800

TRANSMITTING TRIODE

Filament	Thoriated Tungsten	
Voltage	7.5	a-c or d-c volts
Current	3.1	amp. ←
Amplification Factor	15	
Direct Interelectrode Capacitances:		
Grid to Plate	2.5	μμf
Grid to Filament	2.8	μμf
Plate to Filament	2.8	μμf
Overall Length		6-5/32" ± 7/32" ←
Seated Height		5-17/32" ± 7/32" ←
Maximum Diameter		2-11/16"
Bulb		S-21
Caps (two)		Small
Base		Medium 4-Pin, Bayonet
RCA Socket		Stock No. 9937 ←

Maximum Ratings Are Absolute Values

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS

A-F POWER AMPLIFIER & MODULATOR - Class B

D-C Plate Voltage			1250 max.	volts
Max.-Signal D-C Plate Current*			115 max.	ma.
Max.-Signal Plate Input*			85 max.	watts
Plate Dissipation*			35 max.	watts
Typical Operation:				
Unless otherwise specified, values are for 2 tubes.				
D-C Plate Voltage	750	1000	1250	volts
D-C Grid Voltage**	-40	-55	-70	volts
Peak A-F Grid-to-Grid Volt.	320	300	300	volts
Zero-Signal D-C Plate Cur.	26	28	30	ma.
Max.-Signal D-C Plate Cur.	210	160	130	ma.
Load Resistance (per tube)	1600	3125	5250	ohms
Effective Load Resistance (plate to plate)	6400	12500	21000	ohms
Max.-Signal Driving Power	6.0	4.4	3.4 approx.	watts
Max.-Signal Power Output	90	100	106 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			1250 max.	volts
D-C Plate Current			45 max.	ma.
Plate Input			50 max.	watts
Plate Dissipation			35 max.	watts
Typical Operation:				
D-C Plate Voltage		750	1000	volts
D-C Grid Voltage**		-40	-55	volts
Peak R-F Grid Voltage		160	170	volts
D-C Plate Current		45	42	ma.
D-C Grid Current †		2	2 approx.	ma.
Driving Power °†		3.6	3.3 approx.	watts
Power Output		10	14 approx.	watts

*, **, †, °: See next page. ← Indicates a change.

800

TRANSMITTING TRIODE

(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			1000 max.	volts
D-C Grid Voltage			-400 max.	volts
D-C Plate Current			80 max.	ma.
D-C Grid Current			25 max.	ma.
Plate Input			80 max.	watts
Plate Dissipation			23 max.	watts
Typical Operation:				
D-C Plate Voltage	750	1000		volts
D-C Grid Voltage ††	-150	-200		volts
	10000	13300		ohms
Peak R-F Grid Voltage	275	325		volts
D-C Plate Current	70	70		ma.
D-C Grid Current †	15	15	approx.	ma.
Driving Power †	3	4	approx.	watts
Power Output	35	50	approx.	watts

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			80 max.	ma.
D-C Grid Current			25 max.	ma.
Plate Input			100 max.	watts
Plate Dissipation			35 max.	watts
Typical Operation:				
D-C Plate Voltage	750	1000	1250	volts
D-C Grid Voltage †††	-100	-135	-175	volts
	6700	9000	11700	ohms
	1200	1600	2100	ohms
Peak R-F Grid Voltage	225	260	300	volts
D-C Plate Current	70	70	70	ma.
D-C Grid Current †	15	15	15 approx.	ma.
Driving Power †	2	3	4 approx.	watts
Power Output	35	50	65 approx.	watts

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

** For a-c filament supply.

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

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

† Subject to wide variations as explained on sheet TUBE RATINGS in General Section.

†† Obtained from grid resistor of value shown or by combination methods.

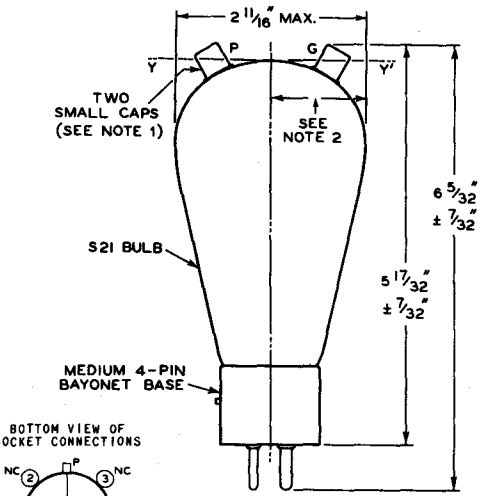
††† Obtained from a fixed supply, by grid resistor (6700, 9000, 11700) or by cathode resistor (1200, 1600, 2100).

