 9000 10000
D.C. Grid Voltage.................. 3000 1000 1200 1600
Plate Load Resistance (ohms).... 5100 2740 6100
Peak R.F. Grid Voltage........... 1650 1600 2300
D.C. Plate Current (amps)........ 1 0.77 0.96 0.99
Plate Input (kw).................... 10 6.62 7.68 7.7
Plate Dissipation (kw)........... 6.8 5.12 1.50 1.35
D.C. Grid Current (approx. amps)................ 400 150 150 135
Driving Power (approx. kwatts)........ 750 310 300
Power Output (kw).................. 3.5 6 6.37
F.C.C. Broadcast Lim. (kw)......... 5.... 5...

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

Maximum Rating Typical Operation
per Tube One Tube
A.C. Filament Voltage*........... 22 22 22
D.C. Plate Voltage................ 15000 6000 10000 12000
D.C. Grid Voltage.................. 5000 1000 1300 1600
Plate Load Resistance (ohms).... 3000 3200 3500
Peak R.F. Grid Voltage........... 8000 2200 1600
D.C. Plate Current (amps)........ 2 1.2 1.4 1.55
Plate Input (kw).................... 30 9.6 14 18.89
Plate Dissipation (kw)........... 10 2.5 2.5 4.35
D.C. Grid Current (approx. i/10).... 400 150 150 165
Driving Power (approx. kwatts)........ 280 340 420
Power Output (kw).................. 7.1 10.5 14.23

NOTES:
1 Two filament units in series.
2 Average over any audio-frequency cycle or sine-wave form.
3 Average at audio-frequency cycle with modulation factor M = 1.0.
4 Average over any audio-frequency cycle of sine-wave form under maximum signal conditions.
5 Modulation essentially negligible may be used if the positive peak of the audio-frequency envelope does not exceed 15% of the carrier maximums.

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