808

TRANSMITTING TRIODE

GENERAL DATA

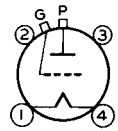
Electrical:

Filament, Thoriated Tungsten:		
Voltage	7.5	ac or dc volts
Current	4.0	amp
Amplification Factor	47	
Direct Interelectrode Capacitances:		
Grid to Plate	2.8	μμf
Grid to Filament	5.3	μμf
Plate to Filament	0.25	μμf ←

Mechanical:

Mounting Position	Vertical only. Base down
Overall Length	5-7/8" ± 3/16"
Seated Length	5-1/4" ± 3/16"
Maximum Diameter	2-13/16"
Bulb	G-22
Cap (top)	Medium
Cap (side)	Small
Base	Medium-Shell Small 4-Pin, Bayonet
Basing Designation for BOTTOM VIEW	$2D_1$

Pin 1 – Filament
Pin 2 – No Connection
Pin 3 – No Connection



Pin 4 – Filament
P – Plate (Top)
G – Grid (Side)

AF POWER AMPLIFIER & MODULATOR – Class B

Maximum Ratings, *Absolute Values*: ←

	CCS●	ICAS●●	
DC PLATE VOLTAGE	1500 max.	2000 max.	volts
MAX.-SIGNAL DC PLATE CUR.*	150 max.	150 max.	ma.
MAX.-SIGNAL PLATE INPUT*	150 max.	225 max.	watts
PLATE DISSIPATION*	50 max.	75 max.	watts

Typical Operation:

Values are for 2 tubes

DC Plate Voltage	1250	1500	2000	volts
DC Grid Voltage#	-16.5	-22.5	-36	volts
Peak AF Grid-to-Grid Volt.	245	215	270	volts
Zero-Signal DC Plate Cur.	40	30	40	ma.
Max.-Signal DC Plate Cur.	230	190	220	ma.
Effective Load Resistance (plate-to-plate)	12700	18300	21400	ohms
Max.-Signal Driving Power (Approx.)	7.8	4.8	8.8	watts

← Indicates a change.

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

●, ●●, #: See next page.

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Max.-Signal Power Output (Approx.). . . .	190	185	300 . .	watts

* *For ac filament supply.*

PLATE-MODULATED RF POWER AMPLIFIER – Class C Telephony

Carrier conditions per tube for use with a max. modulation factor of 1.0

Maximum Ratings, *Absolute Values:*

	CCS●	ICAS●●	
DC PLATE VOLTAGE.	1250 max.	1600 max.	volts
DC GRID VOLTAGE	-400 max.	-400 max.	volts
DC PLATE CURRENT.	125 max.	125 max.	ma.
DC GRID CURRENT	35 max.	40 max.	ma.
PLATE INPUT	135 max.	200 max.	watts
PLATE DISSIPATION	35 max.	50 max.	watts

Typical Operation:

DC Plate Voltage.	1000	1250	1600 . .	volts
DC Grid Voltage⊕.	-135	-150	-170 . .	volts
	3900	5000	4600 . .	ohms
Peak RF Grid Voltage. . .	270	270	300 . .	volts
DC Plate Current.	120	100	125 . .	ma.
DC Grid Current (Approx.)□	35	30	37 . .	ma.
Driving Power (Approx.)□.	9	7.5	10 . .	watts
Power Output (Approx.). .	90	95	150 . .	watts

⊕ Obtained by grid resistor of value shown or by partial self-bias methods.

RF POWER AMPLIFIER & OSCILLATOR – Class C Telegraphy

Key-down conditions per tube without modulation□□

Maximum Ratings, *Absolute Values:*

	CCS●	ICAS●●	
DC PLATE VOLTAGE.	1500 max.	2000 max.	volts
DC GRID VOLTAGE	-400 max.	-400 max.	volts
DC PLATE CURRENT.	150 max.	150 max.	ma.
DC GRID CURRENT	35 max.	40 max.	ma.
PLATE INPUT	200 max.	300 max.	watts
PLATE DISSIPATION	50 max.	75 max.	watts

Typical Operation:

DC Plate Voltage.	1250	1500	2000 . .	volts
DC Grid Voltage Δ	-150	-150	-150 . .	volts
	4300	4300	4200 . .	ohms
	880	940	800 . .	ohms
Peak RF Grid Voltage. . .	290	300	280 . .	volts
DC Plate Current.	135	125	150 . .	ma.
DC Grid Current (Approx.)□	35	35	36 . .	ma.
Driving Power (Approx.)□	9	9.5	9 . .	watts
Power Output (Approx.). .	125	140	225 . .	watts

→ Indicates a change.

