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OSCILLATOR, R-F POWER AMPLIFIER (WATER COOLED)

Filament	Tungsten	
Voltage	22	a-c or d-c volts
Current	52	amp.
Amplification Factor	42	
Direct Interelectrode Capacitances (approx.):		
Grid to Plate	18	μf
Grid to Filament	16	μf
Plate to Filament	2	μf
Maximum Overall Length		24-1/2"
Maximum Radius		7-1/2"
Base		None
Water Jacket		UT-1290

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS

This tube can often be operated with reduced filament voltage as explained on sheet TYPES OF CATHODES in front of book.

A-F POWER AMPLIFIER - Class B

D-C Plate Voltage	20000 max.	volts
Max-Signal D-C Plate Current *	2.0 max.	amp.
Max-Signal D-C Plate Input *	40 max.	kw
Plate Dissipation *	20 max.	kw
Typical Operation - 2 tubes:		

Unless otherwise specified, values are for 2 tubes.

Filament Voltage	22	d-c volts
D-C Plate Voltage	12000	volts
D-C Grid Voltage	-140	volts
Peak A-F Grid-to-Grid Voltage	2600	volts
Zero-Signal D-C Plate Cur.	0.5	amp.
Max-Signal D-C Plate Cur.	3.6	amp.
Load Resistance (per tube)	1800	ohms
Effective Load Res. (plate to plate)	7200	ohms
Max-Signal Driving Power	115	approx. watts
Max-Signal Power Output	26.5	approx. kw

Averaged over any audio-frequency cycle.

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	20000 max.	volts
D-C Plate Current	1.0 max.	amp.
R-F Grid Current	48 max.	amp.
Plate Input	20 max.	kw
Plate Dissipation	15 max.	kw
Typical Operation:		
Filament Voltage	22	d-c volts
D-C Plate Voltage	10000	volts
D-C Grid Voltage	-100	volts
Peak R-F Grid Voltage	400	volts
D-C Plate Current	0.5	amp.

(continued on next page)



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OSCILLATOR, R-F POWER AMPLIFIER

(continued from preceding page)

Driving Power ** 0	25	70	85	<u>approx.watts</u>
Power Output	1.5	3.3	5.6	<u>approx.kw</u>

° 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

D-C Plate Voltage			12000 max.	volts
D-C Grid Voltage			-3000 max.	volts
D-C Plate Current			1.0 max.	amp.
D-C Grid Current			0.25 max.	amp.
R-F Grid Current			48 max.	amp.
Plate Input			12 max.	kw
Plate Dissipation			10 max.	kw

Typical Operation:

Filament Voltage	22	22	22	a-c volts
D-C Plate Voltage	8000	10000	12000	volts
D-C Grid Voltage	-900	-950	-1000	volts
Peak R-F Grid Voltage	1875	1950	1950	volts
D-C Plate Current	0.90	0.90	0.95	amp.
D-C Grid Current **	0.10	0.09	0.08	<u>approx.amp.</u>
Driving Power **	180	200	150	<u>approx.watts</u>
Power Output	5	6	8	<u>approx.kw</u>

R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy

*Key-down conditions per tube without modulation **

D-C Plate Voltage			20000 max.	volts
D-C Grid Voltage			-3000 max.	volts
D-C Plate Current			2.0 max.	amp.
D-C Grid Current			0.25 max.	amp.
R-F Grid Current			60 max.	amp.
Plate Input			40 max.	kw
Plate Dissipation			20 max.	kw

Typical Operation:

Filament Voltage	22	22	22	a-c volts
D-C Plate Voltage	10000	15000	18000	volts
D-C Grid Voltage	-1000	-1100	-1200	volts
Peak R-F Grid Voltage	2200	2500	2600	volts
D-C Plate Current	1.4	1.8	1.8	amp.
D-C Grid Current **	0.13	0.10	0.10	<u>approx.amp.</u>
Driving Power **	275	250	250	<u>approx.watts</u>
Power Output	9	18	22.4	<u>approx.kw</u>

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

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

For use of the 858 at the higher frequencies, refer to sheet TRANS. TUBE RATINGS vs FREQUENCY.

