



207

POWER TRIODE

WATER COOLED

GENERAL DATA**Electrical:**

Filament, Tungsten:

Voltage. 22 ac or dc volts

Current. 52 amp

Starting Current: The filament current must never exceed 100 amperes, even momentarily.

Cold Resistance. 0.03 ohm

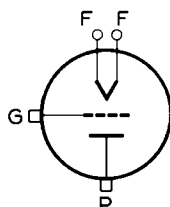
NOTE: This tube can often be operated with reduced filament voltage as explained on sheet TYPES OF CATHODES in the General Section.

Amplification Factor 20

Direct Interelectrode Capacitances (Approx.):

Grid to Plate. 27 μf Grid to Filament 18 μf Plate to Filament. 2 μf **Mechanical:**

Terminal Connections:

F—Filament
G—Grid
TerminalP—Water-Cooled
Plate
Terminal

Mounting Position. Vertical, Filament End Up

Maximum Overall Length 20-1/4"

Maximum Radius 6-1/2"

Water Flow 3 to 8 gpm

The water flow must start before the application of any voltages and must continue for 2 minutes after the removal of all voltages.

Outlet Water Temperature 70 max. °C

Water Pressure in Jacket 80 max. psi

Components:

Water Jacket RCA MI-7415

Gasket RCA MI-7440

AF POWER AMPLIFIER & MODULATOR — Class B**Maximum CCS[•] Ratings, Absolute Values:**

DC PLATE VOLTAGE 15000 max. volts

MAX.—SIGNAL DC PLATE CURRENT*. 2 max. amp

MAX.—SIGNAL PLATE INPUT* 20 max. kw

PLATE DISSIPATION* 7.5 max. kw

Typical Operation:*Values are for 2 tubes*

DC Plate Voltage 6000 10000 12500 volts

DC Grid Voltage† -210 -410 -575 volts

Peak AF Grid-to-Grid Voltage 1520 2140 2300 volts

Zero-Signal DC Plate Current 0.5 0.5 0.4 amp

Max.—Signal DC Plate Current 2.5 3.2 2.8 amp

•, *, †: See next page.

← Indicates a change.

SEPT. 30, 1948

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA 1



POWER TRIODE

Effective Load Resistance (Plate-to-plate) . . .	4200	6400	10000	ohms
Max.-Signal Driving Power (Approx.) . . .	190	380	400	watts
Max.-Signal Power Output (Approx.) . . .	8	20	22.5	kw

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

RF POWER AMPLIFIER - Class B Telephony

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

Maximum CCS[®] Ratings, Absolute Values:

DC PLATE VOLTAGE	15000 max.	volts
DC PLATE CURRENT	1 max.	amp
PLATE INPUT.	15 max.	kw
PLATE DISSIPATION.	10 max.	kw

Typical Operation:

DC Plate Voltage	6000	10000	14000	volts
DC Grid Voltage†	-225	-440	-650	volts
Peak RF Grid Voltage	400	600	730	volts
DC Plate Current	0.62	0.93	1	amp
Driving Power (Approx.) [▲] . . .	72	16	0	watts
Power Output (Approx.)	1	2.5	4	kw

PLATE-MODULATED RF POWER AMPLIFIER - Class C Telephony

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

Maximum CCS[®] Ratings, Absolute Values:

DC PLATE VOLTAGE	10000 max.	volts
DC GRID VOLTAGE.	-3000 max.	volts
DC PLATE CURRENT	1 max.	amp
DC GRID CURRENT.	0.2 max.	amp
PLATE INPUT.	10 max.	kw
PLATE DISSIPATION.	6.6 max.	kw

Typical Operation:

DC Plate Voltage	6000	8000	10000	volts
DC Grid Voltage [●] *	-1200	-1600	-2000	volts
Peak RF Grid Voltage	1860	2300	2660	volts
DC Plate Current	0.76	0.78	0.75	amp
DC Grid Current (Approx.) . . .	0.15	0.14	0.07	amp
Driving Power (Approx.)	280	325	185	watts
Power Output (Approx.)	3.5	5	6	kw

† For dc filament supply.

