

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 or 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 providing 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

Two unit type, for single-phase or two-phase A.C., or D.C. operation

Voltage (per unit)

Tungsten

11 volts

Current (per unit)

60 amperes

Starting current must never exceed 2.0 times the normal current

Amplification Factor

50

Transconductance (Grid to Plate at $I_b = 0.75$ amp)

7000 micromhos

Direct Interelectrode Capacitances

Grid to Plate

32 μf

Grid to Filament

17 μf

Plate to Filament

1.8 μf

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MECHANICAL

Overall Dimensions

Length (approx.)	17½ inches
Maximum Dia. (approx.)	4 inches
Mounting Position - Vertical	Anode Down
Type of Cooling	Water
Water Flow ¹	3-8 gal. per min.
Pressure Drop ² (approx.)	1-5 lbs. per sq. in.
Max. outlet Water Temp.	70°C

ACCESSORIES

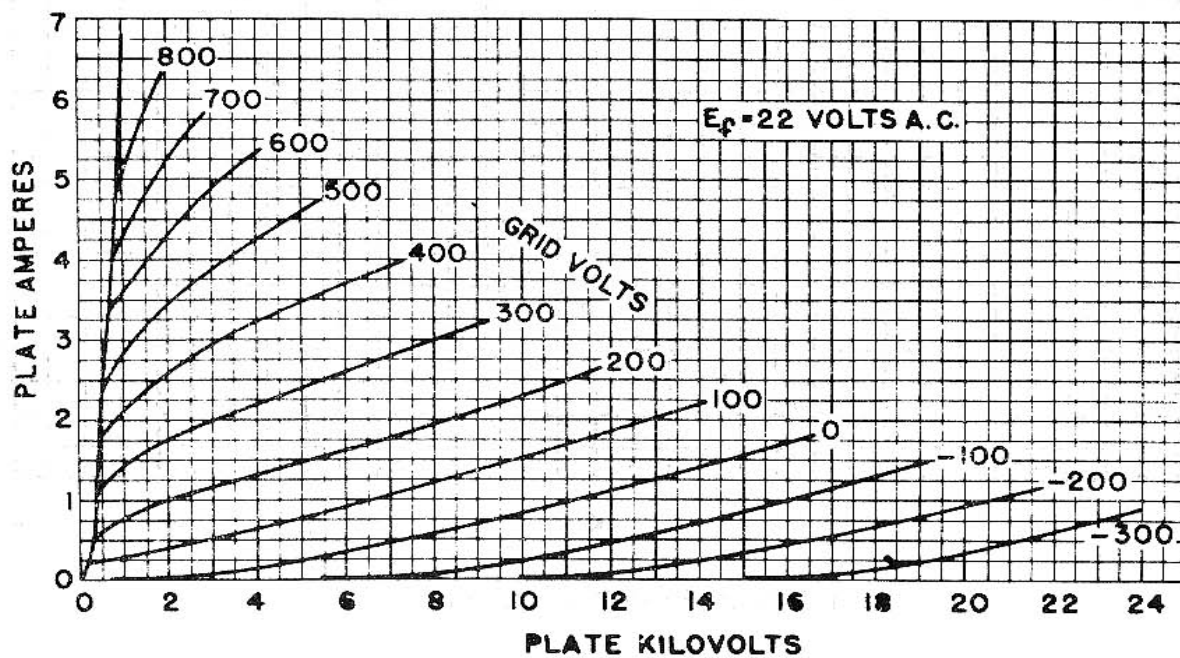
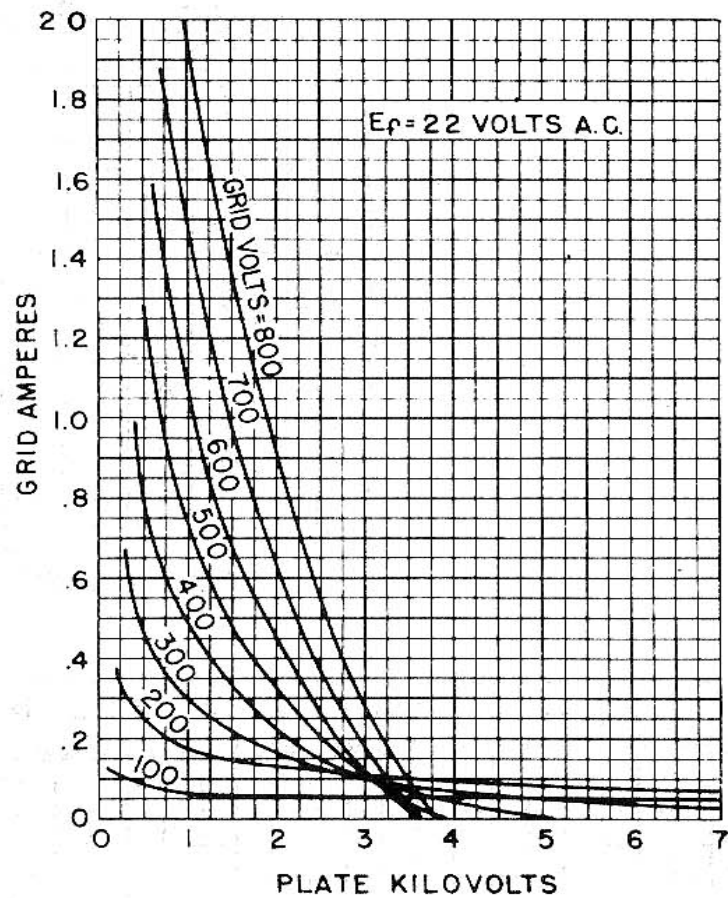
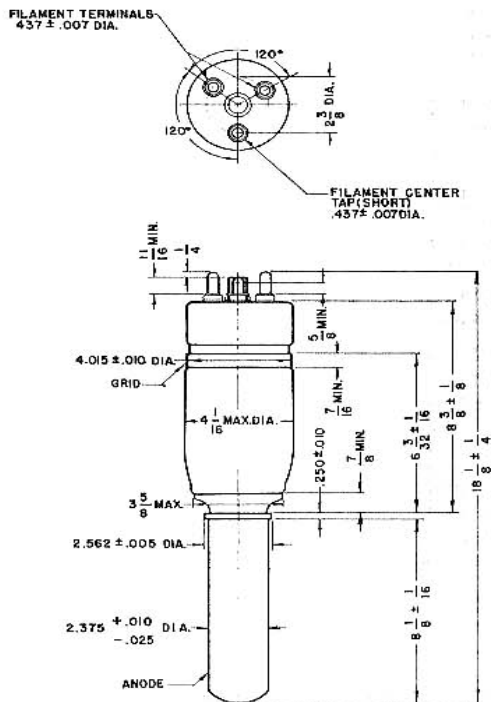
Water Jacket	Amperex Type # S-15096
External Fil. Lead	Amperex Type # S-13484
External Grid Connector	Amperex Type # Y-13326 (supplied with tube without charge)
Water Jacket Mounting Clamp	Amperex Type # S-17463
Water Jacket Mounting Plate	Amperex Type # S-17464
Net Weight (approx.)	10 lbs.
Shipping Weight (approx.) (one tube)	18 lbs.

