

AMPEREX TUBE TYPE 6756

The 6756 is a three electrode, water-cooled tube designed with special characteristics as a low impedance, R.F. industrial oscillator to deliver maximum power under varying load conditions.

The filament is thoriated tungsten. The anode is capable of dissipating 20 KW.

The 6756 has a heavy wall, high dissipation and heat storage copper anode and an extremely rigid, coaxial grid structure.

Filament connections are made with heavy, heat dissipating, permanently attached, flexible leads eliminating difficulties due to contact resistance at the terminals.

The tube design also incorporates wide spacings between the elements which, together with the rugged mechanical supports, prevent internal shorting.

Features of this tube are -

Greatly prolonged filament life.

High transconductance and low μ characteristics for industrial service.

Extra heavy wall copper anode to absorb short-time overload operation.

Platinum-clad grid for stable grid operation.

Rugged, "powdered-glass" stem construction.

Coaxial grid seal for efficient, high frequency performance and maximum physical strength.

AMPEREX designed gettering material.

GENERAL CHARACTERISTICS

ELECTRICAL DATA

Filament	Thoriated tungsten
Filament Voltage	7.5 volts
Filament Current	100 amperes
Starting Current (cannot be exceeded even momentarily)	210 amperes
Peak Cathode Current ¹	28 amperes
Amplification Factor ($I_b = 3$ amperes, $E_b = 4000$ volts)	13.5
Transconductance ($I_b = 3$ amperes, $E_b = 4000$ volts)	11,400 micromhos
Plate Resistance ($I_b = 3$ amperes, $E_b = 4000$ volts)	1180 ohms
Direct Interelectrode Capacitances	
Grid to Plate	47.6 mmf
Grid to Filament	25.1 mmf
Plate to Filament	1.5 mmf

MECHANICAL DATA

Maximum Overall Dimensions	
Length (without leads)	16½ inches
Diameter	4¾ inches
Mounting Position	vertical, anode down
Cooling	water (see curves)

¹ Represents maximum usable cathode current for any condition of operation.

COOLING CHARACTERISTICS (See Curves)

ACCESSORIES

Water Jacket
 External Grid Connector (furnished with tube without charge)
 Net Weight (approx.)

Amperex Type #S-15096
 Amperex Type #Y-13326
 12.5 lbs.

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

Oscillator, Class C - Three Phase, Full-Wave Supply

Maximum Ratings, Absolute Values (per tube)

CCS

DC Plate Voltage	12500	volts max.
DC Plate Current	3.5	amperes max.
DC Grid Voltage	-3000	volts max.
DC Grid Current (full load)	0.220	amperes max.
DC Grid Current (no load) ²	0.300	amperes max.
Plate Input	42.0	kilowatts max.
Plate Dissipation	20.0	kilowatts max.

Typical Operation (per tube)

	<u>CCS</u> <u>Full Load</u>	<u>CCS</u> <u>2A Load</u>	<u>CCS</u> <u>No Load</u>
DC Plate Voltage	12000	12000	12000 volts d-c
DC Plate Current	3.5	2.0	0.430 amperes d-c
DC Grid Voltage	-1220	-1380	-1710 volts d-c
RF Grid Voltage	2050	2030	— volts
DC Grid Current	0.210	0.238	0.295 amperes d-c
Grid Resistor	5.8	5.8	5.8 kilohms
Plate Input	42.0	24.0	5.16 kilowatts
Plate Dissipation	11.25	4.9	— kilowatts
Plate Power Output	30.75	19.1	— kilowatts
Efficiency	73.30	79.4	— per cent
Load Impedance	1755	3120	— ohms

