806
R-F POWER AMPLIFIER, CLASS B MODULATOR

Filament	Thoriated Tungsten	
Voltage	5.0	a-c or d-c volts
Current	9.5	amp. ←
Amplification Factor	12.6	
Direct Interelectrode Capacitances:		←
Grid to Plate	4.0	μμf
Grid to Filament	5.5	μμf
Plate to Filament	0.4	μμf
Maximum Overall Length		10"
Maximum Diameter		3-13/16"
Bulb		GT-30
Cap (Top)		Skirted Medium
Cap (Side)		Saddle Medium
Base		Jumbo 4-Pin
RCA Socket		Stock No. 9936 ←

Cooling—Forced ventilation from fan directed at middle and upper portions of bulb is required for continuous key-down conditions in class C telegraph service and is recommended for other services at frequencies of 30 Mc or higher.

Maximum Ratings Are Absolute Values

MAXIMUM CCS and ICAS RATINGS with TYPICAL OPERATING CONDITIONS

CCS = Continuous Commercial Service
ICAS = Intermittent Commercial and Amateur Service

A-F POWER AMPLIFIER & MODULATOR - Class B

	CCS	ICAS	
D-C Plate Voltage	3000 max.	3300 max.	volts
Max.-Sig. D-C Plate Cur.[oo]	200 max.	250 max.	ma.
Max.-Sig. Plate Input[oo]	500 max.	825 max.	watts ←
Plate Dissipation[oo]	150 max.	225 max.	watts

Typical Operation:
Unless otherwise specified, values are for 2 tubes

D-C Plate Voltage	2000	3000	3300	volts
D-C Grid Voltage	-140	-230	-240	volts
Peak A-F Grid-to-Grid Volt.	660	770	930	volts
Zero-Sig. D-C Plate Cur.	80	50	80	ma.
Max.-Sig. D-C Plate Cur.	390	330	475	ma.
Load Res. (per tube)	4500	5200	4000	ohms
Effective Load Res. (plate to plate)	18000	20800	16000	ohms
Max.-Sig. Driving Power (Approx.)	19	15	35	watts
Max.-Sig. Power Output (Approx.)	535	700	1120	watts

[oo] Averaged over any audio-frequency cycle of sine-wave form.

R-F POWER AMPLIFIER - Class B Telephony

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

	CCS	ICAS	
D-C Plate Voltage	3000 max.	3300 max.	volts
D-C Plate Current	150 max.	150 max.	ma.
Plate Input	225 max.	338 max.	watts

← Indicates a change.

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R-F POWER AMPLIFIER, CLASS B MODULATOR

(continued from preceding page)

	CCS		ICAS	
Plate Dissipation	150 max.		225 max.	watts
Typical Operation:				
D-C Plate Voltage	2000	3000	3300	volts
D-C Grid Voltage	-150	-240	-280	volts
Peak R-F Grid Voltage	180	200	290	volts
D-C Plate Current	110	70	102	ma.
D-C Grid Cur. (Approx.)**	1	0	0	ma.
Driving Power (Approx.)** °	8	5	10.3	watts
Power Output (Approx.)	70	70	115	watts

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

PLATE-MODULATED R-F POWER AMPLIFIER - Class C Telephony

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

	CCS		ICAS	
D-C Plate Voltage	2500 max.		3000 max.	volts
D-C Grid Voltage	-1000 max.		-1000 max.	volts
D-C Plate Current	200 max.		200 max.	ma.
D-C Grid Current	50 max.		50 max.	ma.
Plate Input	500 max.		600 max.	watts
Plate Dissipation	110 max.		150 max.	watts
Typical Operation:				
D-C Plate Voltage	2000	2500	3000	volts
D-C Grid Voltage §	-500	-600	-670	volts
	12500	15000	25000	ohms
Peak R-F Grid Volt.	790	890	970	volts
D-C Plate Current	195	195	195	ma.
D-C Grid Cur. (Approx.)**	40	40	27	ma.
Driving Power (Approx.)**	28	32	24	watts
Power Output (Approx.)	300	390	460	watts

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

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

Key-down conditions per tube without modulation##

	CCS		ICAS	
D-C Plate Voltage	3000 max.		3300 max.	volts
D-C Grid Voltage	-1000 max.		-1000 max.	volts
D-C Plate Current	200 max.		305 max.	ma.
D-C Grid Current	50 max.		50 max.	ma.
Plate Input	600 max.		1000 max.	watts
Plate Dissipation	150 max.		225 max.	watts
Typical Operation:				
D-C Plate Volt.	2000	2500 3000	3300	volts
D-C Grid Volt.★	-400	-500 -600	-600	volts
	16000	20000 24000	15000	ohms
	1800	2300 2700	1730	ohms

□ See "Cooling" under this type.
** See next page.
Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.
← Indicates a change.
★ Obtained by grid resistor (16000, 20000, 24000, 12800), by cathode resistor (1800, 2300, 2700, 1730), or from fixed-bias source.

