

January 1, 1961

VHF POWER TRIODE TYPE 7604

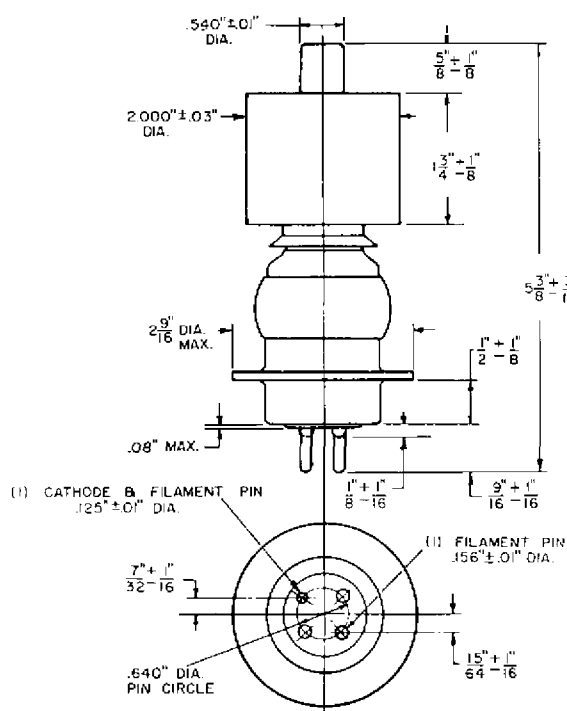
The 7604 is a three electrode tube designed for use as an oscillator, amplifier or modulator. The forced-air-cooled external radiator is capable of dissipating 600 watts. An efficient oxide coated cathode is employed. Maximum ratings apply to 60 megacycles and operation with reduced input is permissible to 350 megacycles.

ELECTRICAL:

Cathode.....	Oxide Coated Unipotential
Heater:	
Voltage.....	5.0 Volts
Current.....	8.0 Amperes
Amplification Factor.....	20
Interelectrode Capacitances:	
Grid to Plate.....	11.8 $\mu\mu\text{f}$
Grid to Cathode.....	26 $\mu\mu\text{f}$
Plate to Cathode.....	0.25 $\mu\mu\text{f}$
Interelectrode Capacitances with Socket in Place:	
Grid to Plate.....	12 $\mu\mu\text{f}$
Grid to Cathode.....	35 $\mu\mu\text{f}$
Plate to Cathode.....	0.24 $\mu\mu\text{f}$

MECHANICAL:

Mounting Position	Vertical-anode up or down
Type of Cooling.....	Forced Air
Maximum Incoming Air Temperature.....	45 °C
Minimum Required Air Flow on Radiator:	
Plate Dissipation.....	600 Watts
Air Flow Cubic Feet per Min.....	30 CFM
Pressure in Inches.....	0.9 Inches
Maximum Glass Temperature.....	160 °C
Net Weight.....	14 Ounces
Shipping Weight.....	3 Pounds



MAXIMUM RATINGS-CLASS C TELEGRAPHY

(Key down conditions per tube without modulation)

D.C. Plate Voltage.....	4000	Volts
D.C. Plate Current.....	0.50	Amperes
D.C. Grid Voltage.....	-500	Volts
D.C. Grid Current.....	0.075	Amperes
Plate Input.....	1.8	Kilowatt
Plate Dissipation.....	600	Watts
Grid Dissipation.....	15	Watts

TYPICAL OPERATION-CLASS C TELEGRAPHY

(Key down without A.M.)

D.C. Plate Voltage.....	2500	3500	Volts
D.C. Grid Voltage.....	-275	-400	Volts
Peak R.F. Grid Voltage.....	370	525	Volts
D.C. Plate Current.....	0.272	0.400	Amperes
D.C. Grid Current.....	0.046	0.069	Amperes
Peak R.F. Plate Voltage.....	2100	2950	Volts
Driving Power (Approx.)@.....	17	35	Watts
Power Output.....	530	1100	Watts

R.F. POWER AMPLIFIER-CLASS AB

Maximum Ratings:

