

AMPEREX TUBE TYPE 6447

6447

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The 6447 is an improved, ruggedized, heavy-wall version of the standard type 892R tube. Incorporating the latest developments in tube design and techniques, the 6447 fills the requirements of the industrial field for a tube similar to the 892R but with higher anode dissipation reserve. This allows for extreme mismatch of load to tube impedance and, therefore, protects the tube against maladjustment or misuse of equipment which cause excessive dissipation.

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.

GENERAL CHARACTERISTICS

FORCED AIR-COOLED TRIODE

ELECTRICAL

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 amps
Starting current must never exceed 120 amps/unit, even momentarily	
Amplification Factor	50
Transconductance (Grid to Plate at $I_b = 0.75$ amp)	7000 micromhos
Direct Interelectrode Capacitances	
Grid to Plate	32 uuf
Grid to Filament	17 uuf
Plate to Filament	1.8 uuf

MECHANICAL

Maximum Overall Dimensions	
Length	19 1/8 inches
Diameter	11 inches
Mounting Position	Vertical-anode down
Type of Cooling ¹	Forced air

¹ Rated air flow must be continuous between the time any voltage is applied and for 5 minutes after voltage is removed.

Cooling Characteristics

Plate Dissipation	10.0	8.0	6.0	KW
Air Flow to Radiator	700	500	350	cfm
Back Pressure	0.9	0.6	0.3	inches water
Maximum Temperatures				
Glass-to-metal Seals				180° C
Radiator				230° C
Net Weight (approx.)				60 lbs.

ACCESSORIES

External Filament Connector	AMPEREX #S-13484
External Grid Connector	AMPEREX #Y-13326 (supplied with tube without charge)

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

Maximum ratings apply up to 5 megacycles. Operation at higher frequencies is permissible provided the input is reduced and attention given to the glass-to-metal seal temperature:

Frequency	5	12.5	20	mc
Percent of Maximum Rated Plate Voltage and Plate Input	100	75	50	%

R.F. POWER AMPLIFIER AND OSCILLATOR - CLASS C - TELEGRAPHY

(Key down conditions per tube without modulation)

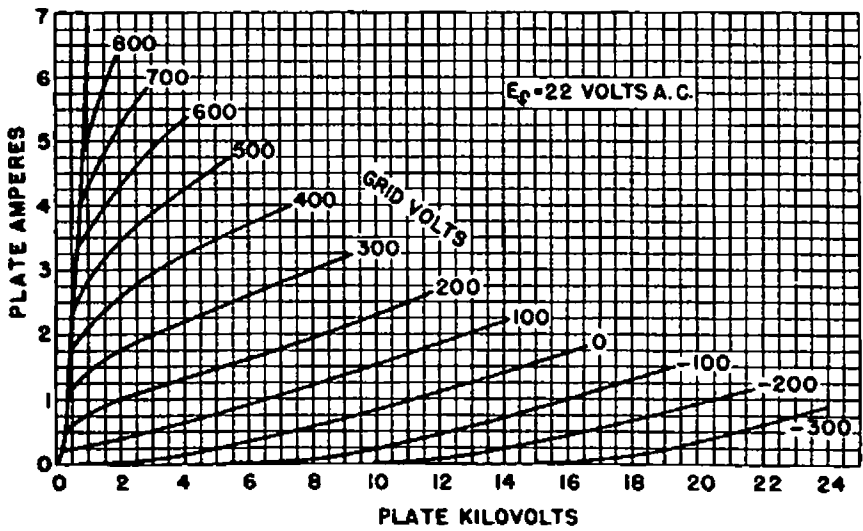
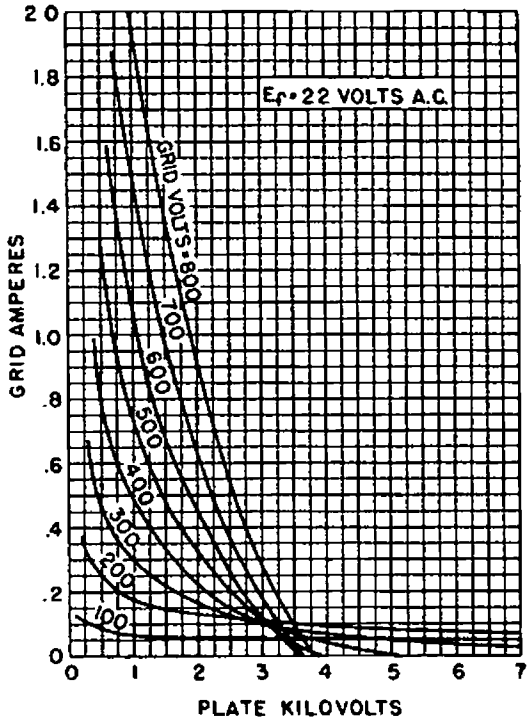
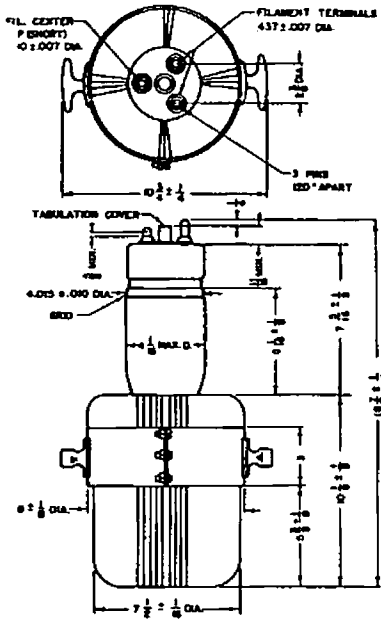
Maximum Ratings

D.C. Plate Voltage	14.0 KV
D.C. Plate Current	2.0 amps
Plate Input	26.0 KW
Plate Dissipation	10.0 KW
D.C. Grid Voltage	- 3.0 KV
D.C. Grid Current	0.40 amp

Typical Operation

Filament Voltage	21.4	21.5	21.8 volts
D.C. Plate Voltage	8.0	10.0	12.0 KV
D.C. Plate Current	1.75	1.8	2.0 amps
D.C. Grid Voltage	- 500	- 600	- 800 volts
Grid Voltage, Peak RF	1300	1420	1740 KV
D.C. Grid Current	0.21	0.20	0.20 amps
Driving Power (approx.)	273	284	348 watts
Power Output	9.4	12.3	17.1 KW
Tube Output	530	700	970 BTU/min.

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