● ●● □ □□ Δ: See next page.

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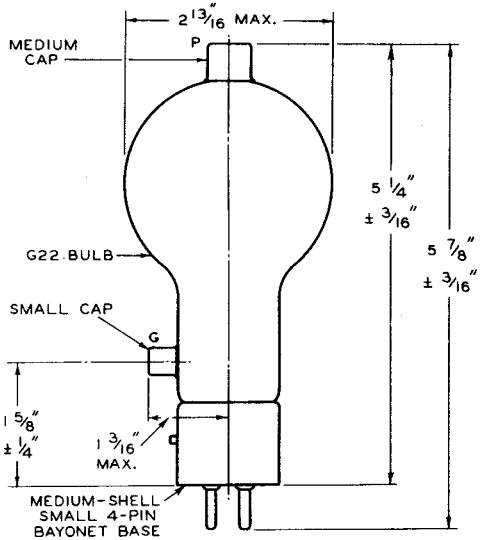
TRANSMITTING TRIODE

- ● Continuous Commercial Service.
- ●● Intermittent Commercial and Amateur Service.
- □ Subject to wide variations as explained on sheet TUBE RATINGS in General Section.
- □I Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.
- Δ Obtained from fixed supply, by grid resistor (4300, 4300, 4200) or by cathode resistor (880, 940, 800).

NOTE: When the 808 is used in the final amplifier or a preceding stage of a transmitter designed for break-in operation and oscillator keying, a small amount of fixed-bias must be used to maintain plate current at a safe value. With a plate voltage of 2000 volts, a fixed bias of at least -30 volts should be used.

Data on operating frequencies for the 808 are given on the sheet TRANS. TUBE RATINGS vs FREQUENCY



THE PLANE THROUGH THE TUBE AXIS AND CENTER OF GRID CAP MAY VARY FROM THE PLANE THROUGH THE TUBE AXIS AND CENTER OF BAYONET PIN BY AN ANGULAR TOLERANCE (MEASURED ABOUT THE TUBE AXIS) OF 10°.

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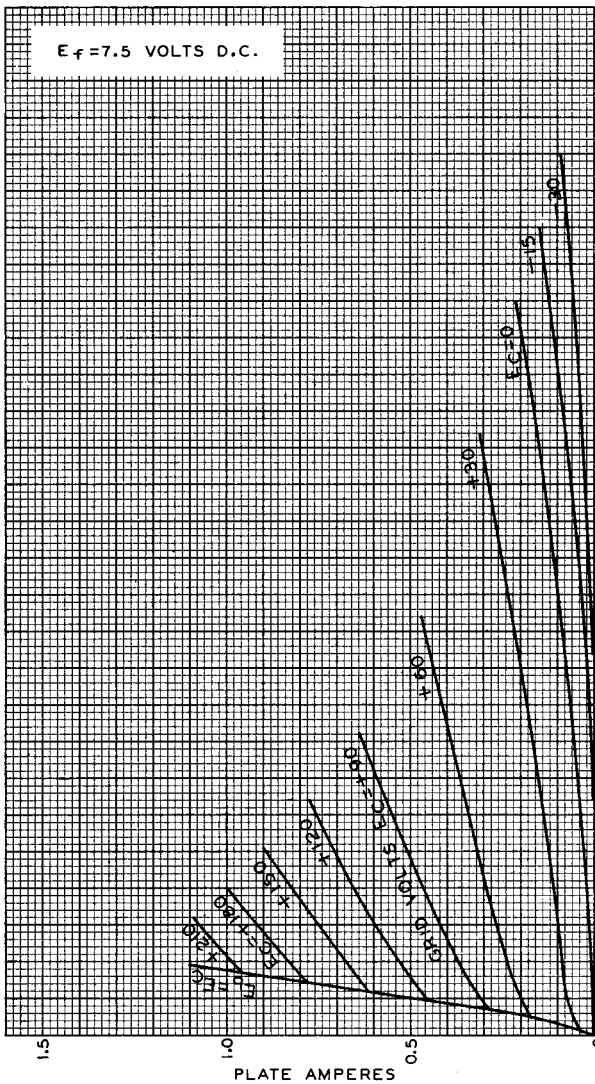
AVERAGE PLATE CHARACTERISTICS



OCT. 26, 1936

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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TYPICAL CHARACTERISTICS