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# POWER TRIODE

## GENERAL DATA

### Electrical:

Filament, Thoriated-Tungsten:

Voltage . . . . .	10	ac or dc volts
Current . . . . .	3.25	amp

Amplification factor . . . . . 12

Direct Interelectrode Capacitances:

Grid to Plate . . . . .	14	$\mu\text{f}$
Grid to Filament . . . . .	5.4	$\mu\text{f}$
Plate to Filament . . . . .	4.8	$\mu\text{f}$

### Mechanical:

Mounting Position . . . . . Vertical, base down; or Horizontal, with pins 1 and 3 in vertical plane

Maximum Overall Length . . . . . 7-7/8"

Maximum Diameter . . . . . 2-5/16"

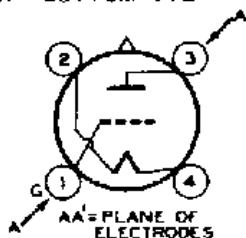
Bulb . . . . . T-18

Base . . . . . Medium-Metal-Shell Jumbo 4-Pin, Bayonet

Basing Designation for BOTTOM VIEW . . . . . 4AZ

Pin 1 - Grid

Pin 2 - Filament



Pin 3 - Plate

Pin 4 - Filament

### AF POWER AMPLIFIER & MODULATOR—Class A<sub>1</sub>

#### Maximum CCS<sup>®</sup> Ratings, Absolute Values:

DC PLATE VOLTAGE . . . . .	1250 max.	volts
PLATE DISSIPATION . . . . .	75 max.	watts

#### Typical Operation and Characteristics:

DC Plate Voltage . . . . .	750	1000	1250	volts
DC Grid Voltage* . . . . .	-46	-61	-80	volts
Peak AF Grid Voltage . . . . .	41	56	75	volts
DC Plate Current . . . . .	34	53	60	ma
Plate Resistance . . . . .	4400	3800	3600	ohms
Transconductance . . . . .	2750	3150	3300	$\mu\text{mhos}$
Load Resistance . . . . .	8800	7600	9200	ohms
2nd Harmonic Distortion . . . . .	5	5	5	%
Power Output . . . . .	5.6	12	19.7	watts

### AF POWER AMPLIFIER & MODULATOR—Class B

#### Maximum CCS<sup>®</sup> Ratings, Absolute Values:

DC PLATE VOLTAGE . . . . .	1250 max.	volts
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\* , # : See next page.

← Indicates a change.



## POWER TRIODE

MAX.—SIGNAL DC PLATE CURRENT*	175 max.	ma
MAX.—SIGNAL PLATE INPUT*	220 max.	watts
PLATE DISSIPATION*	100 max.	watts

### Typical Operation:

*Values are for 2 tubes*

DC Plate Voltage	1000	1250	volts
DC Grid Voltage#	-77	-100	volts
Peak AF Grid-to-Grid Voltage	380	410	volts
Zero-Signal DC Plate Current	20	20	ma
Max.—Signal DC Plate Current	320	320	ma
Effective Load Resistance (plate-to-plate)	6900	9000	ohms
Max.—Signal Driving Power (Approx.)	7.5	8	watts
Max.—Signal Power Output (Approx.)	200	260	watts

### 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	1250 max.	volts
DC PLATE CURRENT	150 max.	ma
PLATE INPUT	150 max.	watts
PLATE DISSIPATION	100 max.	watts

#### Typical Operation:

DC Plate Voltage	1000	1250	volts
DC Grid Voltage#	-77	-100	volts
Peak RF Grid Voltage	125	125	volts
DC Plate Current	130	106	ma
DC Grid Current (Approx.) <sup>□</sup>	5	1	ma
Driving Power (Approx.) <sup>▲ □</sup>	10	7.5	watts
Power Output (Approx.)	40	42.5	watts

### 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	1000 max.	volts
DC GRID VOLTAGE	-400 max.	volts
DC PLATE CURRENT	175 max.	ma
DC GRID CURRENT	50 max.	ma
PLATE INPUT	175 max.	watts

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

# For ac filament supply.

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

□: See next page.



