

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 \square	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

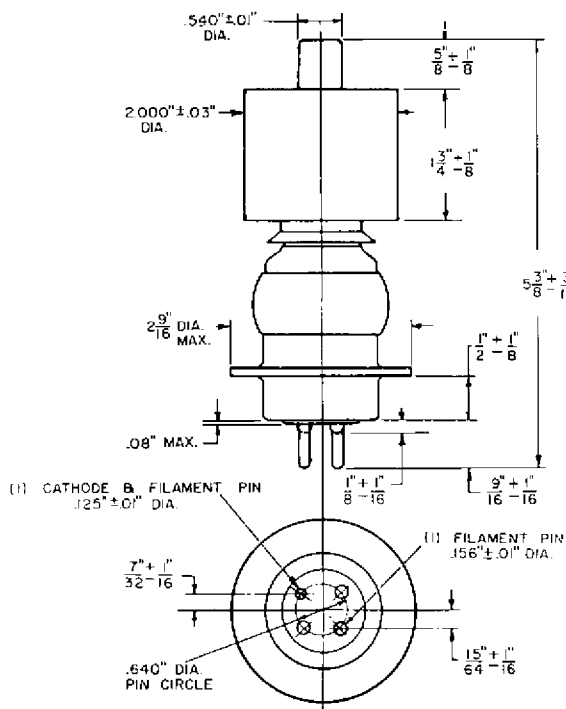
TYPICAL OPERATION

Class AB₂ R-F Linear Amplifier (One Tube)

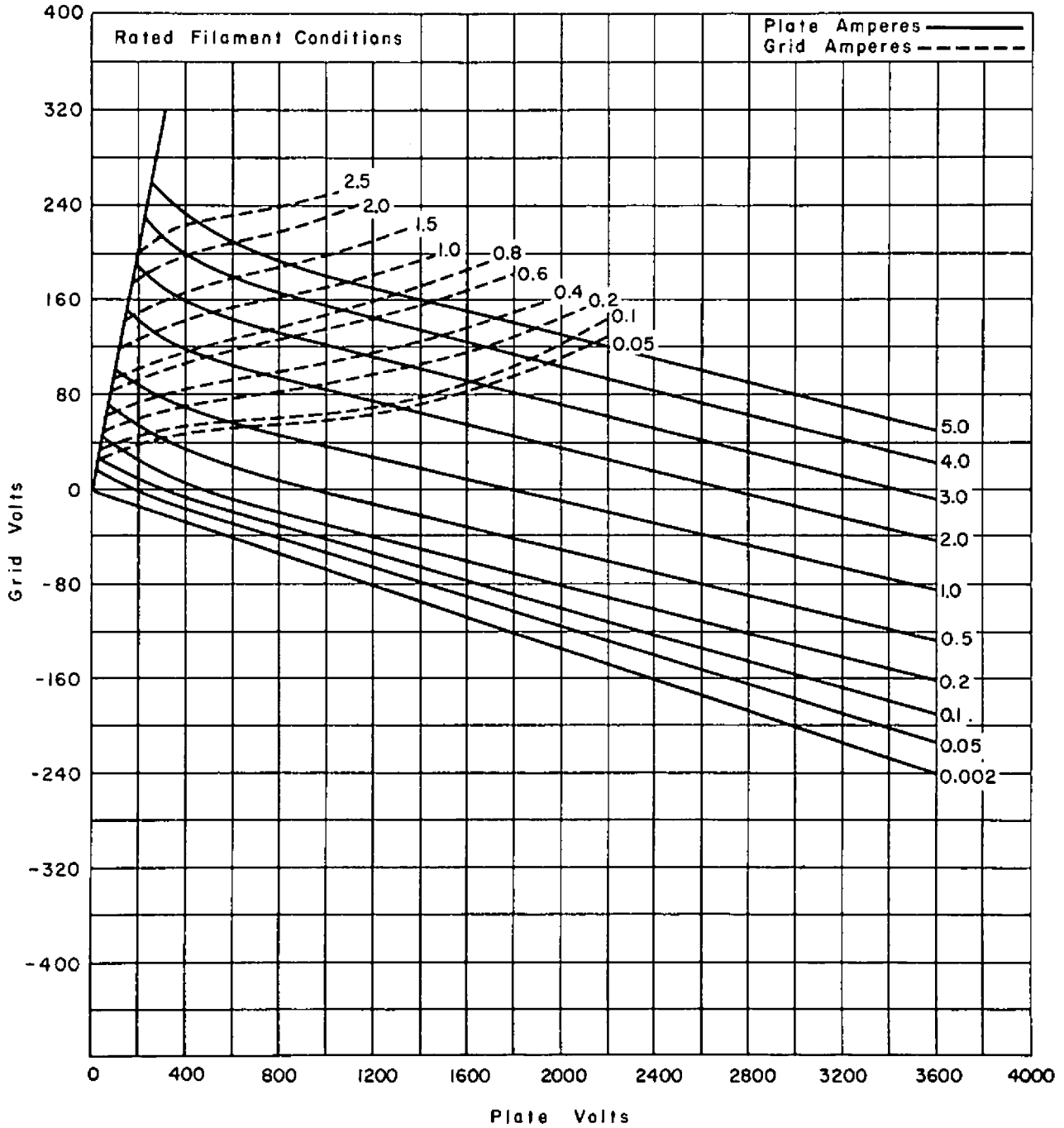
Grounded Grid Operation - Frequencies Below 60 mc.:

