



830-B

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

830-B

Filament	Thoriated Tungsten	
Voltage	10	a-c or d-c volts
Current	2	amp.
Amplification Factor	25	
Direct Interelectrode Capacitances (approx.):		
Grid to Plate	11	$\mu\mu\text{f}$
Grid to Filament	5	$\mu\mu\text{f}$
Plate to Filament	1.8	$\mu\mu\text{f}$
Maximum Overall Length		6-11/16"
Maximum Diameter		2-1/16"
Cap		Small Metal
Base		Medium 4-Pin Bayonet

**MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS****A-F POWER AMPLIFIER & MODULATOR - Class B**

D-C Plate Voltage	1000 max.	volts
Max-Signal D-C Plate Current *	150 max.	ma.
Max-Signal Plate Input *	150 max.	watts
Plate Dissipation *	60 max.	watts

Typical Operation - 2 tubes:

*Unless otherwise specified, values are for 2 tubes.*

Filament Voltage	10	10	a-c volts
D-C Plate Voltage	800	1000	volts
D-C Grid Voltage	-27	-35	volts
Peak A-F Grid-to-Grid Voltage	250	270	volts
Zero-Signal D-C Plate Current	20	20	ma.
Max-Signal D-C Plate Current	280	280	ma.
Load Resistance (per tube)	1500	1900	ohms
Effective Load Res. (plate to plate)	6000	7600	ohms
Max-Signal Driving Power	5	6	approx. watts
Max-Signal Power Output	135	175	approx. watts

**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	1000 max.	volts
D-C Plate Current	100 max.	ma.
Plate Input	90 max.	watts
Plate Dissipation	60 max.	watts
Typical Operation:		
Filament Voltage	10	10 a-c volts
D-C Plate Voltage	800	1000 volts
D-C Grid Voltage	-27	-35 volts
Peak R-F Grid Voltage	85	85 volts
D-C Plate Current	95	85 ma.
D-C Grid Current **	7	6 approx. ma.
Driving Power ** °	9	6 approx. watts
Power Output	23	26 approx. watts

\*, \*\*, ° See next page.

(continued on next page)

MAR. 20, 1936

RCA RADIOTRON DIVISION  
RCA MANUFACTURING COMPANY, INC.

TENTATIVE DATA

830-B



## 830-B 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	800 max.	volts
D-C Grid Voltage	-300 max.	volts
D-C Plate Current	100 max.	ma.
D-C Grid Current	30 max.	ma.
Plate Input	80 max.	watts
Plate Dissipation	40 max.	watts

Typical Operation:

Filament Voltage	10	10	a-c volts
D-C Plate Voltage	600	800	volts
D-C Grid Voltage	-140	-150	volts
Peak R-F Grid Voltage	255	265	volts
D-C Plate Current	95	95	ma.
D-C Grid Current**	30	20	approx.ma.
Driving Power**	7	5	approx.watts
Power Output	38	50	approx.watts

### R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy

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

D-C Plate Voltage	1000 max.	volts
D-C Grid Voltage	-300 max.	volts
D-C Plate Current	150 max.	ma.
D-C Grid Current	30 max.	ma.
Plate Input	150 max.	watts
Plate Dissipation	60 max.	watts

Typical Operation:

Filament Voltage	10	10	10	a-c volts
D-C Plate Voltage	600	800	1000	volts
D-C Grid Voltage	-95	-105	-110	volts
Peak R-F Grid Voltage	235	245	250	volts
D-C Plate Current	140	140	140	ma.
D-C Grid Current**	30	30	30	approx.ma.
Driving Power**	7	7	7	approx.watts
Power Output	45	70	90	approx.watts

\* Averaged over any audio-frequency cycle.

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

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

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

For operation of the 830-B at the higher frequencies, refer to sheet TRANS. TUBE RATINGS vs FREQUENCY.

(continued on next page)

MAR. 20, 1936

RCA RADIOTRON DIVISION  
RCA MANUFACTURING COMPANY, INC.

