



834

834

R-F POWER AMPLIFIER

Filament	Thoriated Tungsten	
Voltage	7.5	a-c or d-c volts
Current	3.1	amp.
Amplification Factor	10.5	
Direct Interelectrode Capacitances:		
Grid to Plate	2.6	μf
Grid to Filament	2.2	μf
Plate to Filament	0.6	μf
Maximum Overall Length		6-7/8"
Maximum Diameter		2-11/16"
Bulb		S-21
Base		Medium 4-Pin, Bayonet
RCA Socket (Type UR-542A)		Stock No. 9919

Cooling - Forced air from fan directed at middle and upper portions of bulb is recommended for all classes of service above 60 Mc.

*Maximum Ratings Are Absolute Values***MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS****R-F POWER AMPLIFIER - Class B Telephony***Carrier conditions per tube for use with a max. modulation factor of 1.0*

D-C Plate Voltage		1250 max.	volts	
D-C Plate Current		100 max.	ma.	
Plate Input		75 max.	watts	
Plate Dissipation		50 max.	watts	
Typical Operation:				
D-C Plate Voltage	750	1000	1250	volts
D-C Grid Voltage #	-70	-90	-115	volts
Peak R-F Grid Voltage	90	100	115	volts
D-C Plate Current	50	50	50	ma.
D-C Grid Current **	1.0	0.5	0	approx. ma.
Driving Power ° **	3.3	3.1	3.0	approx. watts
Power Output	11	16	20	approx. watts

PLATE-MODULATED R-F POWER AMPLIFIER - Class C Telephony*Carrier conditions per tube for use with a max. modulation factor of 1.0*

D-C Plate Voltage		1000 max.	volts
D-C Grid Voltage		-400 max.	volts
D-C Plate Current		100 max.	ma.
D-C Grid Current		20 max.	ma.
Plate Input		100 max.	watts
Plate Dissipation		35 max.	watts
Typical Operation:			
D-C Plate Voltage	750	1000	volts
D-C Grid Voltage *	{ 14500	17700	ohms
	{ -290	-310	volts
Peak R-F Grid Voltage	415	435	volts
D-C Plate Current	90	90	ma.
D-C Grid Current **	20	17.5	approx. ma.
Driving Power **	7.5	6.5	approx. watts
Power Output	42	58	approx. watts

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

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

**, #: See next page.

← Indicates a change.

Dec. 1, 1942

RCA RADITRON DIVISION
RCA MANUFACTURING COMPANY, INC.

DATA



R-F POWER AMPLIFIER

(continued from preceding page)

R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy

Key-down conditions per tube without modulation**

D-C Plate Voltage	1250 max.	volts
D-C Grid Voltage	-400 max.	volts
D-C Plate Current	100 max.	ma.
D-C Grid Current	20 max.	ma.
Plate Input	125 max.	watts
Plate Dissipation	50 max.	watts

→ Typical Operation:

D-C Plate Voltage	750	1000	1250	volts
D-C Grid Voltage †	$\left\{ \begin{array}{l} -175 \\ 8750 \\ 1600 \end{array} \right.$	$\left\{ \begin{array}{l} -200 \\ 11400 \\ 1850 \end{array} \right.$	$\left\{ \begin{array}{l} -225 \\ 15000 \\ 2150 \end{array} \right.$	volts
				ohms
				ohms
Peak R-F Grid Voltage	300	325	350	volts
D-C Plate Current	90	90	90	ma.
D-C Grid Current **	20	17.5	15	approx. ma.
Driving Power **	5.5	5.0	4.5	approx. watts
Power Output	42	58	75	approx. watts

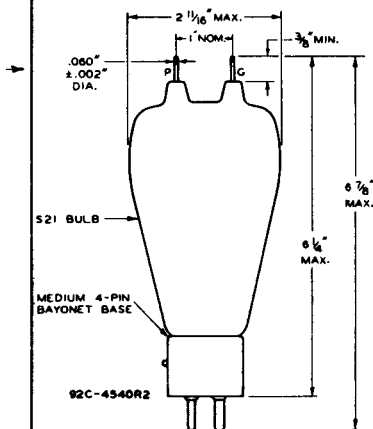
For a-c filament supply. If d.c. is used, the stated voltage values should be decreased by approx. one-half of the rated filament voltage.

† Obtained from fixed supply, by grid resistor (8750, 11400, 15000), or cathode resistor (1600, 1850, 2150).

** 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.

Data on operating frequencies for the 834 are given on the sheet TRANS. TUBE RATINGS vs FREQUENCY. See also "Cooling" under this type.

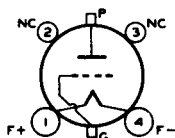


NOTE: Connections to tips P and G should be made by means of radiating connectors to which flexible circuit leads should be clamped.

TUBE MOUNTING POSITION

VERTICAL: Base down.
HORIZONTAL: No.

BOTTOM VIEW OF SOCKET CONNECTIONS



Pin 1 - Filament +
Pin 2 - No Connection
Pin 3 - No Connection
Pin 4 - Filament -
P - Plate
G - Grid

← Indicates a change.

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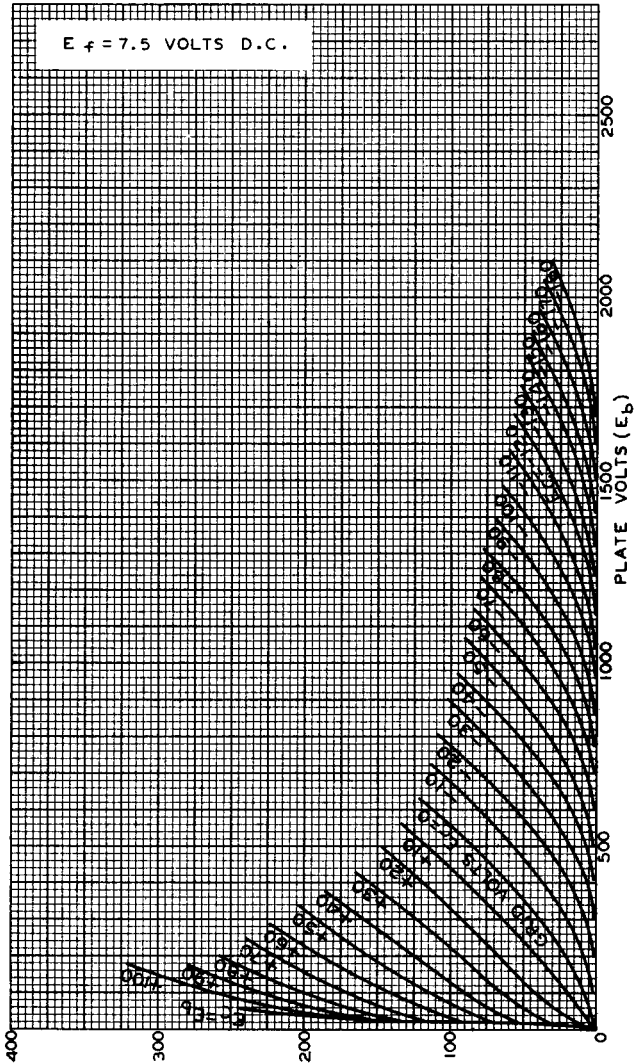


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AVERAGE PLATE CHARACTERISTICS

$E_f = 7.5$ VOLTS D.C.



JAN. 21, 1936

PLATE MILLIAMPERES
RCA RADOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

92C-4544



AVERAGE CHARACTERISTICS

