



841

R-F POWER AMPLIFIER, OSCILLATOR, A-F VOLTAGE AMPLIFIER

Filament	Thoriated Tungsten	
Voltage	7.5	a-c or d-c volts
Current	1.25	amp.
Amplification Factor	30	
Direct Interelectrode Capacitances:		
Grid to Plate	7	μf
Grid to Filament	4	μf
Plate to Filament	3	μf
Maximum Overall Length		5-5/8"
Maximum Diameter		2-3/16"
Bulb		S-17
Base		Medium 4-Pin Bayonet

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS

A-F VOLTAGE AMPLIFIER (Resistance-coupled)-Class A

D-C Plate Voltage	425 max.	volts
D-C Plate-Supply Voltage*	1250 max.	volts
Plate Dissipation	12 max.	watts
Typical Operation and Characteristics:		
Filament Voltage	7.5	7.5 d-c volts
D-C Plate-Supply Voltage*	425	1000 volts
D-C Grid Voltage	-6	-9 volts
Peak A-F Grid Voltage	6	9 volts
D-C Plate Current	0.7	2.2 ma.
Plate Resistance	63000	40000 ohms
Transconductance	450	750 μmhos
Load Resistance	250000	250000 ohms
Voltage Output (5% second harmonic)	126	225 volts

* Voltage effective at plate is less than the plate-supply voltage by an amount equal to the voltage drop in the load resistance caused by the plate current.

A-F POWER AMPLIFIER & MODULATOR - Class B

D-C Plate Voltage	425 max.	volts
Max-Signal D-C Plate Current*	60 max.	ma.
Max-Signal Plate Input*	25 max.	watts
Plate Dissipation*	15 max.	watts

Typical Operation - 2 tubes:

Unless otherwise specified, values are for 2 tubes.

Filament Voltage	7.5	7.5 d-c volts
D-C Plate Voltage	350	425 volts
D-C Grid Voltage	-5	-5 volts
Peak A-F Grid-to-Grid Voltage	176	180 volts
Zero-Signal D-C Plate Cur.	7	13 ma.
Max-Signal D-C Plate Cur.	114	120 ma.
Load Resistance (per tube)	1300	1750 ohms
Effective Load Res. (plate to plate)	5200	7000 ohms
Max-Signal Driving Power	3.2	3.6 approx. watts
Max-Signal Power Output	21	28 approx. watts

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

← Indicates a change

APRIL 5, 1937

RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

DATA



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R-F POWER AMPLIFIER, OSCILLATOR, A-F VOLTAGE AMPLIFIER

(continued from preceding page)

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	450 max.	volts
D-C Plate Current	50 max.	ma.
R-F Grid Current	4 max.	amp.
Plate Input	22.5 max.	watts
Plate Dissipation	15 max.	watts

Typical Operation:

Filament Voltage	7.5	7.5	a-c volts
D-C Plate Voltage	350	450	volts
D-C Grid Voltage	-12	-15	volts
Peak R-F Grid Voltage	60	60	volts
D-C Plate Current	45	45	ma.
D-C Grid Current**	4	4	approx. ma
Driving Power**	3.5	3.5	approx. watts
Power Output	4.25	6	approx. watts

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

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	60 max.	ma.
D-C Grid Current	20 max.	ma.
R-F Grid Current	4 max.	amp.
Plate Input	21 max.	watts
Plate Dissipation	10 max.	watts

Typical Operation:

Filament	7.5	7.5	a-c volts
D-C Plate Voltage	250	350	volts
D-C Grid Voltage	-40	-47	volts
Peak R-F Grid Voltage	125	130	volts
D-C Plate Current	50	50	ma.
D-C Grid Current**	15	15	approx. ma.
Driving Power**	2	2	approx. watts
Power Output	7	11	approx. watts

R-F POWER AMPLIFIER & MODULATOR - Class C Telegraphy

*Key-down conditions per tube without modulation **.*

D-C Plate Voltage	450 max.	volts
D-C Grid Voltage	-200 max.	volts
D-C Plate Current	60 max.	ma.
D-C Grid Current	20 max.	ma.
R-F Grid Current	5 max.	amp.
Plate Input	27 max.	watts
Plate Dissipation	15 max.	watts

Typical Operation:

Filament Voltage	7.5	7.5	a-c volts
D-C Plate Voltage	350	450	volts
D-C Grid Voltage	-30	-34	volts
Peak R-F Grid Voltage	115	120	volts
D-C Plate Current	50	50	ma.