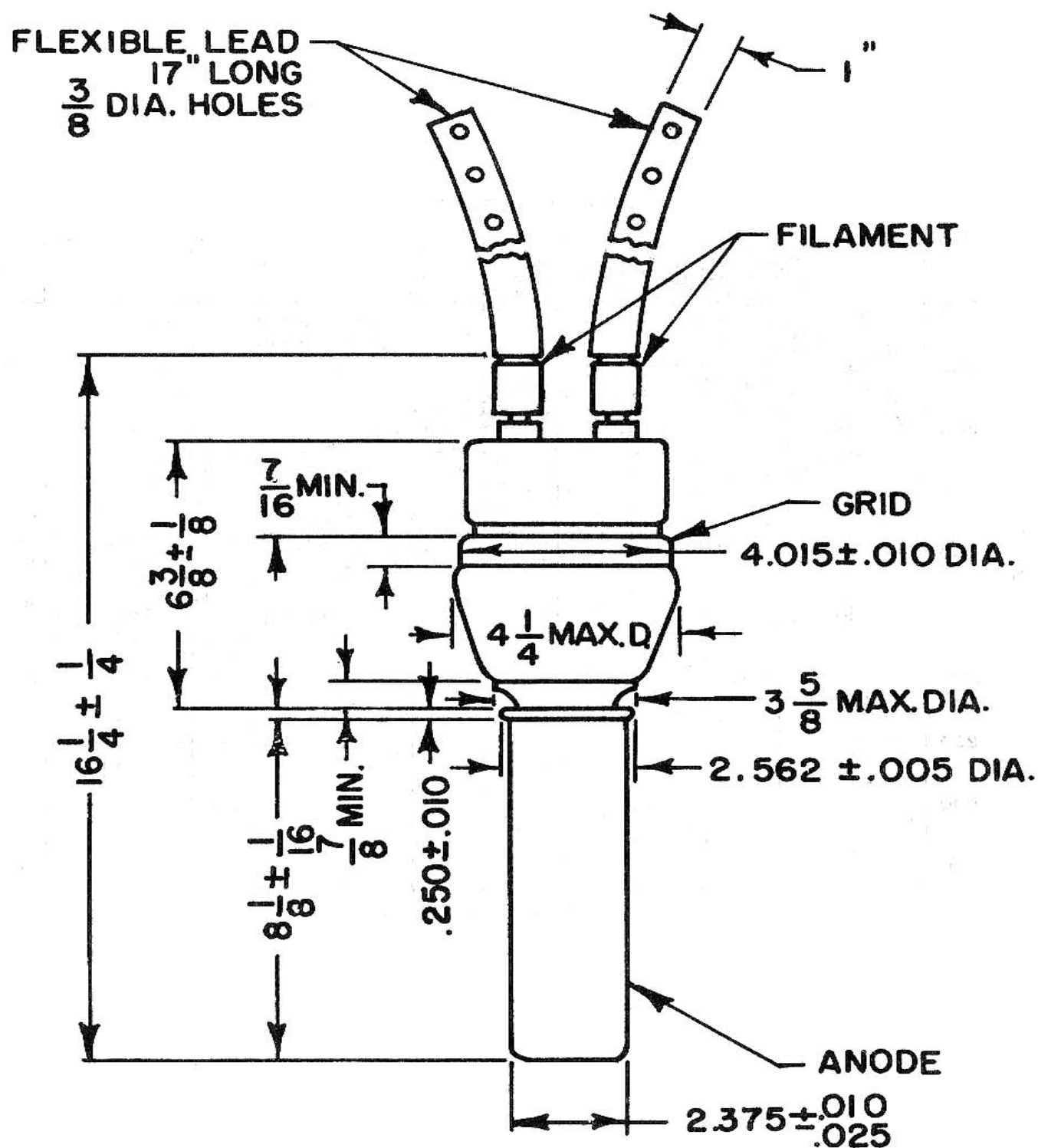
MEASURED³

Plate Dissipation	11.36	6.87	— kilowatts
Plate Power Output	30.64	17.13	— kilowatts
Plate Efficiency	73	71.40	— %

² No load condition is valid for plate current of 0.500 amperes d-c or less.

³ Measured in an industrial R.F. oscillator.

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CONSTANT CURRENT CHARACTERISTICS