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R-F POWER AMPLIFIER

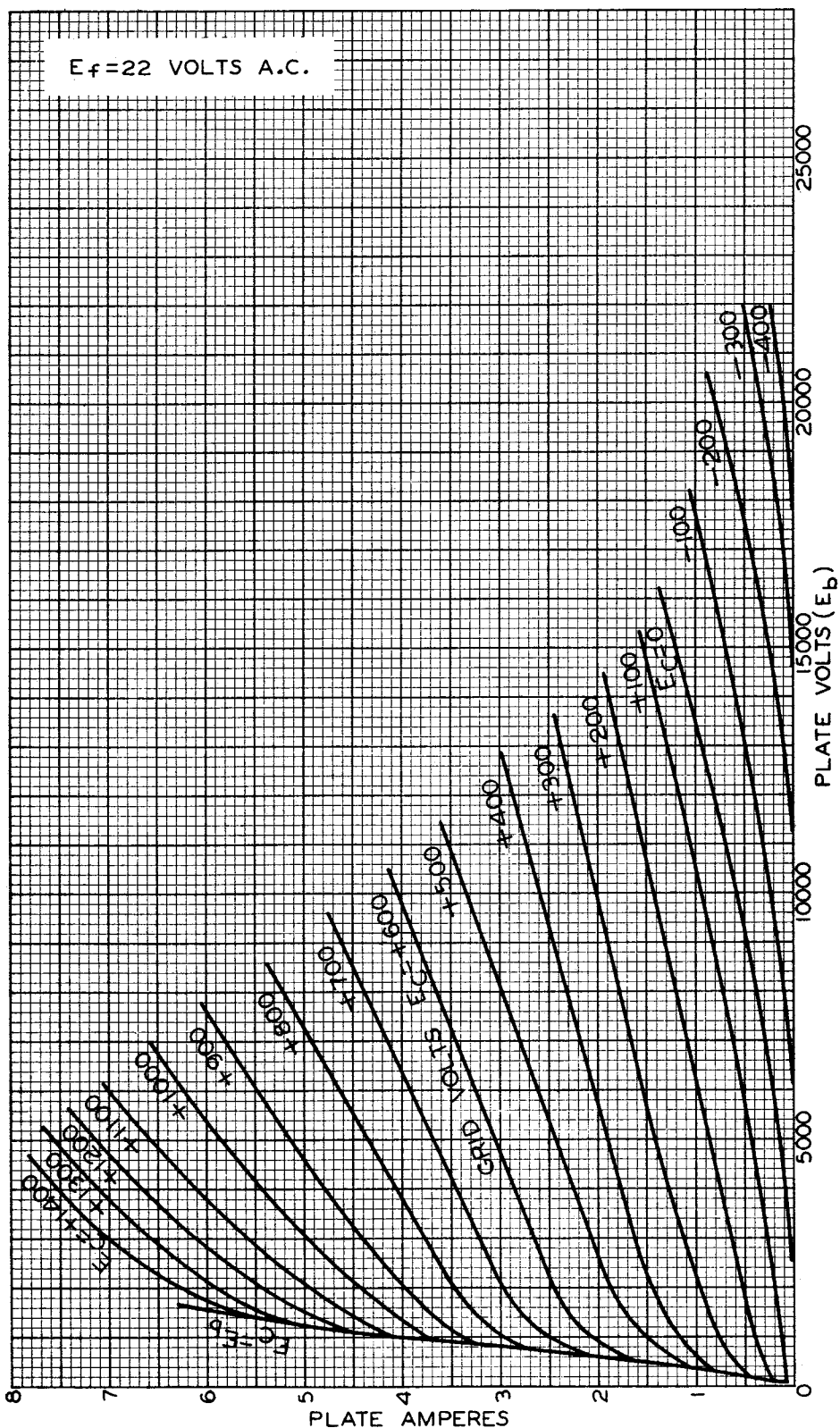
THE FILAMENT CHARACTERISTIC AND THE FILA-
MENT EMISSION CHARACTERISTIC FOR THE 858
ARE THE SAME AS THOSE SHOWN FOR THE 207.



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AVERAGE PLATE CHARACTERISTICS



TYPICAL CHARACTERISTICS