¹ Rated 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.

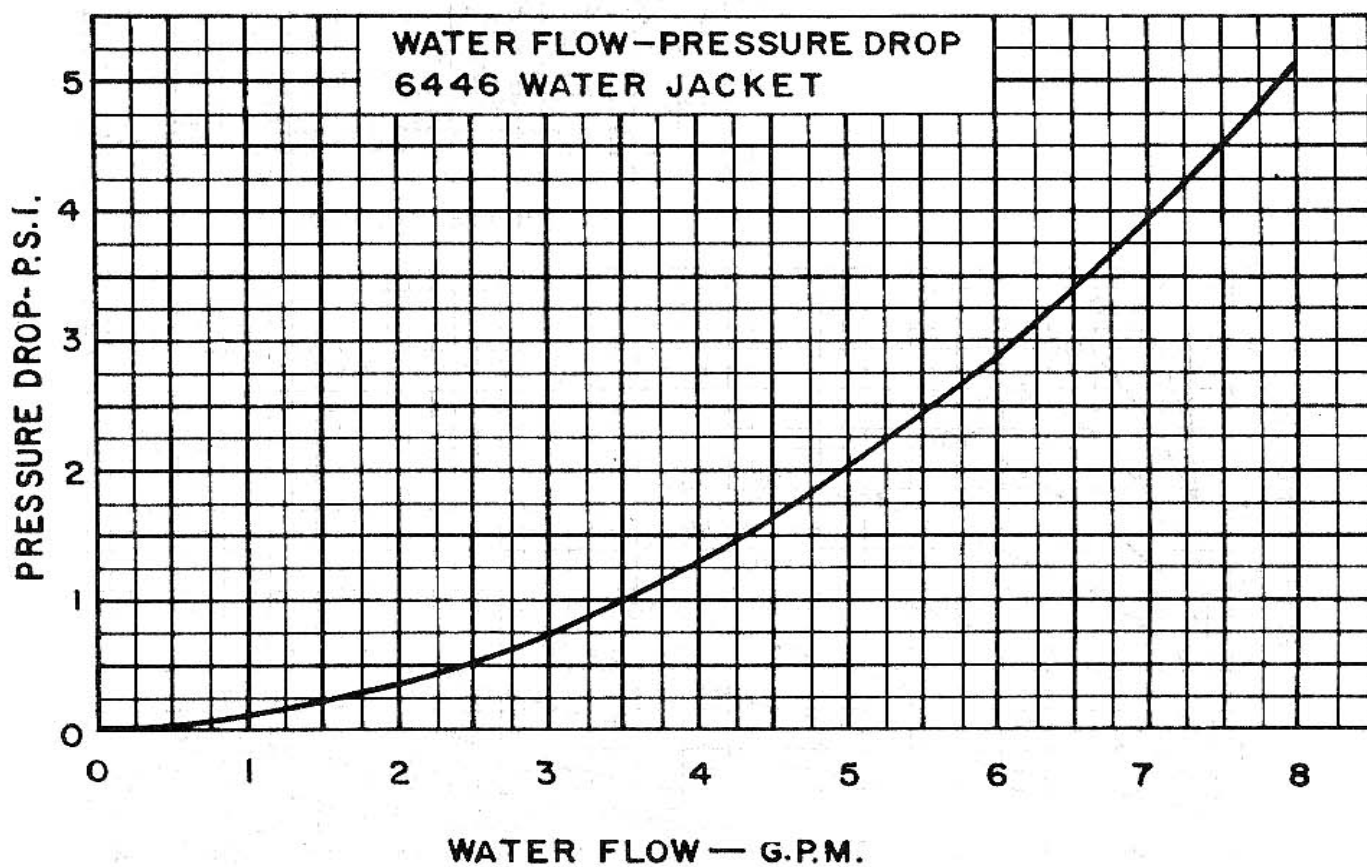
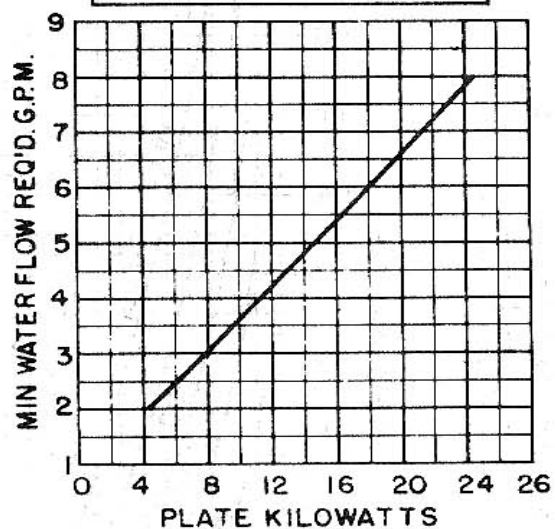
MAXIMUM RATING AND TYPICAL OPERATING CONDITIONS RF POWER AMPLIFIER AND OSCILLATOR - CLASS "C"

PLATE VOLTS AND INPUT MAX. % FOR FREQUENCIES INDICATED (mc)		100 5	75 12.5	50 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.)	_____	200	250	300	620 watts
Plate Power Output	_____	8.7	12.8	17.5	20.0 KW
Tube Output	_____	494	715	996	1138 BTU/Min.



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CHARACTERISTICS FOR
AMPEREX WATER JACKET
S-15096.



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TENTATIVE DATA