D.C. Plate Voltage.....	4000	Volts
Max. Signal D.C. Plate Current.....	0.600	Amperes
Max. Signal Plate Input.....	1.5	Kilowatts
Plate Dissipation.....	600	Watts
Grid Dissipation.....	15	Watts

TYPICAL OPERATION

Class AB₂ R-F Linear Amplifier (One Tube)

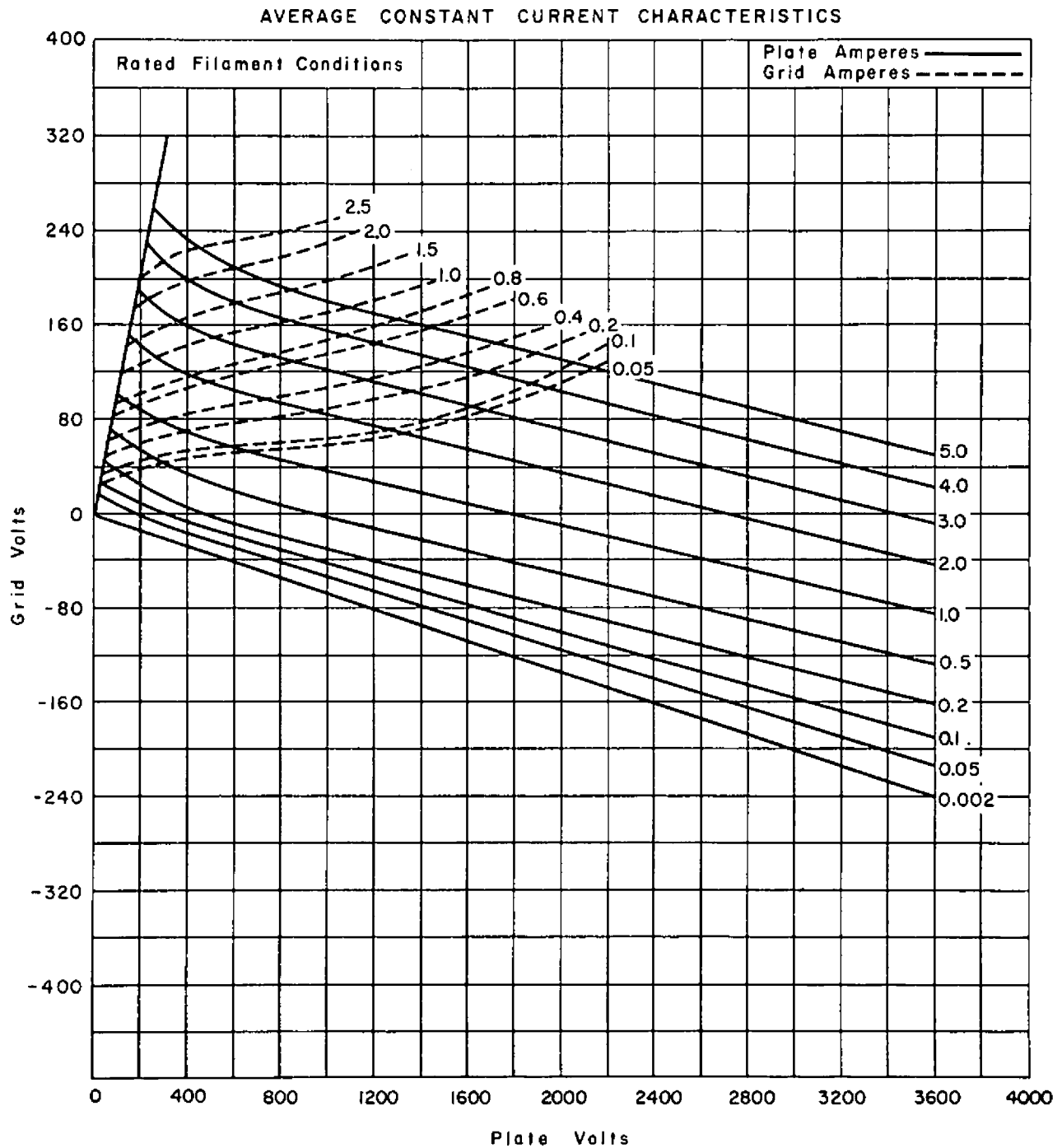
Grounded Grid Operation - Frequencies Below 60 mc.:

