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OSCILLATOR, R-F POWER AMPLIFIER (WATER COOLED)

Filament	Tungsten	
Voltage	11	a-c or d-c volts
Current	51	amp.
Amplification Factor	40	
Direct Interelectrode Capacitances (approx.):		
Grid to Plate	9	μf
Grid to Filament	6.5	μf
Plate to Filament	1.5	μf
Maximum Overall Length		9-1/2"
Maximum Radius		3-3/8"
Base		None
Water Jacket		Special

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS

This tube can often be operated at reduced filament voltage as explained on sheet TYPES OF CATHODES in front of book.

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	7500 max.	volts
D-C Plate Current	0.5 max.	amp.
R-F Grid Current	24 max.	amp.
Plate Input	3.75 max.	kw
Plate Dissipation	2.5 max.	kw
Typical Operation:		
Filament Voltage	11	d-c volts
D-C Plate Voltage	7000	volts
D-C Grid Voltage	-100	<u>approx.volts</u>
Peak R-F Grid Voltage °	1275	<u>approx.volts</u>
D-C Plate Current	0.45	amp.
Driving Power ** °	175	<u>approx.watts</u>
Power Output	1	<u>approx.kw</u>

° 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	6000 max.	volts		
D-C Grid Voltage	-1000 max.	volts		
D-C Plate Current	0.5 max.	amp.		
D-C Grid Current	0.15 max.	amp.		
R-F Grid Current	24 max.	amp.		
Plate Input	3 max.	kw		
Plate Dissipation	1.66 max.	kw		
Typical Operation:				
Filament Voltage	11	11	11	a-c volts
D-C Plate Voltage	4000	5000	6000	volts
D-C Grid Voltage	-850	-900	-950	approx.volts

** See next page.

(continued on next page)

JULY 17, 1935 (1-36)

RCA RADOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

DATA



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OSCILLATOR, R-F POWER AMPLIFIER

(continued from preceding page)

Peak R-F Grid Voltage	1600	1700	1950	<u>approx.volts</u>
D-C Plate Current	0.3	0.4	0.5	<u>amp.</u>
D-C Grid Current **	0.080	0.100	0.125	<u>approx.amp.</u>
Driving Power **	125	175	200	<u>approx.watts</u>
Power Output	0.9	1.5	2.25	<u>approx.kw</u>

R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy

Key-down conditions per tube without modulation #

D-C Plate Voltage	7500 max.	volts
D-C Grid Voltage	-1000 max.	volts
D-C Plate Current	1.0 max.	amp.
D-C Grid Current	0.15 max.	amp.
R-F Grid Current	30 max.	amp.
Plate Input	7.5 max.	kw
Plate Dissipation	2.5 max.	kw

Typical Operation:

Filament Voltage	11	11	11	a-c volts
D-C Plate Voltage	5000	6000	7000	volts
D-C Grid Voltage	-800	-850	-900	<u>approx.volts</u>
Peak R-F Grid Voltage	1850	2040	2300	<u>approx.volts</u>
D-C Plate Current	0.60	0.75	0.90	<u>amp.</u>
D-C Grid Current **	0.11	0.125	0.14	<u>approx.amp.</u>
Driving Power **	175	235	300	<u>approx.watts</u>
Power Output	2	3	4.25	<u>approx.kw</u>

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

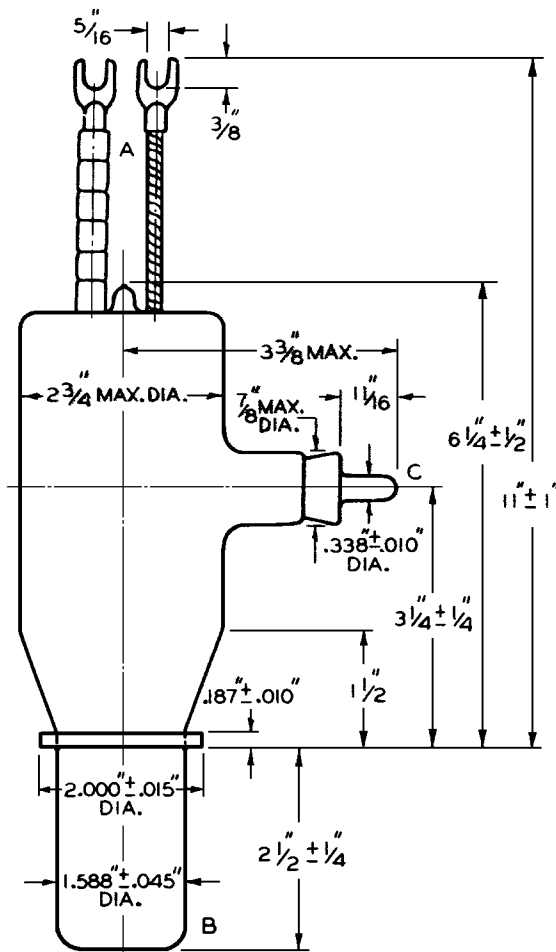
** Subject to wide variations as explained on sheet TRANS, TUBE RATINGS.

