



811

811

TRANSMITTING TRIODE

Filament	Thoriated Tungsten	
Voltage	6.3	a-c or d-c volts
Current	4	amp.
Amplification Factor	160	
Direct Interelectrode Capacitances:		
Grid to Plate	5.5	μf
Grid to Filament	5.5	μf
Plate to Filament	0.6	μf
Maximum Overall Length		6-9/16"
Maximum Diameter		2-7/16"
Bulb		ST-19
Cap		Medium Metal
Base	Medium 4-Pin, "Micanol"	Bayonet
RCA Socket		UR-542-A

**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

	<u>CCS</u>	<u>ICAS</u>	
D-C Plate Voltage	1250 max.	1500 max.	volts
Max.-Sig. D-C Plate Current*	125 max.	125 max.	ma.
Max.-Sig. Plate Input*	125 max.	150 max.	watts
Plate Dissipation*	40 max.	50 max.	watts

Typical Operation:

Unless otherwise specified, values are for 2 tubes

D-C Plate Voltage	1250	1500	volts
D-C Grid Voltage #	0	-9	volts
Peak A-F Grid-to-Grid Volt.	140	160	volts
Zero-Sig. D-C Plate Current	48	20	ma.
Max.-Sig. D-C Plate Current	200	200	ma.
Max.-Sig. D-C Grid Current	38	38	ma.
Load Resistance (per tube)	3750	4500	ohms
Effective Load Resistance (plate to plate)	15000	18000	ohms
Max.-Sig. Driving Power	3.8 approx.	4.2 approx.	watts
Max.-Sig. Power Output	175 approx.	225 approx.	watts

* 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

	<u>CCS</u>	<u>ICAS</u>	
D-C Plate Voltage	1250 max.	1500 max.	volts
D-C Plate Current	60 max.	60 max.	ma.
Plate Input	60 max.	75 max.	watts
Plate Dissipation	40 max.	50 max.	watts
Typical Operation:			
D-C Plate Voltage	1250	1500	volts

See next page.



TRANSMITTING TRIODE

(continued from preceding page)

	<u>CCS</u>	<u>ICAS</u>	
D-C Grid Voltage #	0	-6	volts
Peak R-F Grid Voltage	26	35	volts
D-C Plate Current	48	50	ma.
D-C Grid Current**	6 approx.	6 approx.	ma.
Driving Power** ^o	1 approx.	1.5 approx.	watts
Power Output	20 approx.	25 approx.	watts

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

Grid voltages are given for either a-c or d-c filament operation. When a.c. is used, the circuit returns are made to the midpoint of the filament circuit. When d.c. is used, the returns are made to the negative filament terminal.

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

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

	<u>CCS</u>	<u>ICAS</u>	
D-C Plate Voltage	1000 max.	1250 max.	volts
D-C Grid Voltage	-200 max.	-200 max.	volts
D-C Plate Current	105 max.	125 max.	ma.
D-C Grid Current	50 max.	50 max.	ma.
Plate Input	105 max.	155 max.	watts
Plate Dissipation	27 max.	40 max.	watts

Typical Operation:

D-C Plate Voltage	1000	1250	volts
D-C Grid Voltage [□]	{ -100 2000	{ -125 2500	{ volts ohms
Peak R-F Grid Voltage	195	230	volts
D-C Plate Current	105	125	ma.
D-C Grid Current**	50 approx.	50 approx.	ma.
Driving Power**	9 approx.	11 approx.	watts
Power Output	82 approx.	120 approx.	watts

[□] obtained preferably from grid leak of value shown, or combination of grid leak with either fixed supply or suitably by-passed cathode resistor.

R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy

Key-down conditions per tube without modulation **

	<u>CCS</u>	<u>ICAS</u>	
D-C Plate Voltage	1250 max.	1500 max.	volts
D-C Grid Voltage	-200 max.	-200 max.	volts
D-C Plate Current	125 max.	150 max.	ma.
D-C Grid Current	50 max.	50 max.	ma.
Plate Input	155 max.	225 max.	watts
Plate Dissipation	40 max.	55 max.	watts

Typical Operation:

D-C Plate Voltage	1250	1250	volts
D-C Grid Voltage [‡]	{ -87.5 2500 550	{ -113 3200 610	{ volts ohms ohms

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

[‡] Obtained from fixed supply, or grid resistor (2500, 3200), or by

cathode resistor (550, 610).

