AMPEREX TUBE TYPE 6446

The 6446 is an improved, ruggedized, heavy wall version of the standard type 892 tube.

Incorporating the latest developments in tube design and techniques, the 6446 fills the requirements of the industrial field for a tube which is electrically similar to the 892 tube, but with higher dissipation reserve allowing for extreme mismatch of load to tube impedance. The tube is, therefore, protected against maladjustment of misuse of equipment.

Among the outstanding features of the new AMPEREX tube are the following:

1. Heavy wall, high conductivity copper anode (7/16" thick)
2. Rugged powdered glass stem which takes the place of the stem press construction.
3. Elimination of the projecting feather-edge seal grid arm by the incorporation of a Kovar ring grid connection.
4. Addition of a strong, conical internal grid support instead of the 3 legged riveted construction. This also provides much lower inductance.
5. Elimination of the more fragile copper feather-edge anode seal and replacement with a Kovar seal.
6. New, stronger spiral filament provide more uniform heat distribution over the anode surface.
7. Only one-half the water flow required for 892 for equivalent anode dissipation.

RF Power Amplifier and Oscillator

TENTATIVE DATA

GENERAL CHARACTERISTICS

WATER COOLED TRIODE

ELECTRICAL

Filament ........................................ Tungsten
Two unit type, for single-phase or two-phase A.C., or C.D. 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 ................. 7000 microhms
Direct Inter-electrode Capacitances
Grid to Plate ........................................ 32 uuf
Grid to Filament .................................. 17 uuf
Plate to Filament ................................ 1.8 uuf

MAXIMUM RATING AND TYPICAL OPERATING CONDITIONS

RF POWER AMPLIFIER AND OSCILLATOR - CLASS "C"

PLATE VOLTAGES AND INPUT MAX. %

FOR FREQUENCIES INDICATED (mc)

100 75 50
5 12.5 20

MAXIMUM RATING PER TUBE TYPICAL OPERATION ONE TUBE

A.C. Filament Voltage ........................ 21.2 21.5 21.8 22.0 volts
D.C. Plate Voltage ............................. 15,000 8,000 10,000 12,000 15,000 volts
D.C. Grid Voltage .................................. -3,000 -300 -400 -500 -1,250 volts
Peak R.F. Grid Voltage .......................... 1,000 1,200 1,400 2,400 volts
D.C. Plate Current .................................. 2.0 1.6 1.8 2.0 2.0 amps
Plate Input ........................................ 30 12.8 18.0 24.0 30.0 KW
Plate Dissipation .................................. 20 4.1 5.2 6.5 10.0 KW
D.C. Grid Current .................................. 400 210 220 230 250 mA
Drive Power (Approx.) ........................ 7.9 250 300 620 watts
Plate Power Output ................................ 8.7 12.8 17.5 20.0 KW
Tube Output ....................................... 494 715 996 1138 BTU/Min