[▲] At crest of audio-frequency cycle with modulation factor of 1.0.

[●] Obtained by grid resistor or by partial self-bias methods.

[●], ^{*}. See next page.



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207 POWER TRIODE

RF POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy

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

Maximum CCS[●] Ratings, Absolute Values:

DC PLATE VOLTAGE	15000 max.	volts
DC GRID VOLTAGE.	-3000 max.	volts
DC PLATE CURRENT	2 max.	amp
DC GRID CURRENT.	0.2 max.	amp
PLATE INPUT.	30 max.	kw
PLATE DISSIPATION.	10 max.	kw

Typical Operation:

DC Plate Voltage	8000	10000	12000	volts
DC Grid Voltage ^{▲▲} #	-1000	-1200	-1600	volts
Peak RF Grid Voltage	1730	2050	2650	volts
DC Plate Current	1.10	1.33	1.67	amp
DC Grid Current (Approx.). . .	0.17	0.12	0.09	amp
Driving Power (Approx.). . . .	295	245	235	watts
Power Output (Approx.)	6.5	10	15	kw

● Continuous Commercial Service.

For ac filament supply.

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

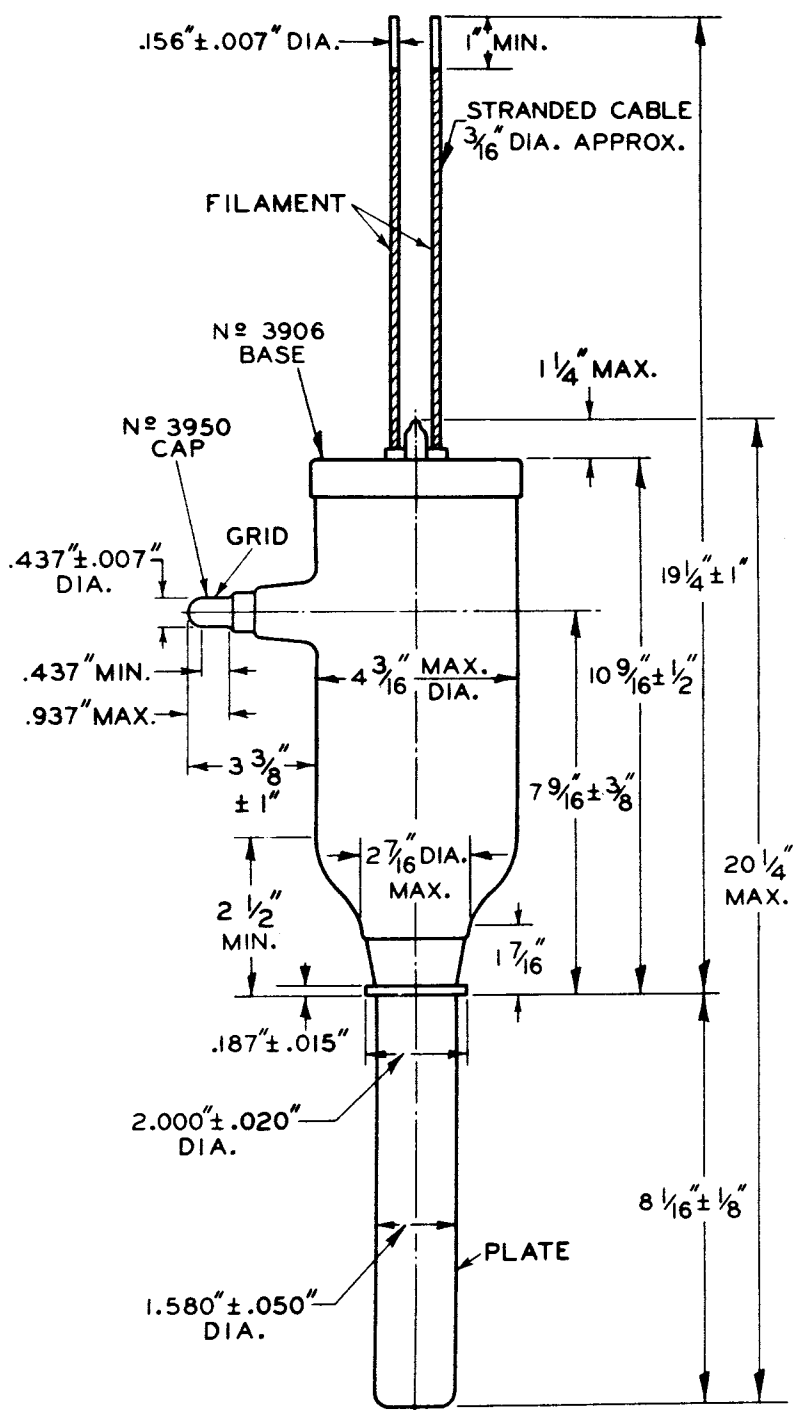
▲▲ obtained from fixed supply, by grid resistor, or by cathode resistor.