→ ** See next page

← Indicates a change



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R-F POWER AMPLIFIER A-F VOLTAGE AMPLIFIER

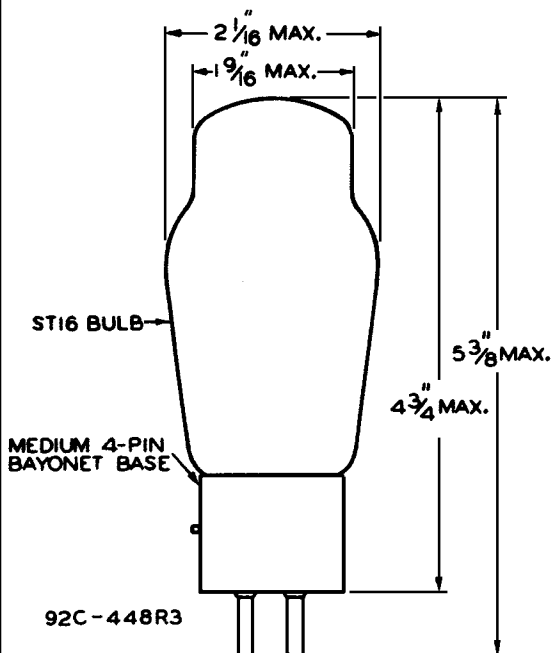
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D-C Grid Current**	15	15 approx.ma.
Driving Power**	1.8	1.8 approx.watts
Power Output	11	15 approx.watts

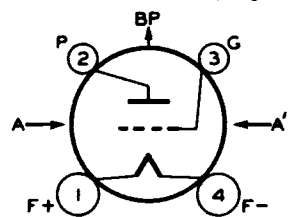
Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.

** Subject to wide variations as explained on sheet TRANS.TUBE RATINGS.

For the use of the 841 at the higher frequencies refer to sheet
TRANS. TUBE RATINGS vs FREQUENCY.



BOTTOM VIEW OF
SOCKET CONNECTIONS



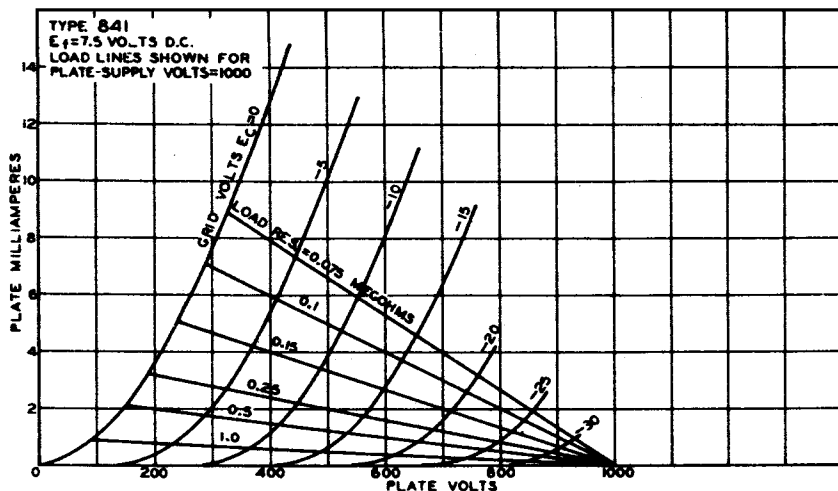
AA'=PLANE OF ELECTRODES

- Pin 1 - Filament +
- Pin 2 - Plate
- Pin 3 - Grid
- Pin 4 - Filament -
- BP - Bayonet pin

TUBE MOUNTING POSITION

VERTICAL: Base down
HORIZONTAL: Plate in
vertical plane (on edge)