D.C. Plate Voltage.....	3500	Volts
D.C. Grid Voltage.....	-210	Volts
D.C. Plate Current.....	.285	Amperes
Zero Signal Plate Current.....	0.045	Amperes
D.C. Grid Current.....	0.008	Amperes
Peak R.F. Grid Voltage.....	270	Volts
Plate Dissipation.....	245	Watts
Driving Power (Approx.).....	65	Watts
Power Output (Approx.).....	755	Watts

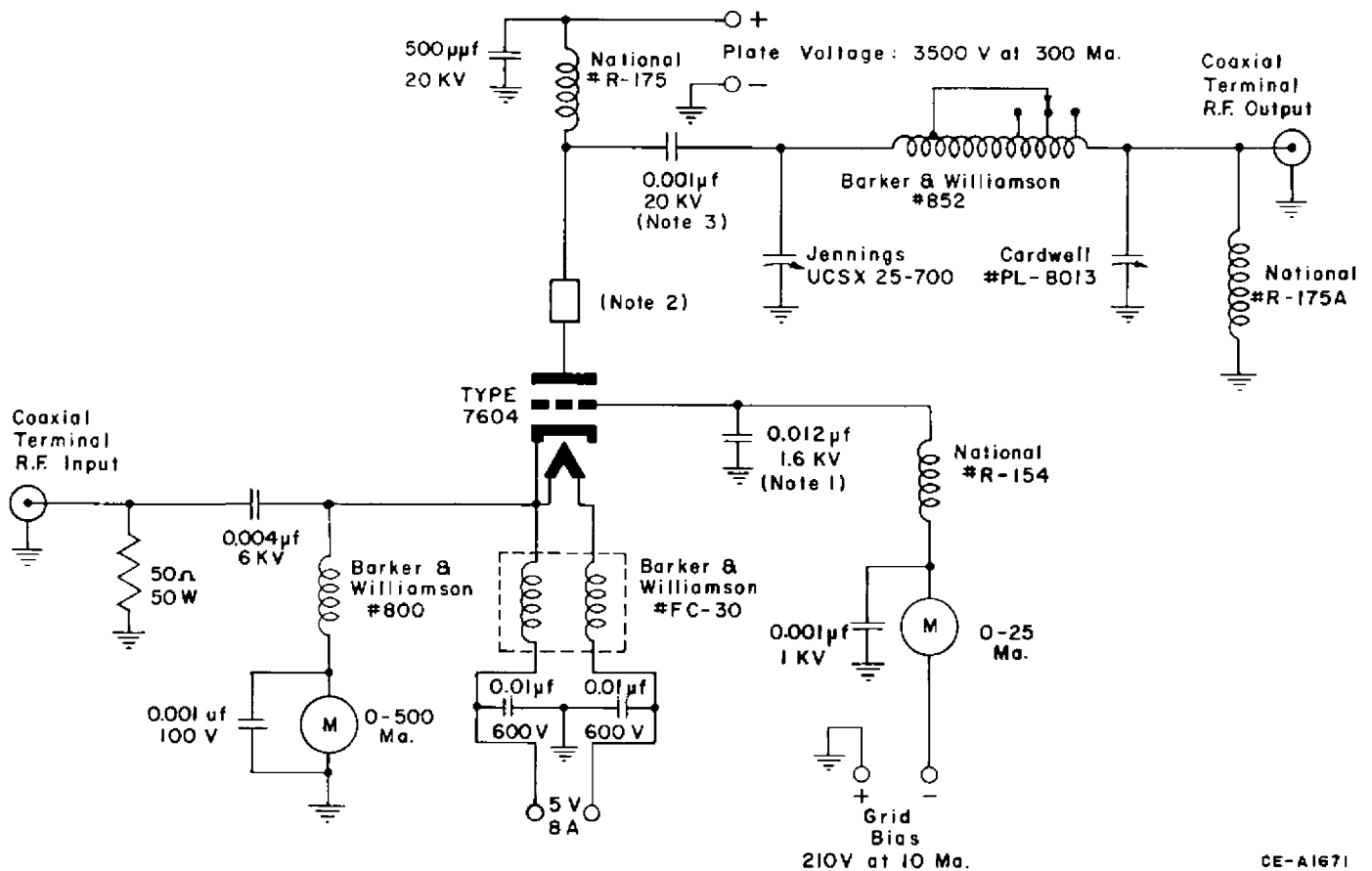
- The tube may be supported either by the anode or by use of a socket, Westinghouse Part No. 3-2H-4290. This socket is designed to provide a low inductance contact to the grid. Anode support of the tube may be done with a Lapp No. 43751 Insulating Support, sold by Lapp Insulator Co., Leroy, N.Y. or equivalent. When tube is operated anode down, cooling of the base end of the tube is necessary. Free air convection will suffice for most applications.

