



808

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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 μf Grid to Filament. 5.3 μf Plate to Filament 0.25 μf

Mechanical:

Mounting Position. Vertical only, Base down

Overall Length $5-7/8" \pm 3/16"$ Seated Length. $5-1/4" \pm 3/16"$ Maximum Diameter $2-13/16"$

Bulb G-22

Cap (top). Medium

Cap (side) Small

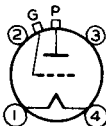
Base Medium-Shell Small 4-Pin, Bayonet

Basing Designation for BOTTOM VIEW 2D1

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.



TRANSMITTING TRIODE

Max.—Signal Power Output
(Approx.) 190 185 1 300 . . 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*	1 CAS**	
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 Telephony

Key-down conditions per tube without modulation^{□□}

Maximum Ratings, Absolute Values:

	CCS*	1 CAS**	
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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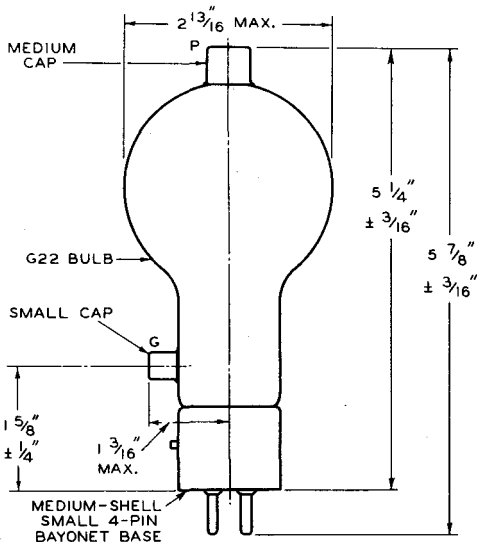
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TRANSMITTING TRIODE

- Continuous Commercial Service.
- Intermittent Commercial and Amateur Service.
- Subject to wide variations as explained on sheet TUBE RATINGS in General Section.
- 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°.

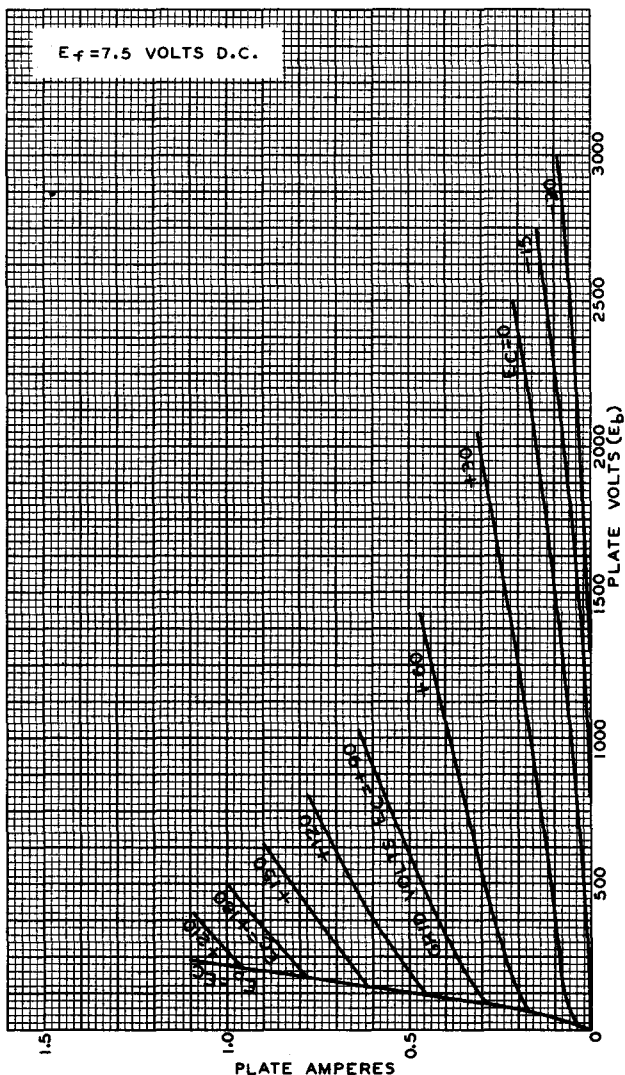
92CM-4677R3



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AVERAGE PLATE CHARACTERISTICS

 $E_f = 7.5$ VOLTS D.C.

OCT. 26, 1936

PLATE AMPERES

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-4678



TYPICAL CHARACTERISTICS