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### POWER TRIODE

PLATE DISSIPATION. . . . . 67 max. watts

**Typical Operation:**

DC Plate Voltage . . . . .	750	1000	volts
DC Grid Voltage. . . . .	-200	-260	volts
Peak RF Grid Voltage . . . . .	350	410	volts
DC Plate Current . . . . .	150	150	ma
DC Grid Current (Approx.) <sup>□</sup> . . . . .	35	35	ma
Driving Power (Approx.) <sup>□</sup> . . . . .	12	14	watts
Power Output (Approx.) . . . . .	65	100	watts

**RF POWER AMPLIFIER & OSCILLATOR—Class C Telegraphy**

*Key-down conditions per tube without modulation<sup>□□</sup>*

**Maximum CCS\* Ratings, Absolute Values:**

DC PLATE VOLTAGE . . . . .	1250 max.	volts
DC GRID VOLTAGE. . . . .	-400 max.	volts
DC PLATE CURRENT . . . . .	175 max.	ma
DC GRID CURRENT. . . . .	50 max.	ma
PLATE INPUT. . . . .	220 max.	watts
PLATE DISSIPATION. . . . .	100 max.	watts

**Typical Operation:**

DC Plate Voltage . . . . .	750	1000	1250	volts
DC Grid Voltage. . . . .	-135	-175	-225	volts
Peak RF Grid Voltage . . . . .	275	315	375	volts
DC Plate Current . . . . .	150	150	150	ma
DC Grid Current (Approx.) <sup>□</sup> . . . . .	18	18	18	ma
Driving Power (Approx.) <sup>□</sup> . . . . .	5	6	7	watts
Power Output (Approx.) . . . . .	65	100	130	watts

- continuous commercial service.
- For effect of load resistance on grid current and driving power, refer to TUBE RATINGS—Grid Current and Driving Power 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.

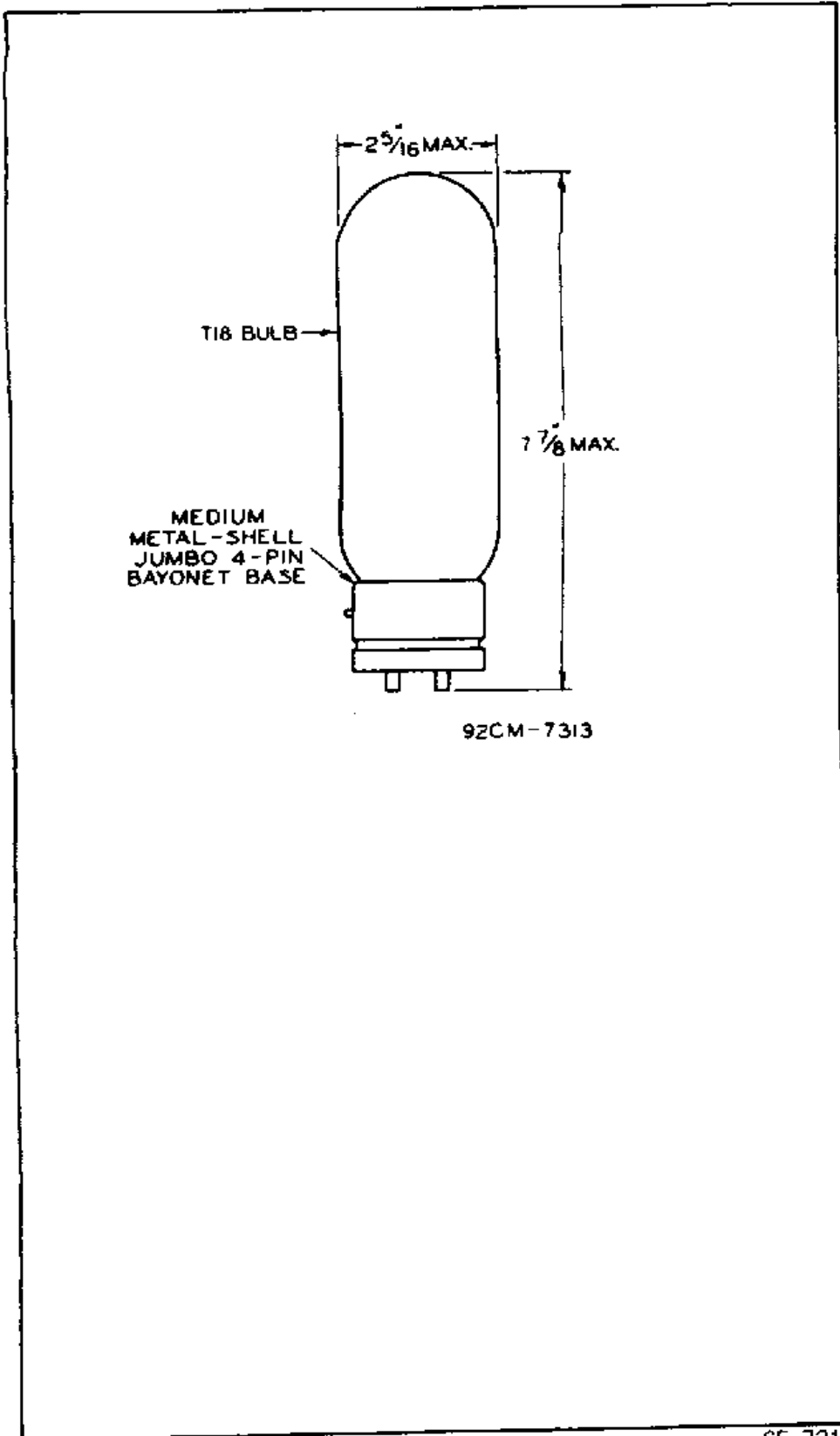
Data on operating frequencies for the 211 are given on the sheet TRANS. TUBE RATINGS vs FREQUENCY.

