MANUFACTURERS OF POWER TRANSMITTING TUBES AND RECTIFIERS

Amperex ELECTRONIC CORPORATION

CABLE: AMPRONICS, NEW YORK

230 DUFFY AVENUE, HICKSVILLE, L. I., NEW YORK • WEIls 1-6200

AMPEREX TUBE TYPE 6757

TENTATIVE DATA

The 6757 is a three electrode, forced air-cooled tube designed with special characteristics as a low impedance, RF industrial oscillator to deliver maximum power under varying load conditions.

The filament is thoriated tungsten. The anode is capable of dissipating 15 KW.

The 6757 has a heavy wall, high heat 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 mu 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	50.0	mmf
Grid to Filament	25.1	mmf
Plate to Filament	2.0	mmf

COOLING CHARACTERISTICS (Forced Air)

Plate Dissipation	8	10	15	KW
Air Flow	500	700	1050	CFM
Static Pressure	0.6	0.9	1.8	inches of water

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

Revised 11/55

6757

MECHANICAL DATA

Maximum Overall Dimensions	
Length (without leads)	17 1/8 inches
Diameter	11 inches
Mounting Position	Vertical, anode down
Net Weight (approx,)	56½ lbs.

ACCESSORIES

External Grid Connector (furnished with tube without charge)	Amperex No. Y-13326

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

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

Maximum Ratings, Absolute Values (per tube)

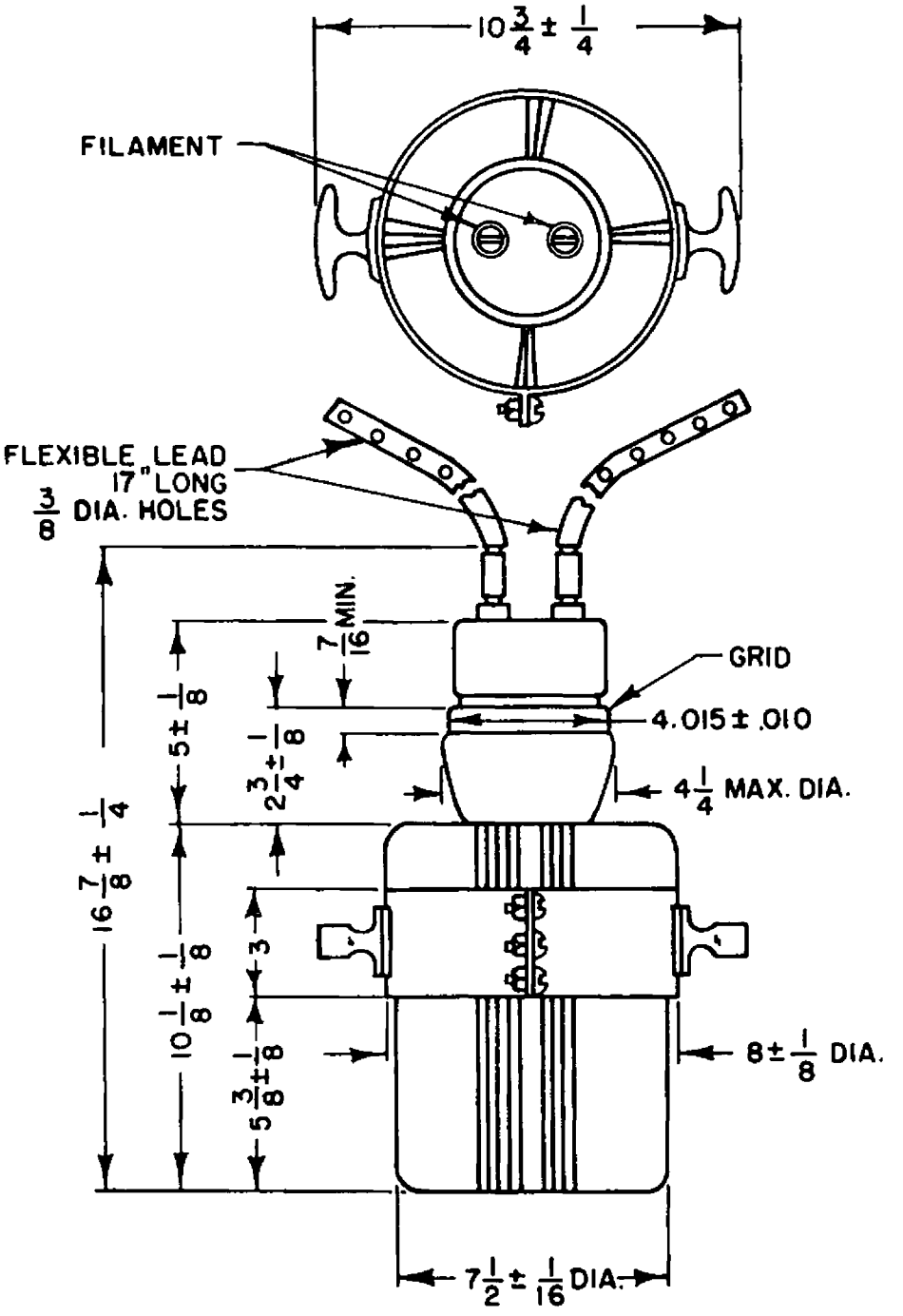
	CCS	
DC Plate Voltage	12500	volts max.
DC Plate Current	3.5	amperes max.
DC Grid Voltage	−2000	volts max.
DC Grid Current (full load)	0.220	amperes max.
DC Grid Current (no load) [2]	0.300	amperes max.
Plate Input	42.0	kilowatts max.
Plate Dissipation	15.0	kilowatts max.