For use of the 846 at the higher frequencies, refer to sheet TRANS, TUBE RATINGS vs Frequency.

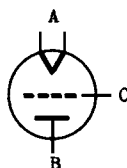


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OSCILLATOR,
R-F POWER AMPLIFIER



TUBE SYMBOL
AND
TERMINAL CONNECTIONS

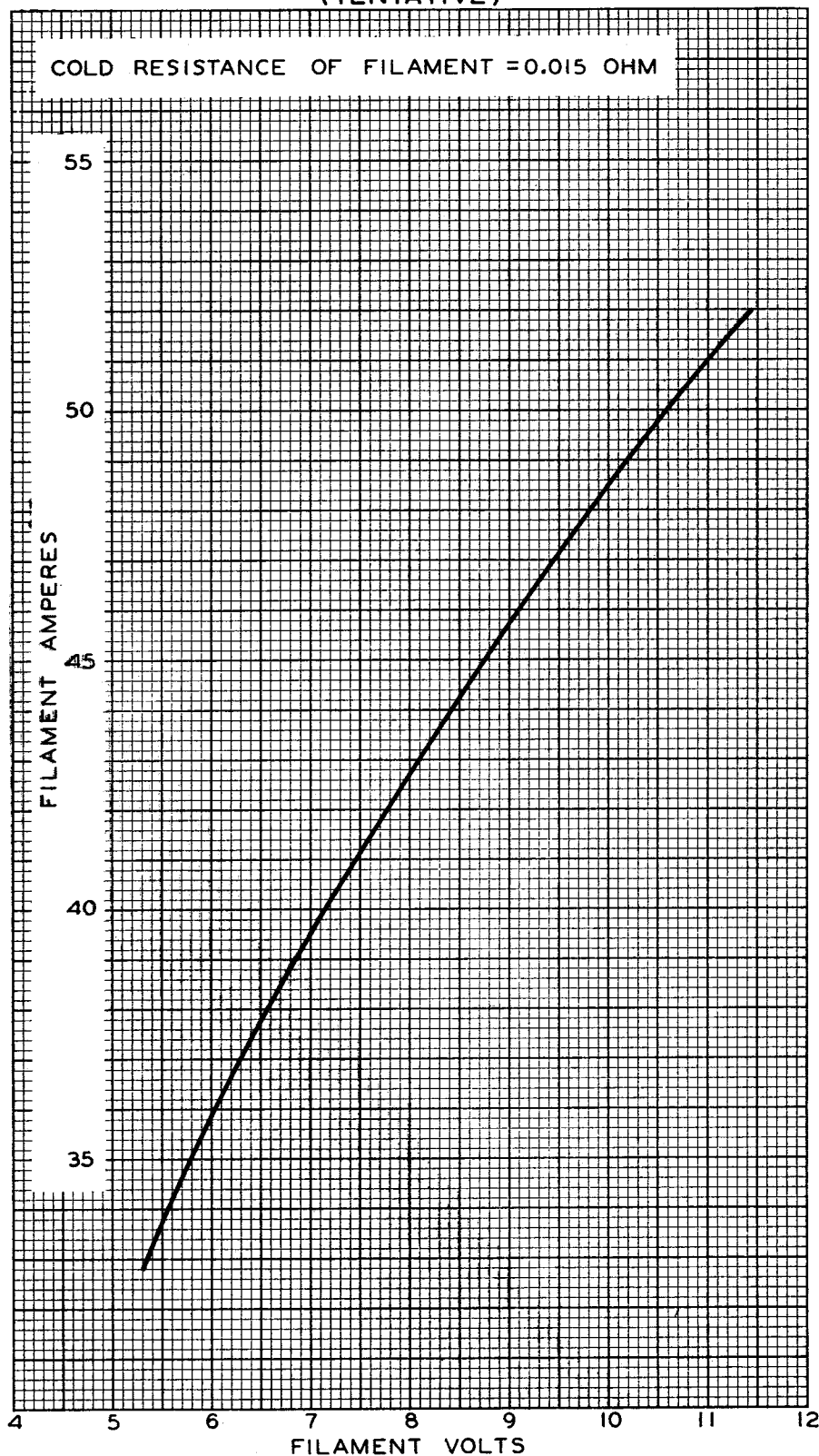


A - Filament
B - Plate
C - Grid

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AVERAGE FILAMENT CHARACTERISTIC
(TENTATIVE)