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# POWER TRIODE



92CM-7313

MAY 1, 1950

TUBE DEPARTMENT  
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

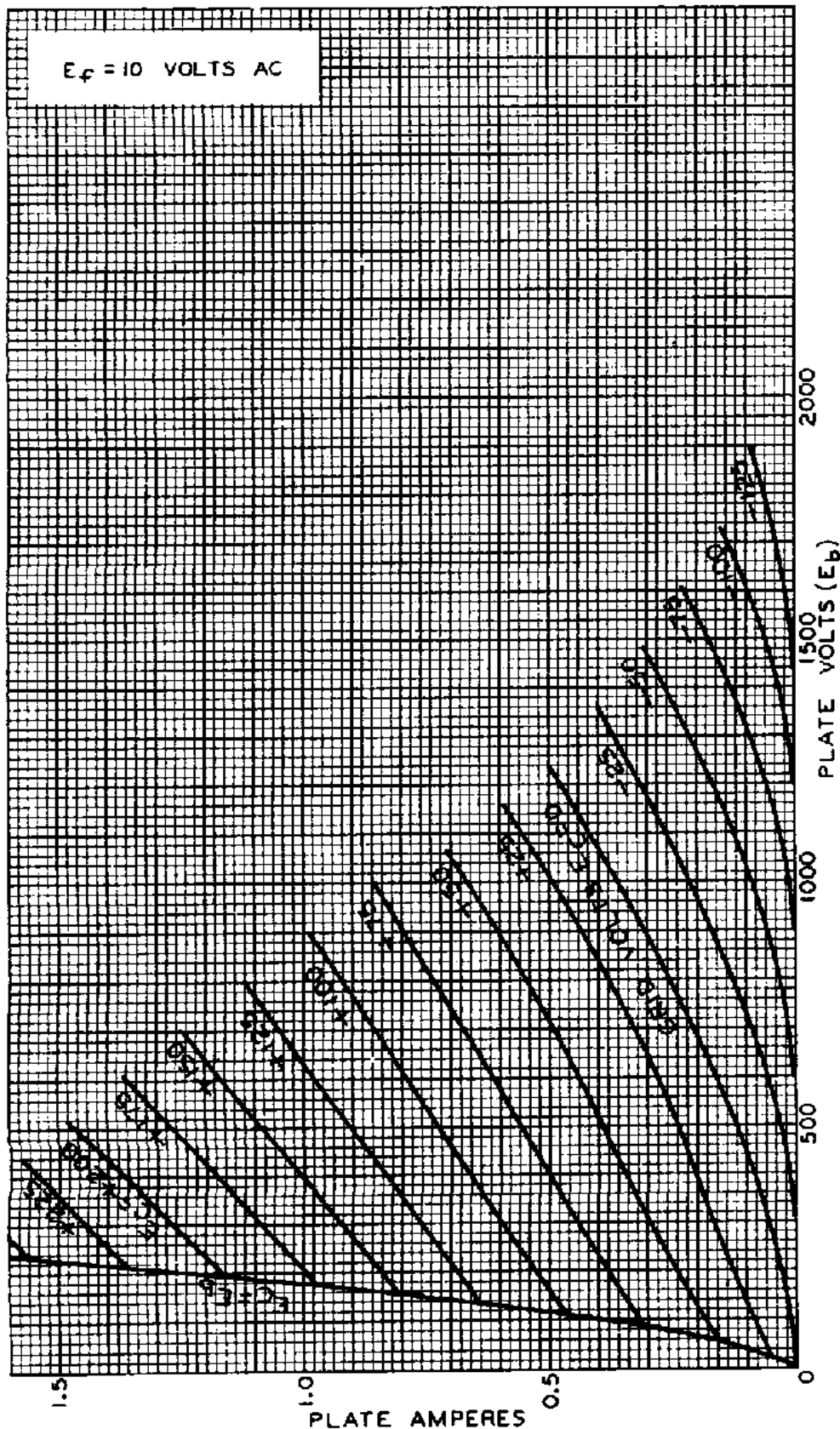
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### AVERAGE PLATE CHARACTERISTICS



