



1608

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R-F POWER AMPLIFIER, OSCILLATOR, CLASS B MODULATOR

Filament	Coated	
Voltage	2.5	a-c or d-c volts
Current	2.5	amp.
Amplification Factor	20	
Direct Interelectrode Capacitances:		
Grid to Plate	9	μf
Grid to Filament	8.5	μf
Plate to Filament	3	μf
Maximum Overall Length		5-3/8" ←
Maximum Diameter		2-1/16" ←
Bulb		ST-16
Base	Medium 4-Pin Ceramic, Bayonet	
RCA Socket		Type UR-542-A ←

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS

A-F POWER AMPLIFIER & MODULATOR - Class B

D-C Plate Voltage	425 max.	volts
Max.-Signal D-C Plate Current *	95 max.	ma.
Max.-Signal Plate Input *	40 max.	watts
Plate Dissipation *	20 max.	watts

Typical Operation:

Unless otherwise specified, values are for 2 tubes

D-C Plate Voltage	350	425	volts
D-C Grid Voltage	-10	-15	volts ←
Peak A-F Grid-to-Grid Voltage	120	190	volts ←
Zero-Signal D-C Plate Cur.	30	36	ma.
Max.-Signal D-C Plate Cur.	190	190	ma.
Load Resistance (per tube)	950	1200	ohms
Effective Load Res. (plate to plate)	3800	4800	ohms
Max.-Signal Driving Power	2.2	2.2	approx.watts
Max.-Signal Power Output	38	50	approx.watts

* Averaged over any audio-frequency cycle of sine-wave form.

R-F POWER AMPLIFIER - Class B Telephony

Carrier conditions per tube for use with a max. modulation fact. of 1.0

D-C Plate Voltage	425 max.	volts
D-C Plate Current	70 max.	ma.
Plate Input	30 max.	watts
Plate Dissipation	20 max.	Watts

Typical Operation:

D-C Plate Voltage	350	425	volts
D-C Grid Voltage	-10	-15	volts
Peak R-F Grid Voltage	35	40	volts
D-C Plate Current	70	70	ma.
D-C Grid Current **	4	4	approx.ma.
Driving Power **	2	2	approx.watts
Power Output	7	10	approx.watts

** See next page.

o At crest of a-f cycle with modulation factor of 1.0.

← Indicates a change.

JULY 1, 1938

RCA RADOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

DATA



1608 R-F POWER AMPLIFIER, OSCILLATOR, CLASS B MODULATOR

(continued from preceding page)

PLATE-MODULATED R-F POWER AMPLIFIER - Class C Telephony

Carrier conditions per tube for use with a max. modulation fact. of 1.0

D-C Plate Voltage		350 max.	volts
D-C Grid Voltage		-200 max.	volts
D-C Plate Current		85 max.	ma.
D-C Grid Current		25 max.	ma.
Plate Input		30 max.	watts
Plate Dissipation		13.5 max.	watts
Typical Operation:			
D-C Plate Voltage	325	350	volts
D-C Grid Voltage ¶	{ 4000	4000	ohms
	{ -80	-80	volts
Peak R-F Grid Voltage	150	165	volts
D-C Plate Current	85	85	ma.
D-C Grid Current **	20	20	<u>approx.ma.</u>
Driving Power **	2.7	3	<u>approx.watts</u>
Power Output	16	18	<u>approx.watts</u>

¶ Obtained by grid-leak resistor or partial self-bias methods.

R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy

*Key-down conditions per tube without modulation **

D-C Plate Voltage		425 max.	volts
D-C Grid Voltage		-200 max.	volts
D-C Plate Current		95 max.	ma.
D-C Grid Current		25 max.	ma.
Plate Input		40 max.	watts
Plate Dissipation		20 max.	watts
Typical Operation:			
D-C Plate Voltage	350	425	volts
D-C Grid Voltage ^Δ	{ 4300	4500	ohms
	{ -85	-90	volts
Peak R-F Grid Voltage	150	155	volts
D-C Plate Current	95	95	ma.
D-C Grid Current **	20	20	<u>approx.ma.</u>
Driving Power **	3	3	<u>approx.watts</u>
Power Output	20	27	<u>approx.watts</u>

Δ Obtained by grid-leak resistor or other self- or fixed-bias method.

* Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.

** Subject to considerable variation as explained on sheet TRANS. TUBE RATINGS.

For use of the 1608 at the higher frequencies, refer to sheet TRANS. TUBE RATINGS vs FREQUENCY.

OUTLINE DIMENSIONS, TUBE SYMBOL, and
SOCKET CONNECTIONS for the 1608 are the same
as for the 801.

← Indicates a change.