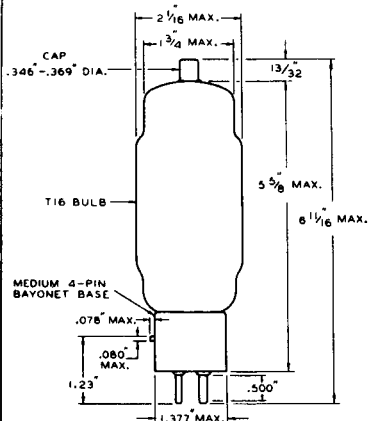
TENTATIVE DATA



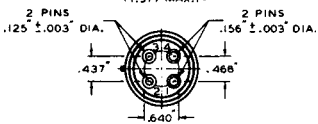
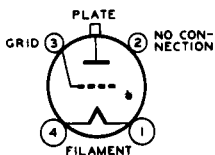
830-B

# 830-B R-F POWER AMPLIFIER, OSCILLATOR, CLASS B MODULATOR

(continued from preceding page)



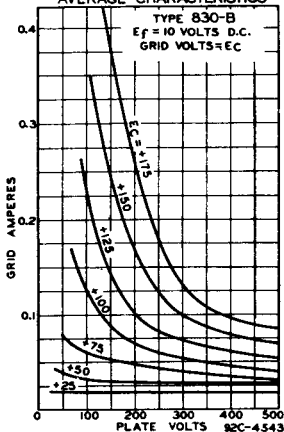
TUBE SYMBOL & TOP VIEW OF SOCKET CONNECTIONS



BOTTOM VIEW OF BASE

92C-4541

### AVERAGE CHARACTERISTICS

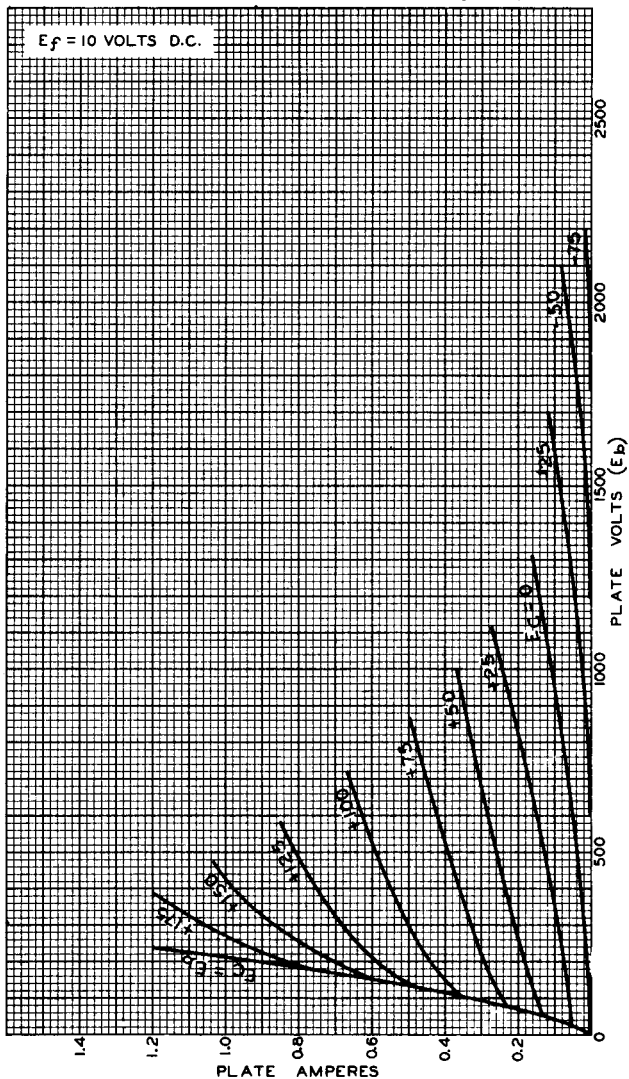


830-B



830-B

## AVERAGE PLATE CHARACTERISTICS



JAN. 17. 1936

RCA RADIOTRON DIVISION  
RCA MANUFACTURING COMPANY, INC.

92C-4542