JAN. 10, 1936

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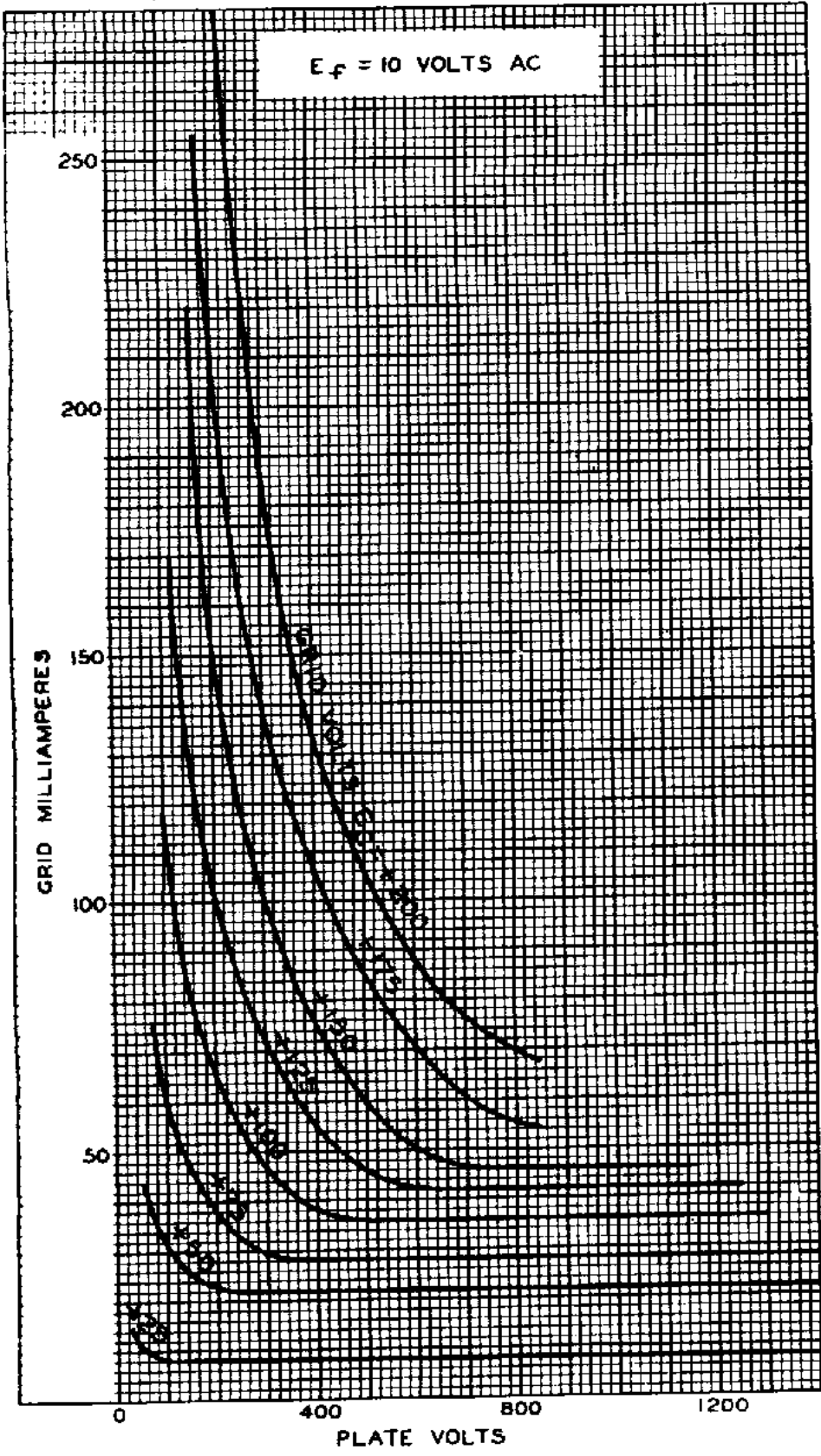
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### TYPICAL CHARACTERISTICS



JAN. 13, 1935

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