Typical Operation (per tube)

	CCS Full Load	CCS 2A Load	CCS No Load	
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-d
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
MEASURED [3]				
Plate Dissipation	11.36	6.87	—	kilowatts
Plate Power Output	30.64	17.13	—	kilowatts
Plate Efficiency	73.0	71.40	—	per cent

[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.


10 3/4 ± 1/4
FILAMENT
FLEXIBLE LEAD
17" LONG
3/8 DIA. HOLES
7/16 MIN.
GRID
4.015 ± .010
4 1/4 MAX. DIA.
1/8
5 ± 1/8
2 3/4 ± 1/8
1/4
16 7/8 ± 1/8
10 1/8 ± 1/8
3
5 3/8 ± 1/8
8 ± 1/8 DIA.
7 1/2 ± 1/16 DIA.

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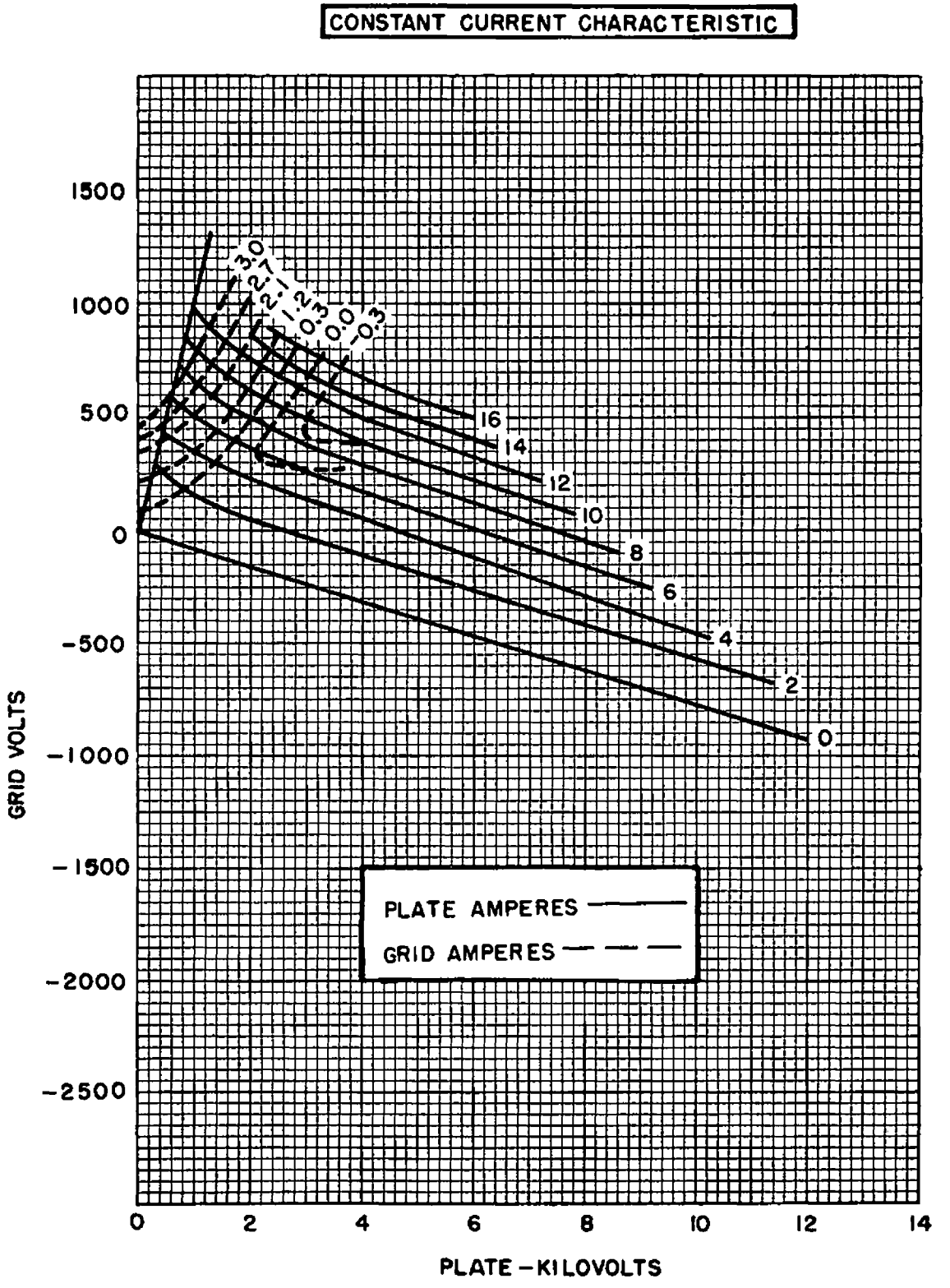
CONSTANT CURRENT CHARACTERISTIC
1500
1000
500
0
-500
-1000
-1500
-2000
-2500
GRID VOLTS
3.0
2.7
2.1
1.2
0.3
0.0
-0.3
16
14
12
10
8
6
4
2
0
PLATE AMPERES
GRID AMPERES
0
2
4
6
8
10
12
14
PLATE-KILOVOLTS