D.C. Plate Voltage	3500	Volts
D.C. Grid Voltage	-210	Volts
D.C. Plate Current285	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

\square 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.

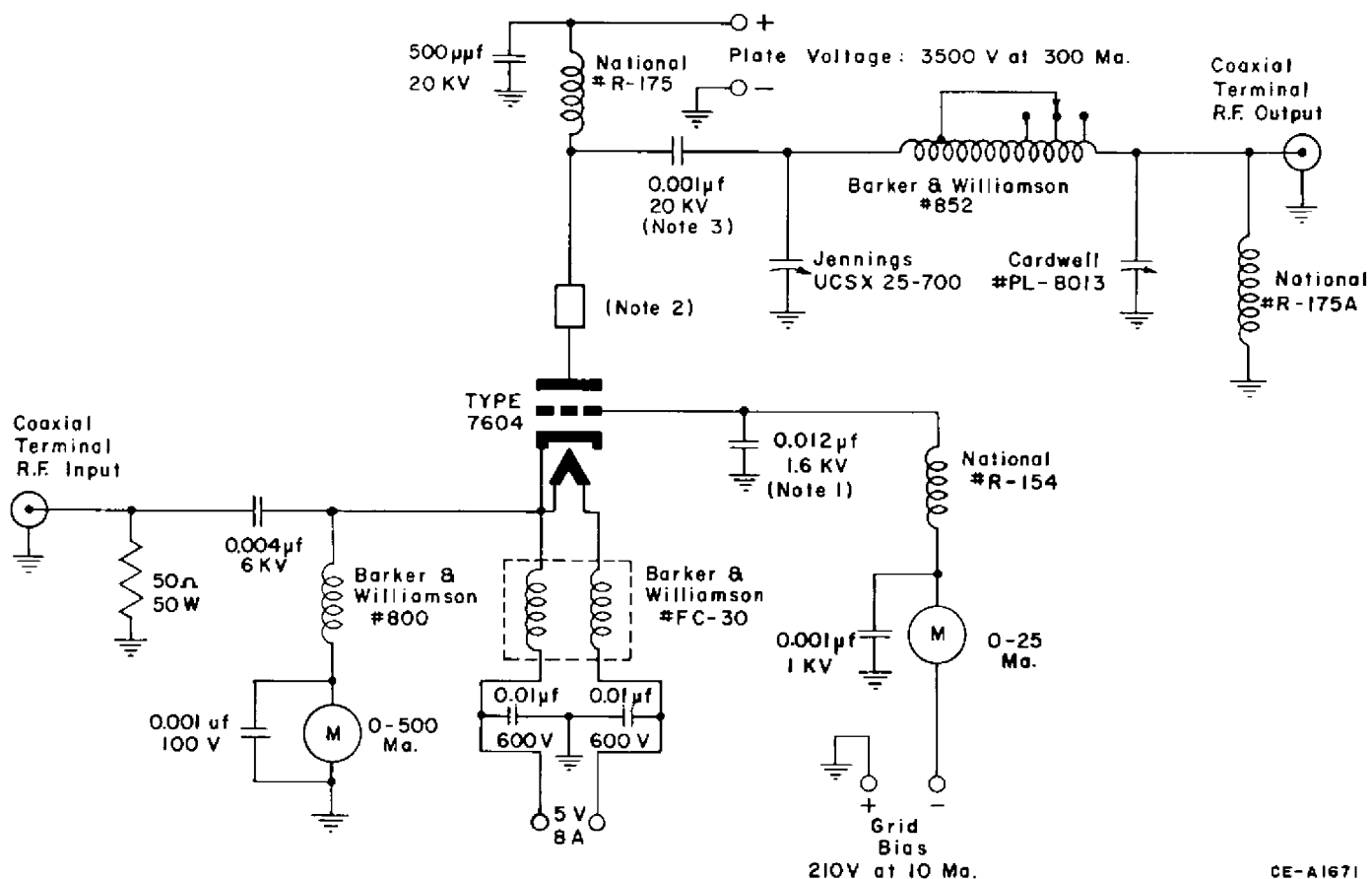


AVERAGE CONSTANT CURRENT CHARACTERISTICS



CE-01549

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.