Data on operating frequencies for the 800 are given on the sheet TRANS. TUBE RATINGS vs. FREQUENCY.

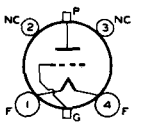
←Indicates a change.

800

TRANSMITTING TRIODE

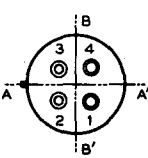


BOTTOM VIEW OF SOCKET CONNECTIONS



2D2

Pin 1 – Filament
Pin 2 – No Connection
Pin 3 – No Connection
Pin 4 – Filament
Cap P – Plate
Cap G – Grid



BOTTOM VIEW OF BASE

TUBE MOUNTING POSITION

VERTICAL: Base up or down.
HORIZONTAL: No.

92CM-4281R4

AS USED BELOW, PLANES AA', BB', AND YY' HAVE THE FOLLOWING DEFINITIONS:

1. PLANE AA' IS PLANE THROUGH AXIS OF BASE AND POINT MIDWAY BETWEEN PINS NO.1 AND NO.4.
2. PLANE BB' IS PLANE THROUGH AXIS OF BASE AND PERPENDICULAR TO PLANE AA'.
3. PLANE YY' IS TANGENT TO TOP OF BULB AND PERPENDICULAR TO AXIS OF BASE.

NOTE 1 -- WITH ALL MEASUREMENTS MADE PARALLEL TO THE PLANE YY' AND AT OR ABOVE THE PLANE, THE TOP CAPS ARE POSITIONED SO THAT:

a. NO PORTION OF CONTACT SURFACE EXTENDS MORE THAN 1-11/32" FROM THE PLANE BB'.

b. NO PORTION OF CONTACT SURFACE IS NEARER THAN 1/2" TO THE PLANE BB'.

c. NO PORTION OF CONTACT SURFACE EXTENDS MORE THAN 1/2" FROM THE PLANE AA'.

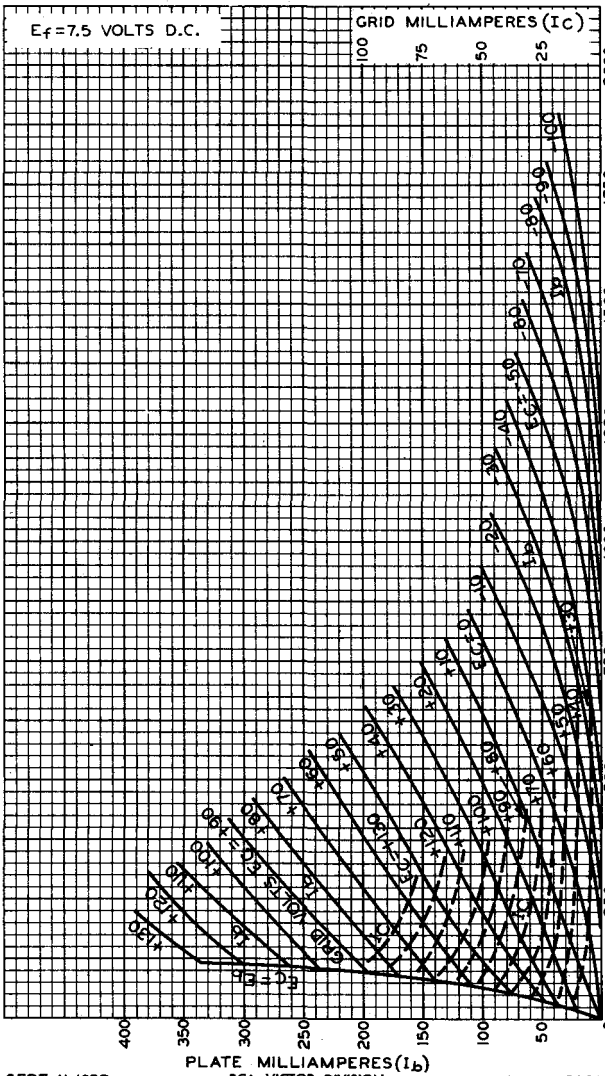
NOTE 2 -- WHEN TUBE IS ROTATED ABOUT AXIS OF ITS BASE, THE MAXIMUM RADIAL DISTANCE BETWEEN ANY POINT ON THE BULB AND THE ROTATIONAL AXIS DOES NOT EXCEED 1-7/16".

← indicates a change.

800

800

AVERAGE PLATE CHARACTERISTICS



SEPT. 11, 1933

RCA VICTOR DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-5368