Data on operating frequencies for the 207 are given on the sheet TRANS. TUBE RATINGS vs FREQUENCY.

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92CM-4326R3

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CE-4326R3



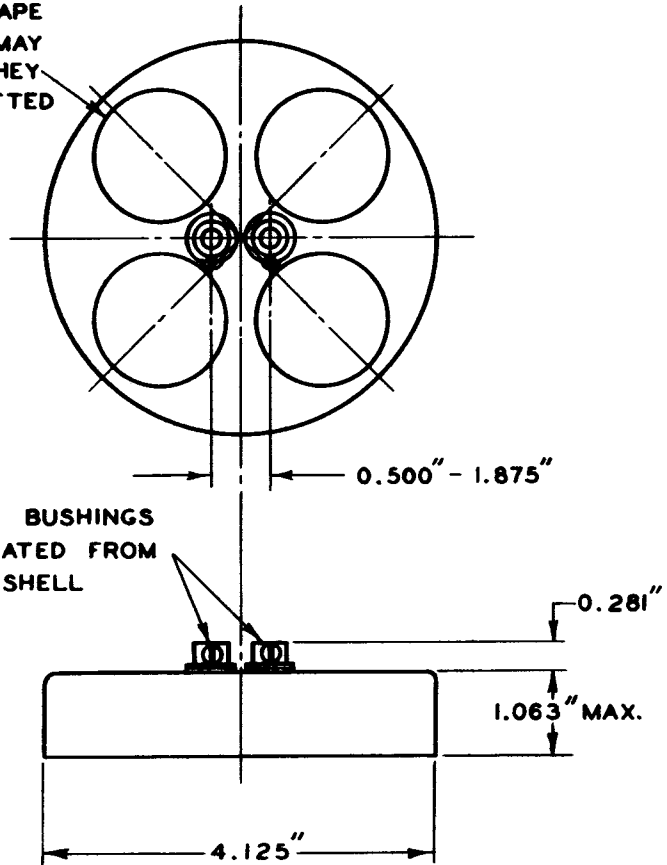
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207 POWER TRIODE