JUNE 19, 1935

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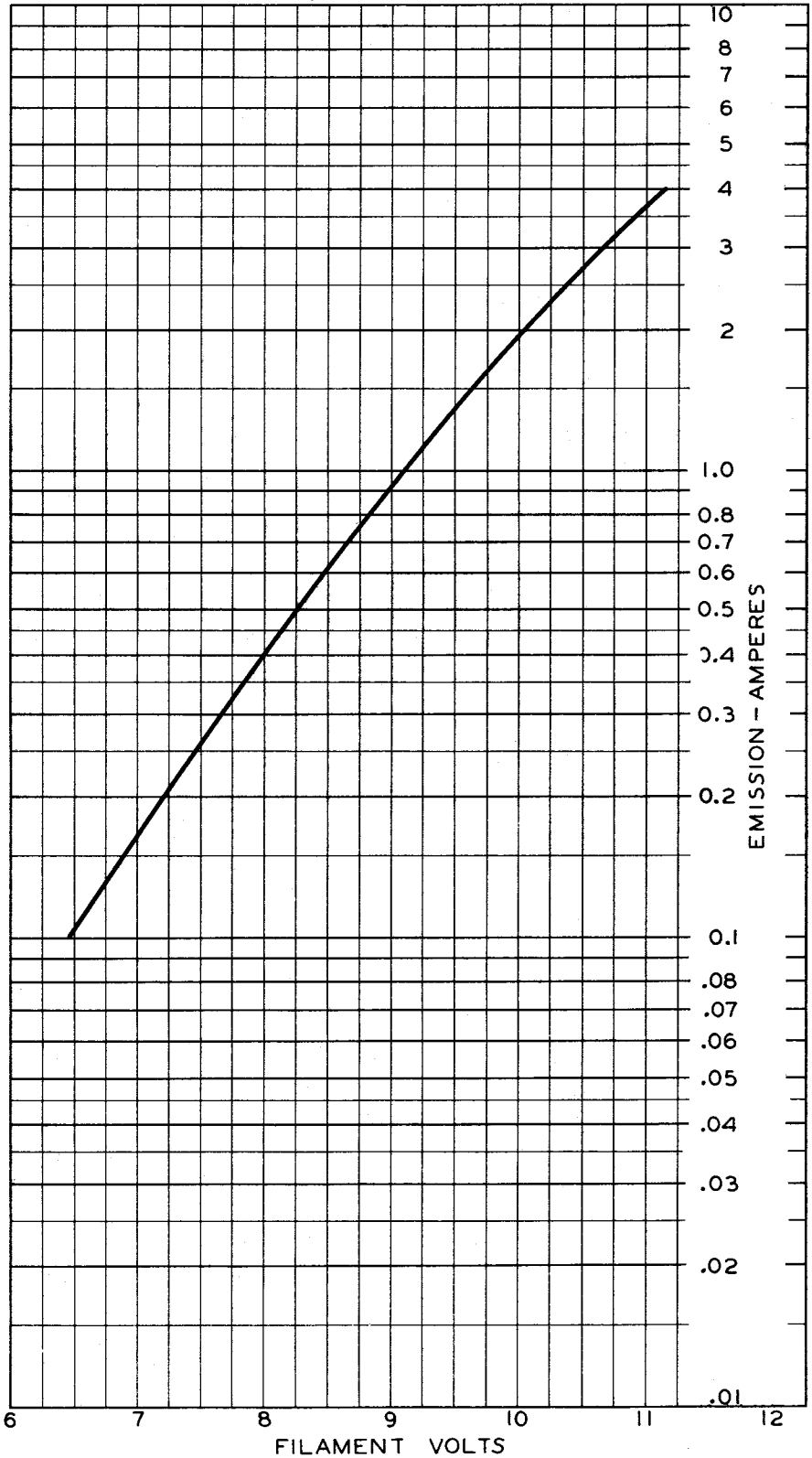
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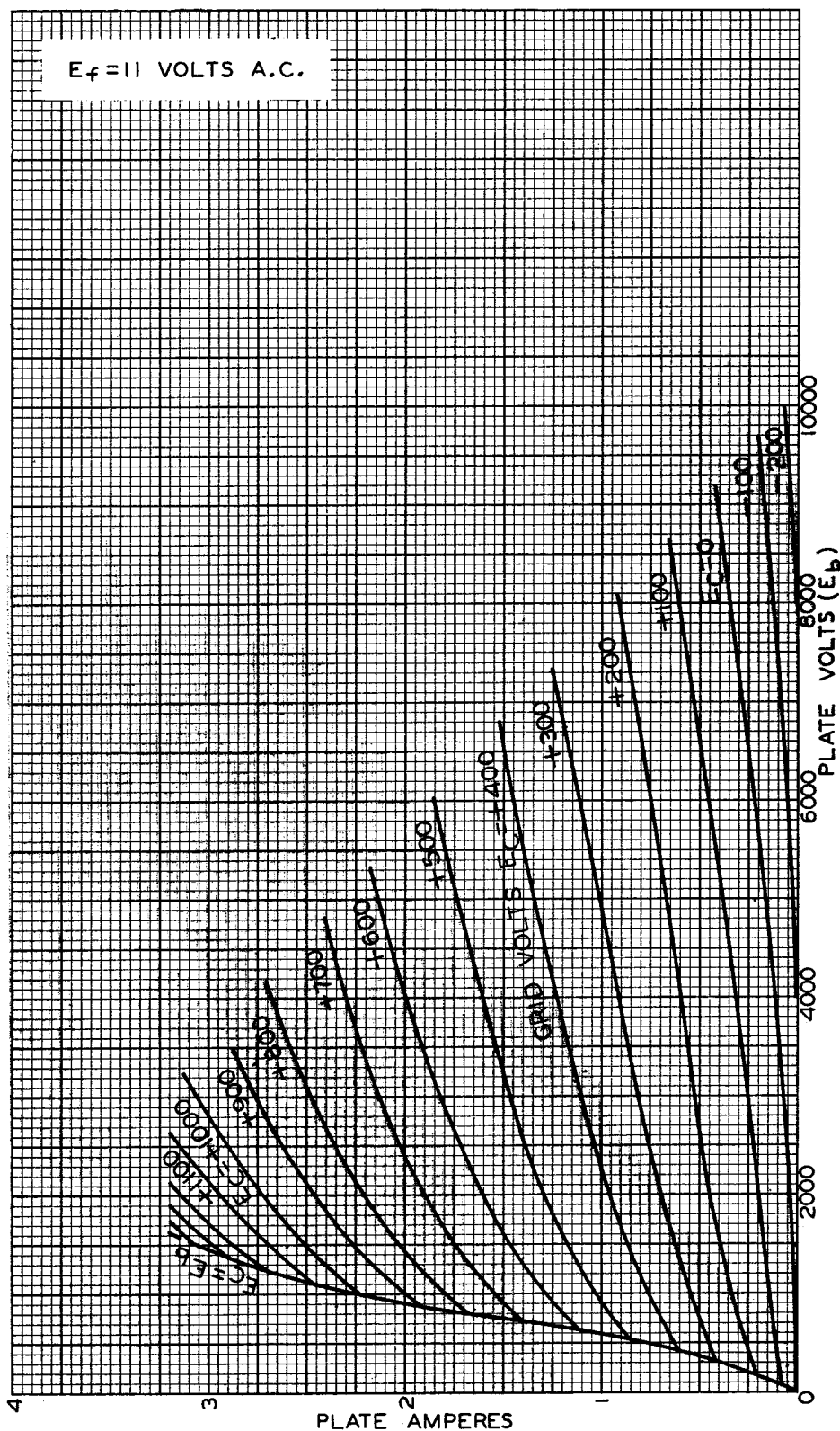
AVERAGE FILAMENT-EMISSION CHARACTERISTIC (TENTATIVE)



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AVERAGE PLATE CHARACTERISTICS

 $E_f = 11$ VOLTS A.C.



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TYPICAL CHARACTERISTICS