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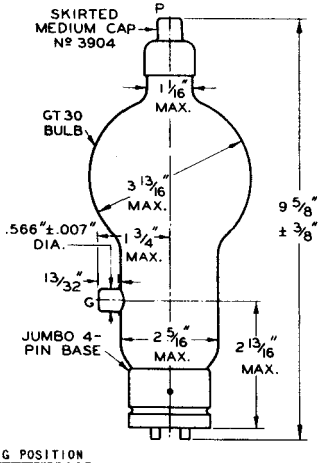
R-F POWER AMPLIFIER, CLASS B MODULATOR

(continued from preceding page)

	CCS			ICAS	
Peak R-F Grid Volt.	640	755	870	930	volts
D-C Plate Current	195	195	195	300	ma.
D-C Grid Cur. (Approx.)**	25	25	25	40	ma.
Driving Power (Approx.)**	15	17	20	34	watts
Power Output (Approx.)	280	370	450	780	watts

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

Data on operating frequencies for the 806 are given on the sheet TRANS. TUBE RATINGS vs FREQUENCY.

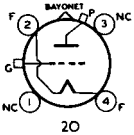


TUBE MOUNTING POSITION

VERTICAL: Base down.
HORIZONTAL: No.

92CM-4681R3

BOTTOM VIEW OF SOCKET CONNECTIONS



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F - FILAMENT
G - GRID
NC - NO CONNECTION
P - PLATE

← indicates a change.

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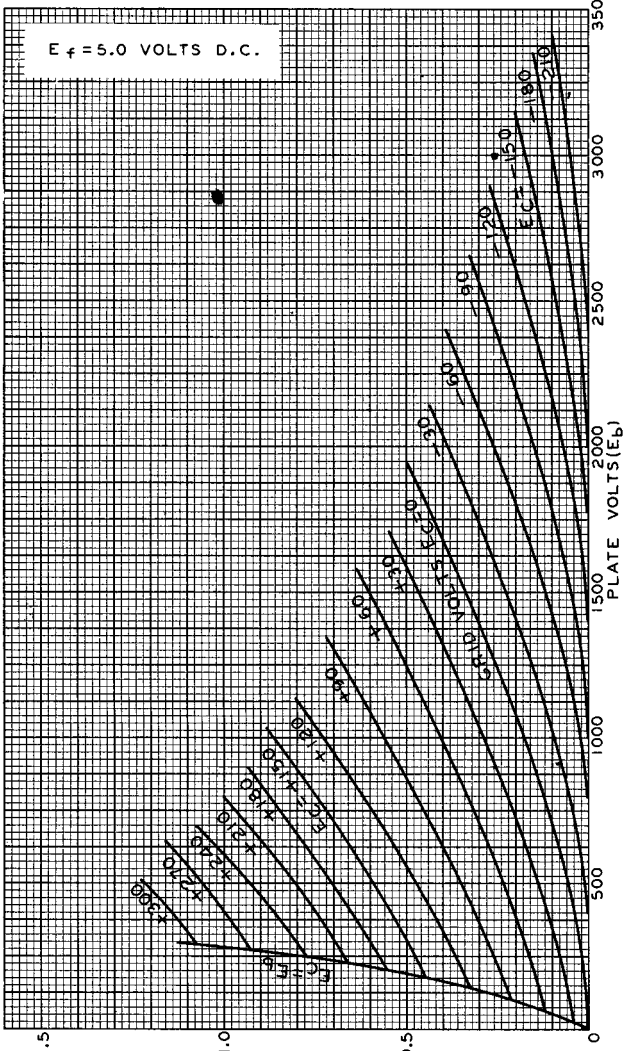
AVERAGE PLATE CHARACTERISTICS



DEC. 1, 1943

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92CM—4690