TERMINAL-SUPPORT SHELL N₂ 3906

SIZE AND SHAPE
OF HOLES MAY
VARY OR THEY
MAY BE OMITTED

BOTH BUSHINGS
INSULATED FROM
SHELL



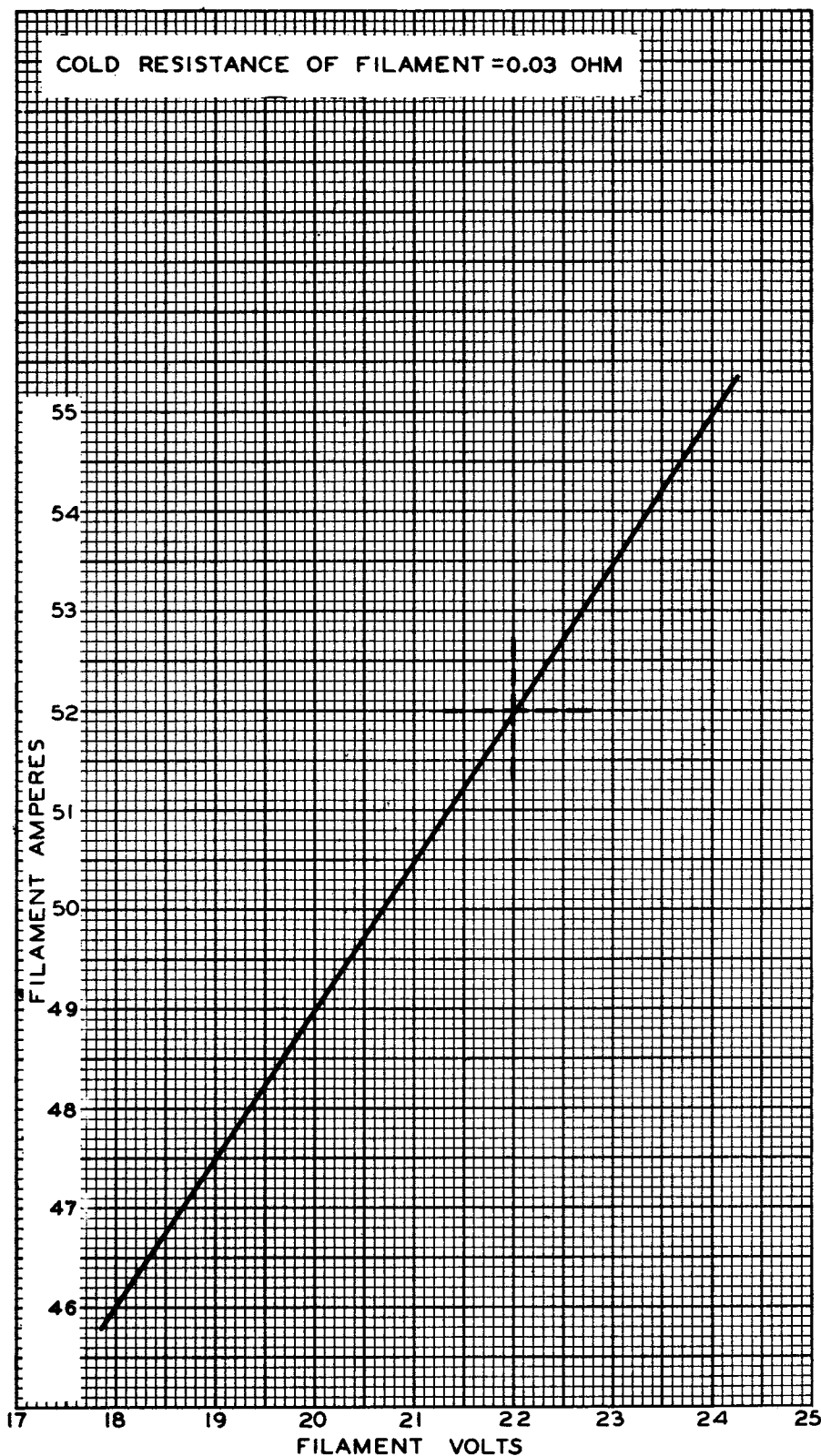
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AVERAGE FILAMENT CHARACTERISTIC



