



211

POWER TRIODE

211

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 μf Grid to Filament 5.4 μf Plate to Filament 4.8 μf

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"

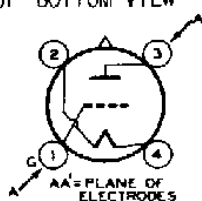
Bulb T-18

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 A₁

Maximum CCS* 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 μmhos

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* Ratings, Absolute Values:

DC PLATE VOLTAGE 1250 max. volts

*, #: See next page.

← Indicates a change.

MAY 1, 1950

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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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.) [□]	5	1	ma
Driving Power (Approx.) ^{▲ □}	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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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.) [□]	35	35	ma
Driving Power (Approx.) [□]	12	14	watts
Power Output (Approx.)	65	100	watts

RF POWER AMPLIFIER & OSCILLATOR—Class C Telegraphy*Key-down conditions per tube without modulation^{□□}***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.) [□]	18	18	18	ma
Driving Power (Approx.) [□]	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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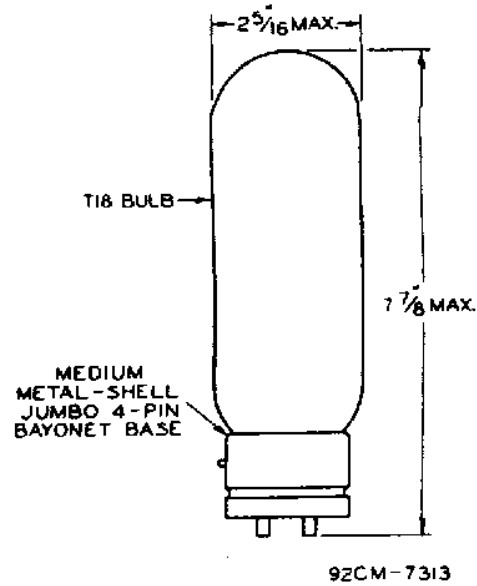
DATA 2

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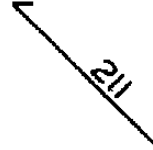
POWER TRIODE



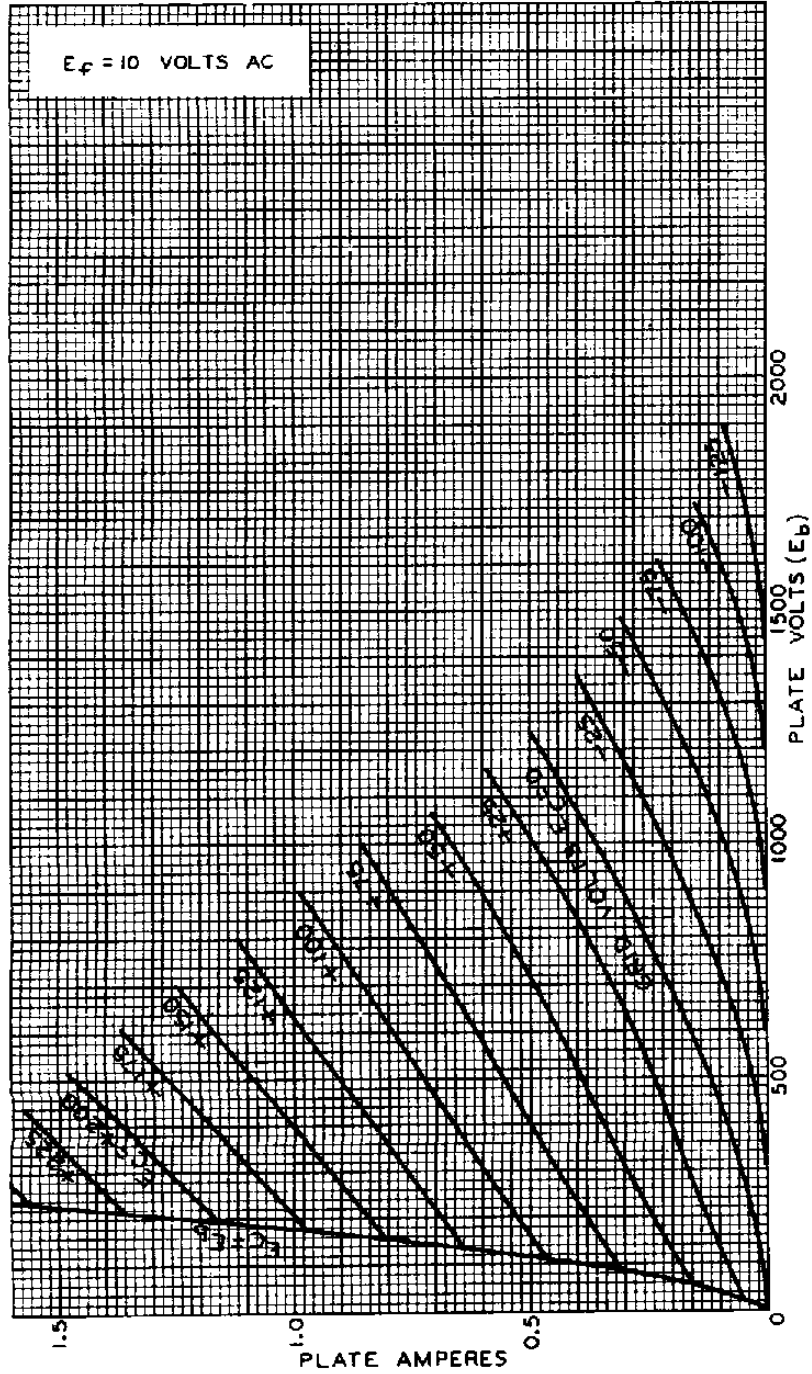
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CE-7313



AVERAGE PLATE CHARACTERISTICS



JAN. 10. 1936

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92CM-4537

211

6X4

$E_f = 10$ VOLTS AC

GRID MILLIAMPERES

PLATE VOLTS

Curves for Grid Voltage (V): 0, -25, -50, -75, -100, -125, -150, -175, -200, -225, -250.

92CM - 4538