** See next page.



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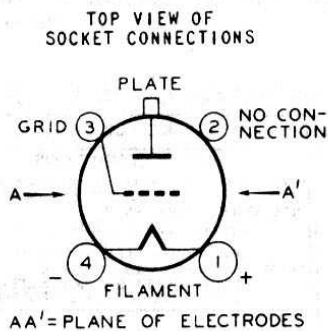
	<u>CCS</u>	<u>ICAS</u>	
Peak R-F Grid Voltage	180	225	volts
D-C Plate Current	125	150	ma.
D-C Grid Current**	35 approx.	35 approx.	ma.
Driving Power**	7 approx.	8 approx.	watts
Power Output	115 approx.	170 approx.	watts

** Subject to wide variations as explained on sheet TRANS. TUBE RATINGS.

HIGH-FREQUENCY OPERATION*Maximum permissible percentage of maximum rated plate voltage and plate input.*

FREQUENCY (Mc)	60	80	100
TELEPHONY { Class B	100	90	83
{ Class C, Plate Mod.	100	75	60
TELEGRAPHY - Class C	100	75	60

OUTLINE DIMENSIONS for the 811 are the same as those for the 809.

MOUNTING POSITIONVERTICAL: Base down.
HORIZONTAL: Plane of
electrodes vertical.

DEC. 1, 1939

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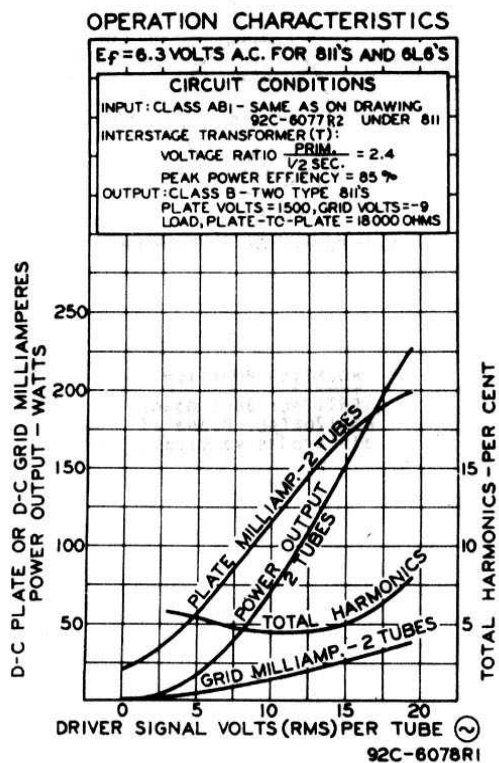
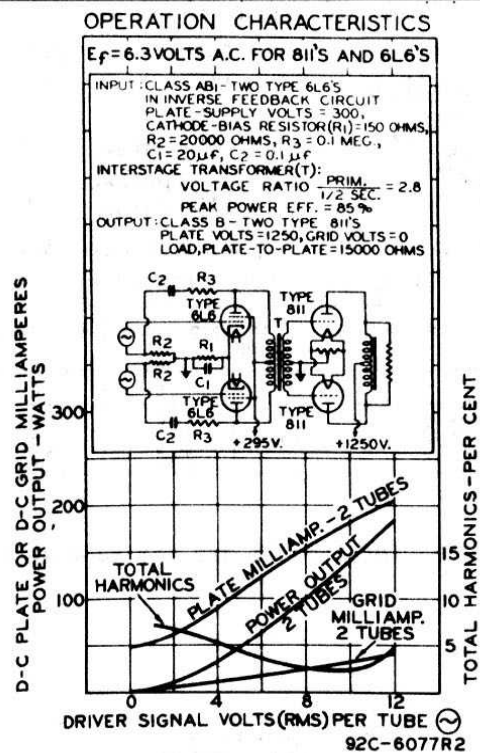
TENTATIVE DATA 2