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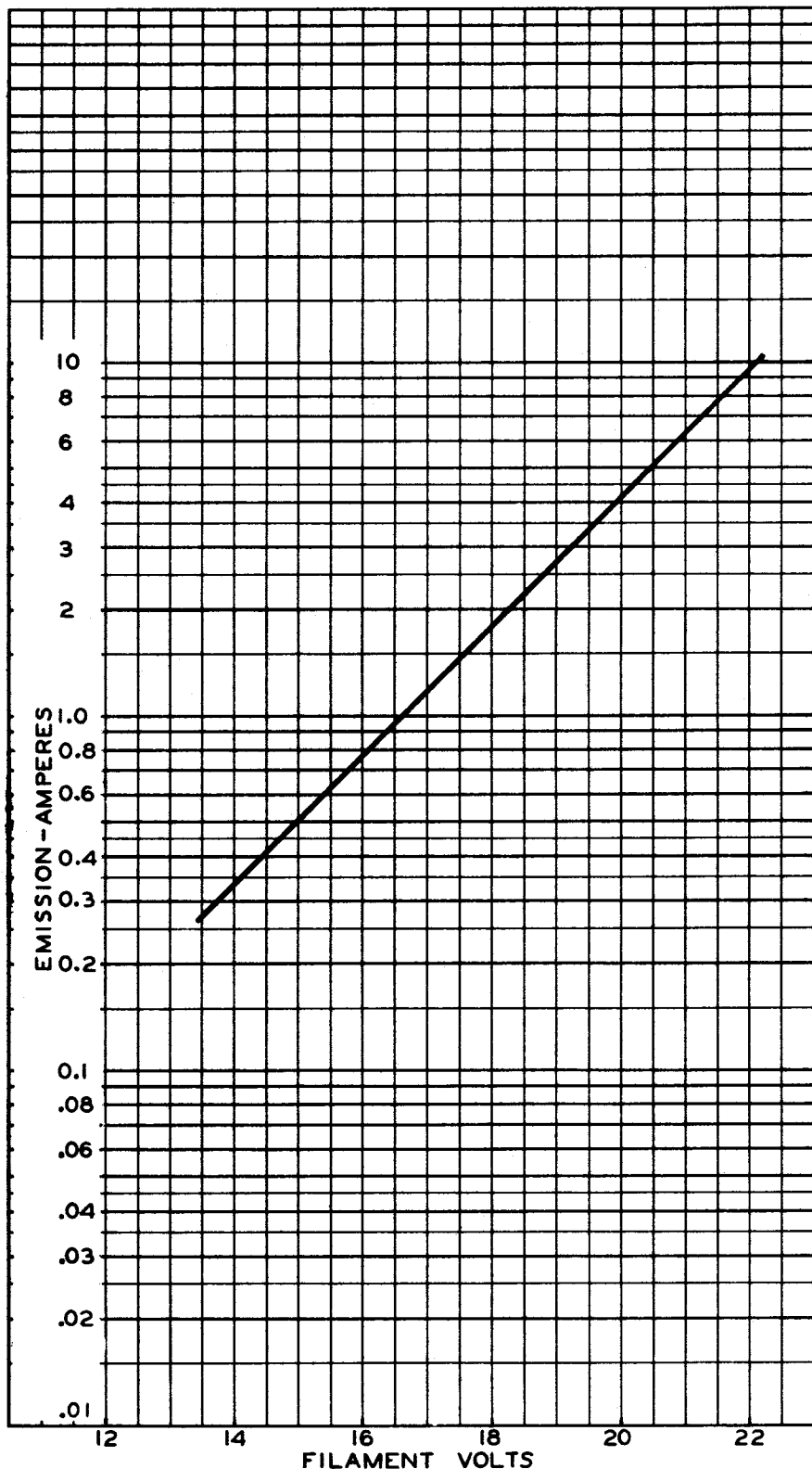
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AVERAGE FILAMENT-EMISSION CHARACTERISTIC