High Vacuum Amplifier Section

WESTINGHOUSE ELECTRIC CORPORATION, ELECTRONIC TUBE DIVISION, ELMIRA, NEW YORK



KILOWATT LINEAR AMPLIFIER FOR 80 THROUGH 10 METERS

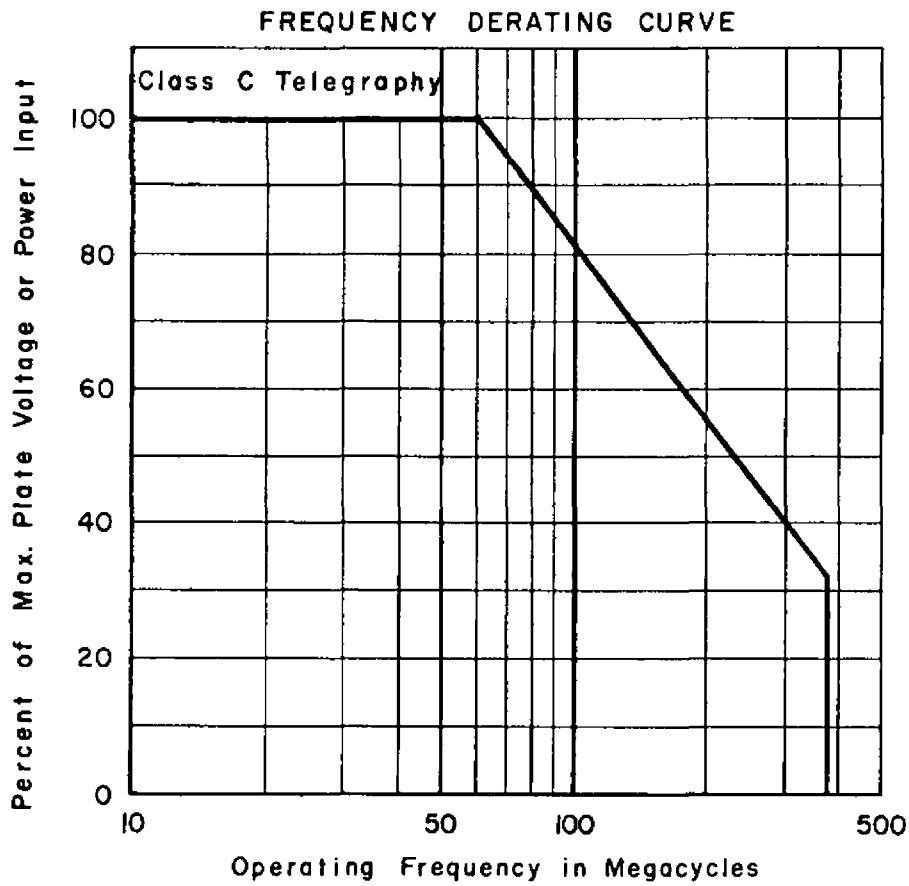


CE-A1671

Note 1: Four 0.003 μ f, 1.6 KV disc-caps attached at 90° intervals around grid ring.

Note 2: Parasitic suppressor consists of 7 turns of #12 wire on 47 Ω , 2 watt resistor.

Note 3: Two TV high voltage filter capacitors in parallel.



CE-A 1650