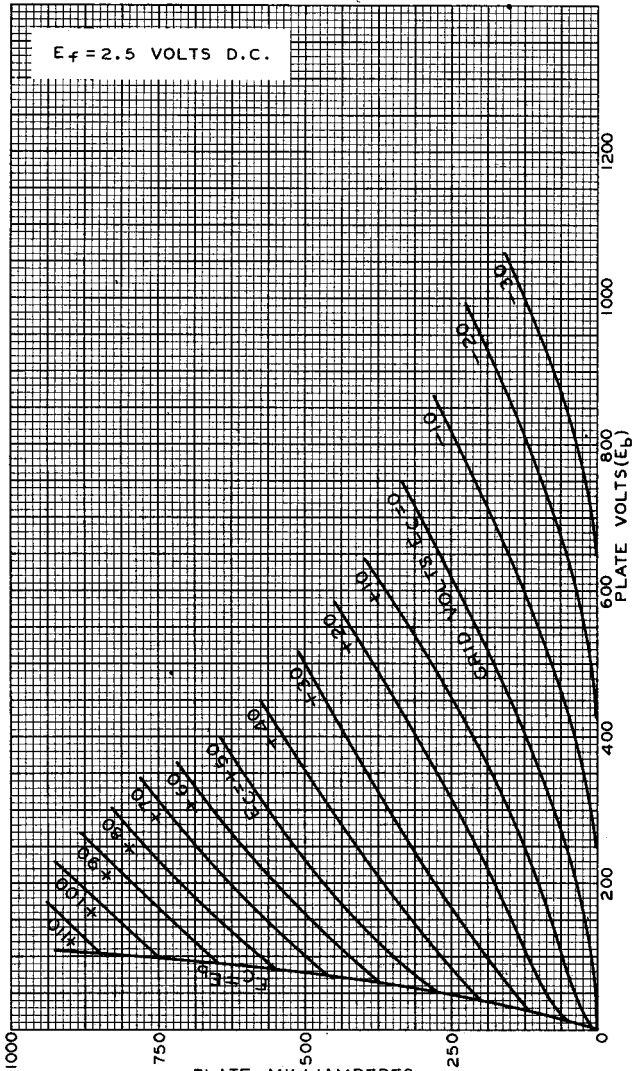


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AVERAGE PLATE CHARACTERISTICS

$E_f = 2.5$ VOLTS D.C.



FEB. 4, 1937

PLATE MILLIAMPERES
RCA RADOTRON DIVISION
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92C-4729

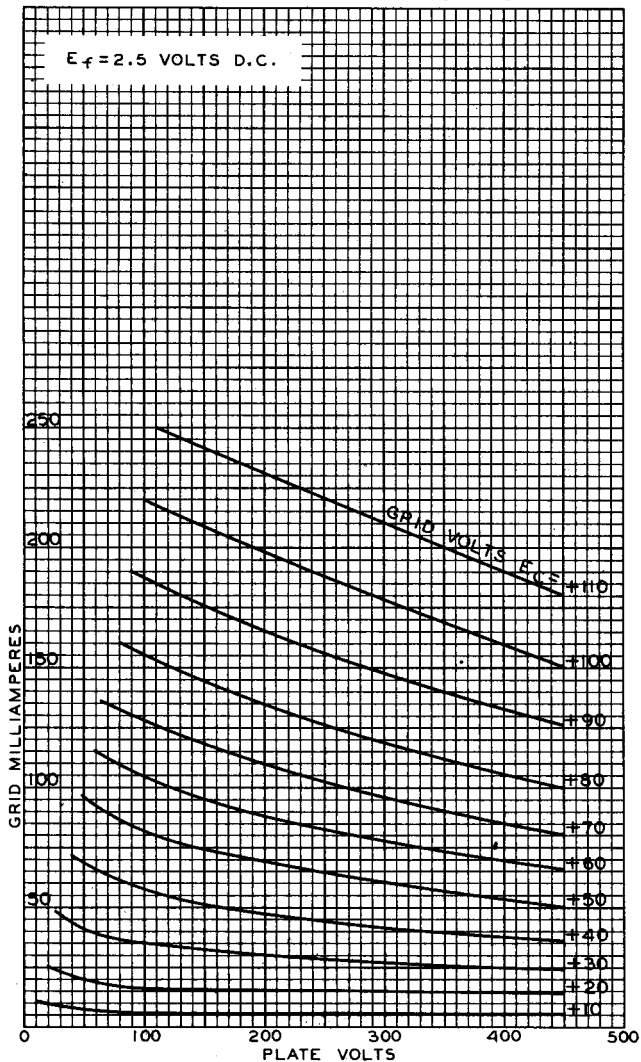
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AVERAGE CHARACTERISTICS

$E_f = 2.5$ VOLTS D.C.



FEB. 5, 1937

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