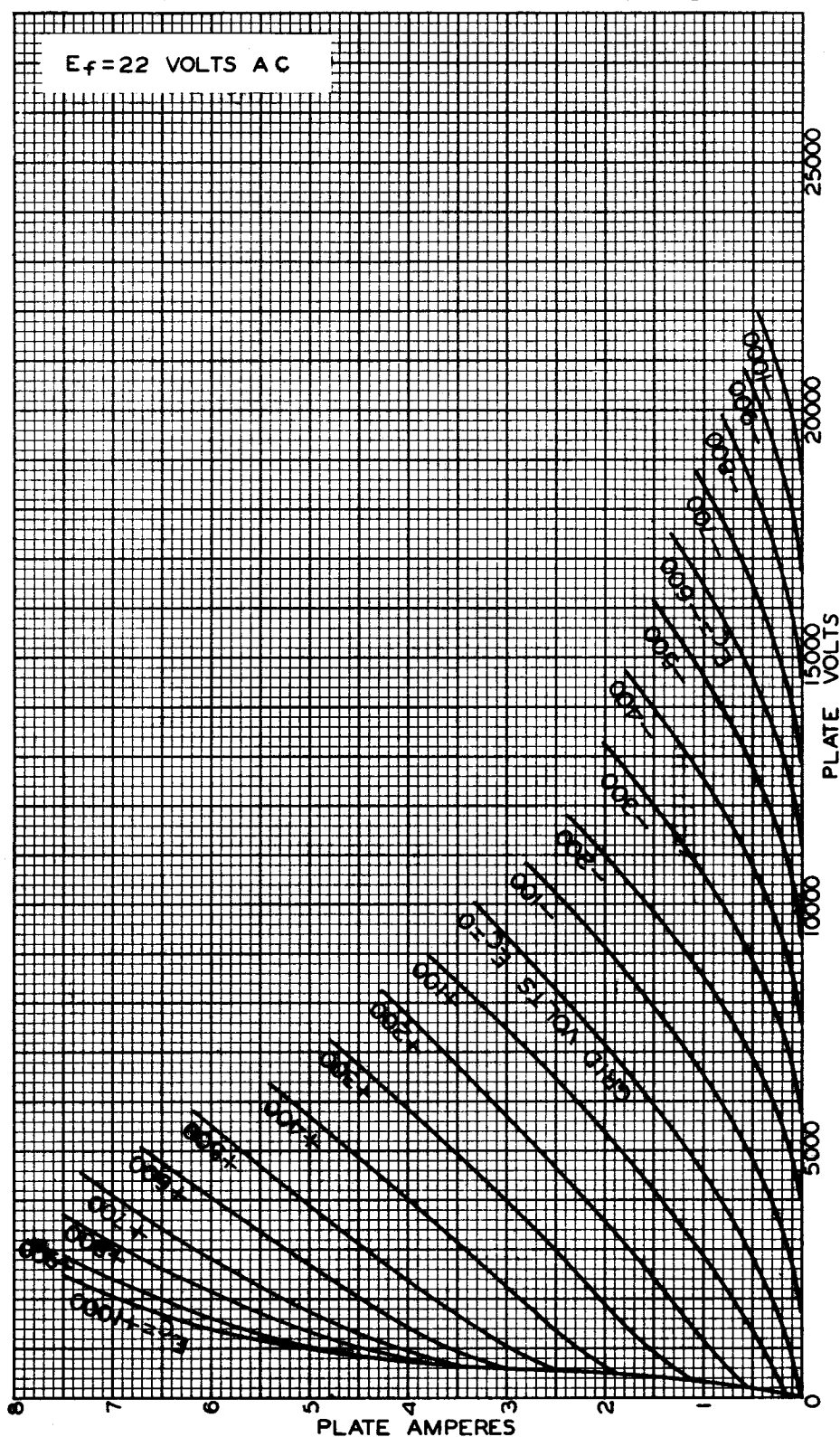
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AVERAGE PLATE CHARACTERISTICS