AVERAGE PLATE CHARACTERISTICS

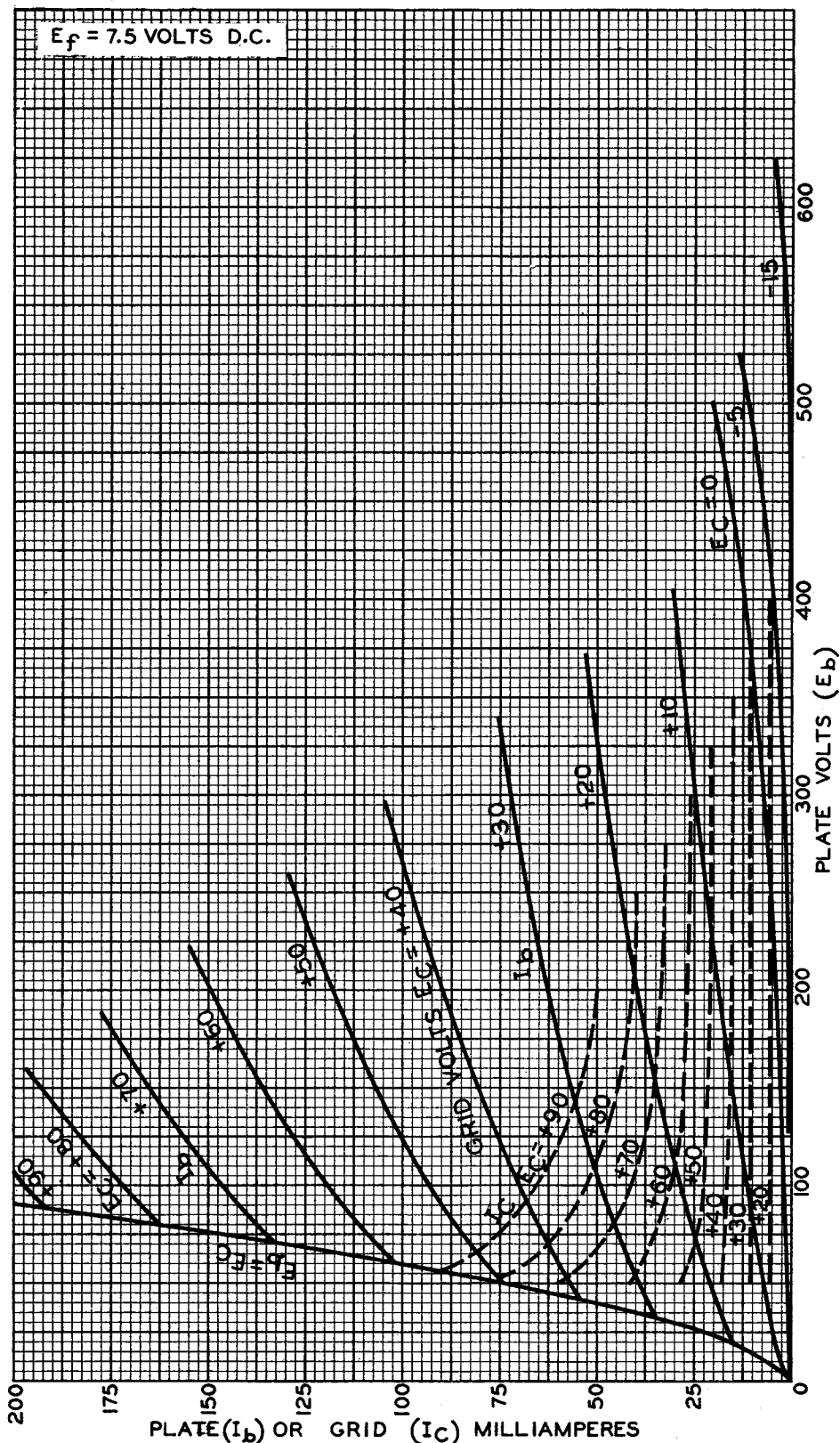


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AVERAGE PLATE CHARACTERISTICS



FEB. 12, 1934

RCA VICTOR DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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