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TRANSMITTING TRIODE



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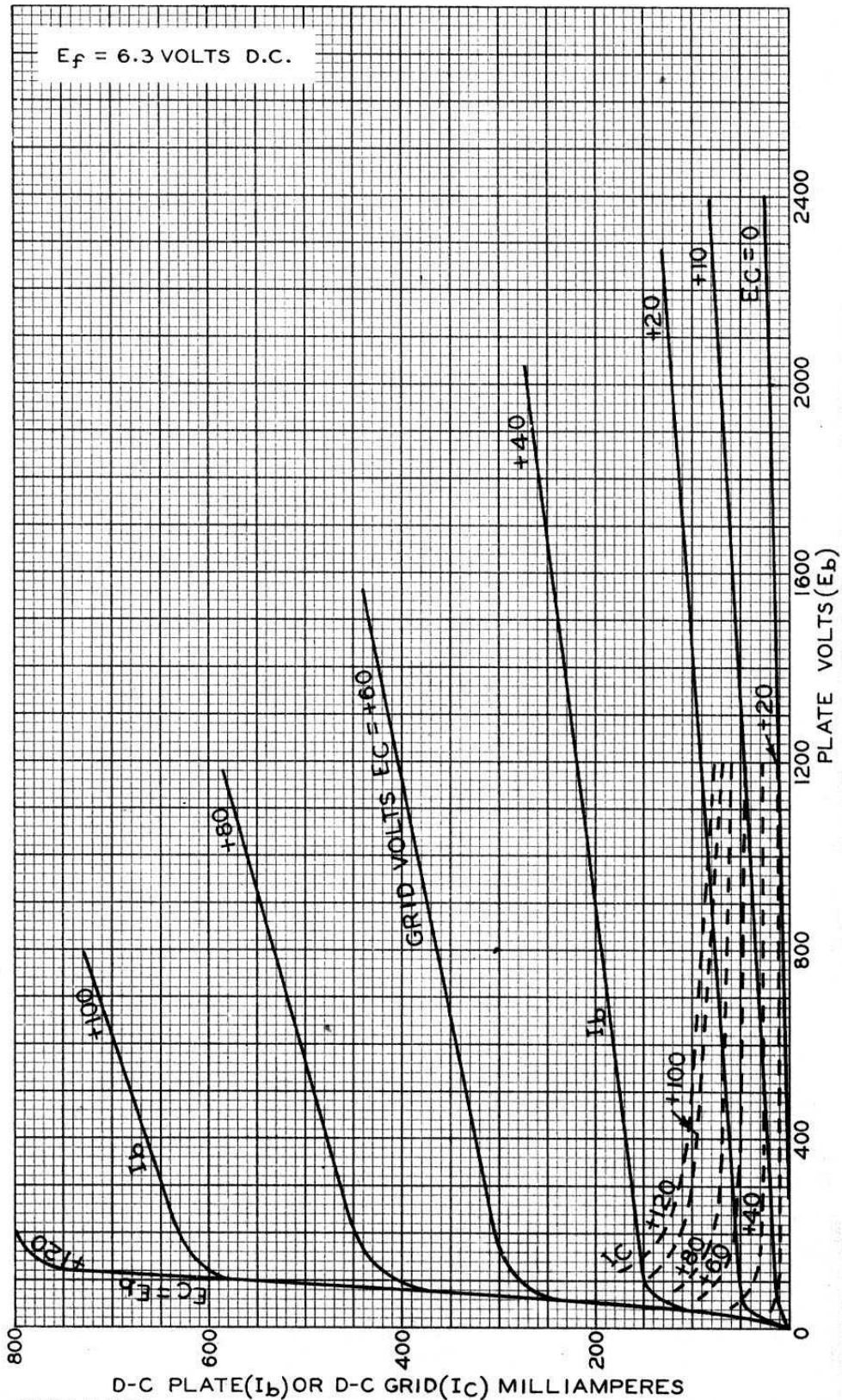
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AVERAGE PLATE CHARACTERISTICS



SEPT. 11, 1939

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92C-6075