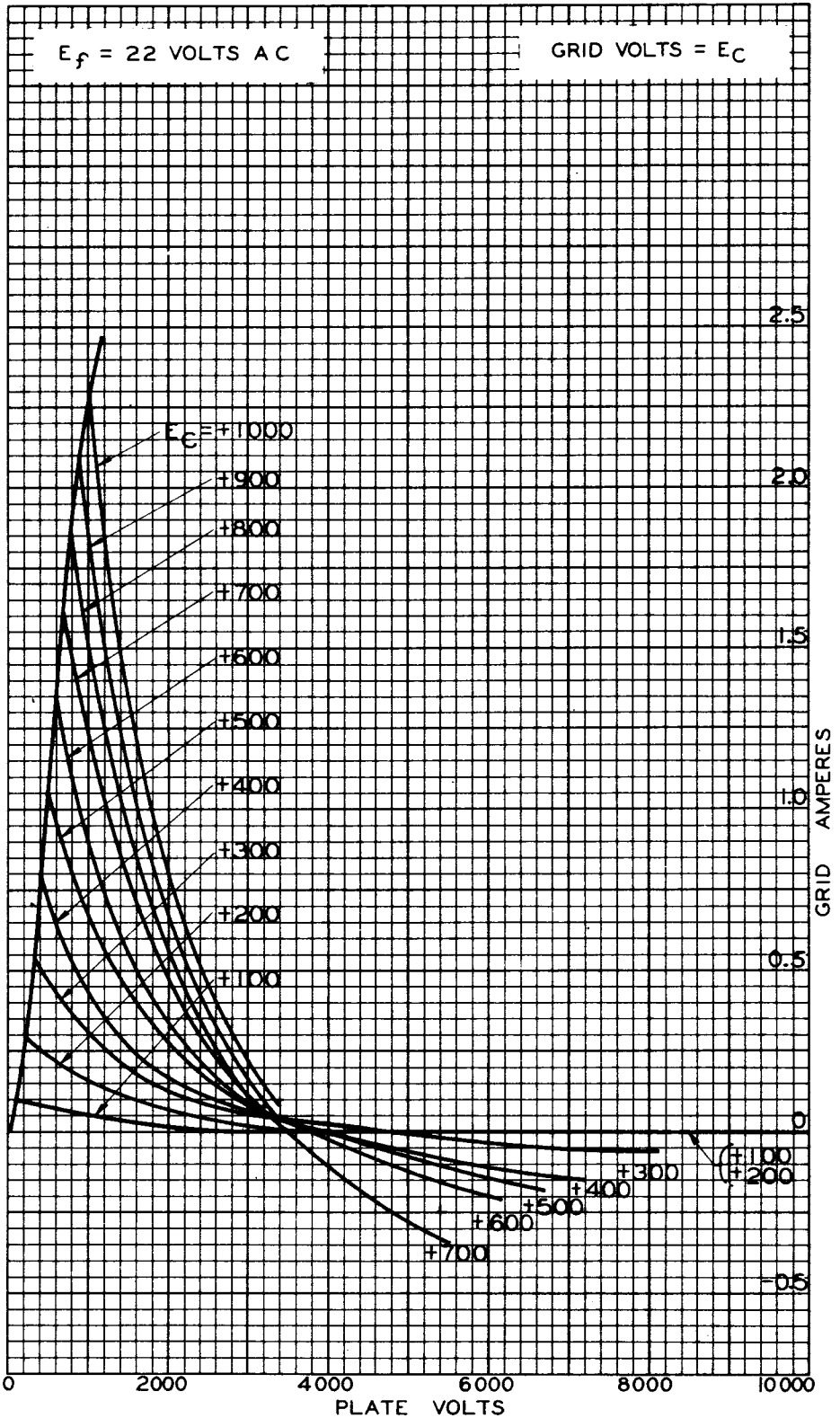




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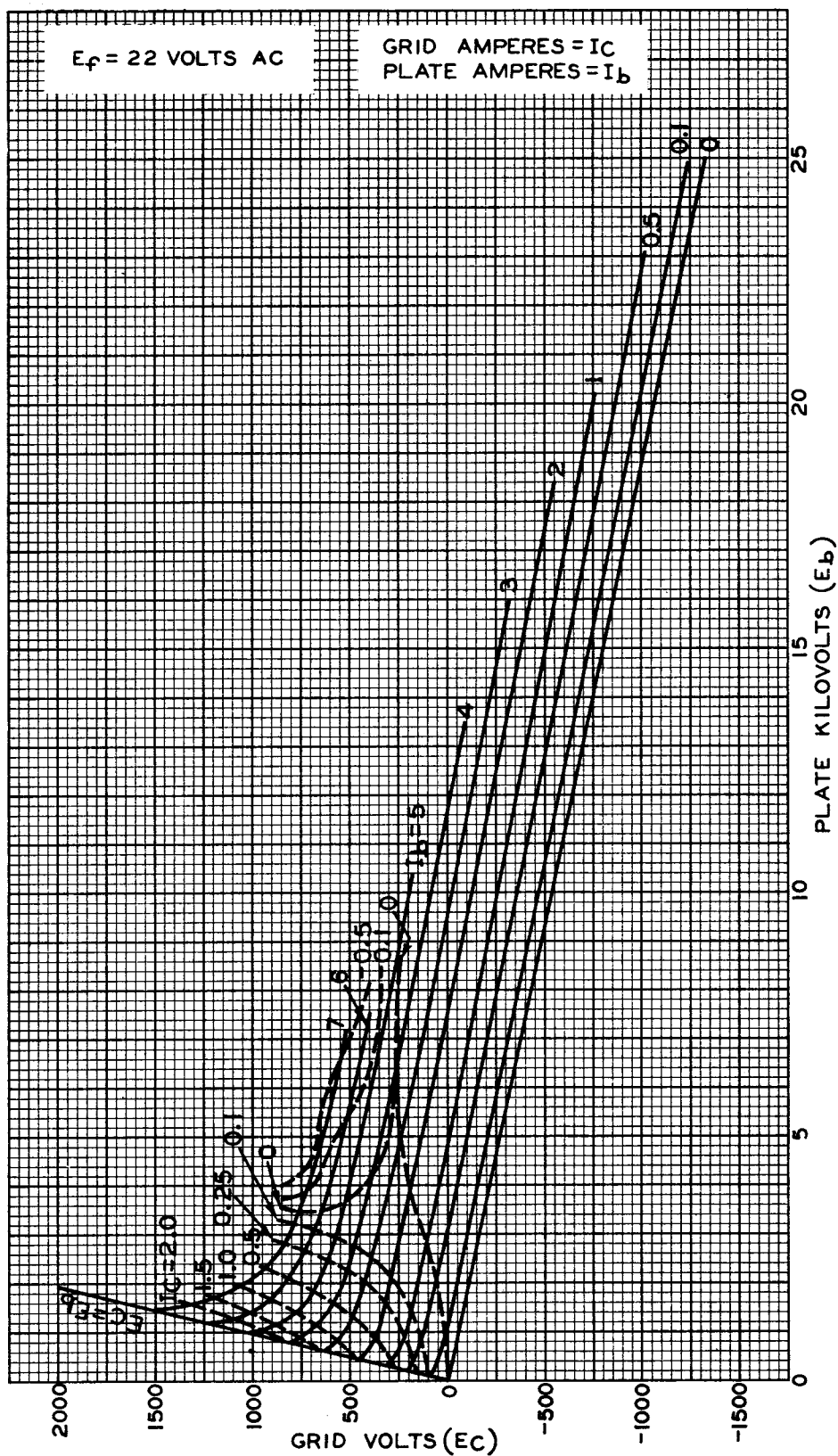
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TYPICAL CHARACTERISTICS





AVERAGE CONSTANT-CURRENT CHARACTERISTICS



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92CM-6084

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