



807

BEAM POWER TUBE

Useful at Frequencies up to 125 Mc

807

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage 6.3 ± 0.6 ac or dc volts
Current 0.9 amp

Transconductance (Approx.)

for plate volts = 250,
grid-No.2 volts = 250,
grid-No.1 volts = -14 6000 μmhos

Mu-Factor, Grid No.2 to

Grid No.1 for plate volts =
250, grid-No.2 volts = 250,
and grid-No.1 volts = -20 8

Direct Interelectrode Capacitances:

Grid No.1 to plate⁰ 0.2 max. μμf

Grid No.1 to cathode &
grid No.3, grid No.2,
and heater 12 μμf

Plate to cathode & grid
No.3, grid No.2,
and heater 7 μμf

Mechanical:

Mounting Position Any

Maximum Overall Length 5-3/4"

Seated Length 4-31/32" ± 5/32"

Maximum Diameter 2-1/16"

Weight (Approx.) 3 oz

Bulb ST-16

Cap. Small (JETEC No. C1-1)

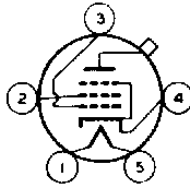
Base Medium-Micanol-Shell Small 5-Pin (JETEC No. A5-11)

Basing Designation for BOTTOM VIEW 5AW

Pin 1 - Heater

Pin 2 - Grid No.2

Pin 3 - Grid No.1



Pin 4 - Cathode,

Grid No.3

Pin 5 - Heater

Cap - Plate

AF POWER AMPLIFIER & MODULATOR - Class AB₁

Triode Connection--Grid No.2 Connected to Plate

Maximum Ratings, Absolute Values:

| | CCS* | ICAS** | |
|---|----------|----------|-------|
| DC PLATE VOLTAGE | 400 max. | 400 max. | volts |
| MAX.-SIGNAL DC PLATE CURRENT* | 125 max. | 125 max. | ma |
| MAX.-SIGNAL DC PLATE PLUS GRID-No.2 INPUT* | 50 max. | 50 max. | watts |
| PLATE DISSIPATION PLUS GRID-No.2 INPUT* | 25 max. | 30 max. | watts |

⁰ with external shield JETEC No.312.

♦, •, ••, * : See next page.

← Indicates a change.



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807

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| Typical Operation: | CCS* | | | ICAS** | |
|---|------------------------|------|-------|----------------|-----------------|
| | Values are for 2 tubes | | | | |
| DC Plate Voltage | 400 | 500 | 600 | 750 | volts |
| DC Grid-No.2 Voltage** . . . | 300 | 300 | 300 | 300 | volts |
| DC Grid-No.1 (Control-Grid) Voltage: | | | | | |
| From fixed-bias source | -30 | -32 | -34 | -35 | volts |
| Peak AF Grid-No.1-to-Grid-No.1 Voltage. . . | 60 | 64 | 68 | 70 | volts |
| Zero-Signal DC Plate Current. | 56 | 44 | 36 | 30 | ma |
| Max.-Signal DC Plate Current. | 143 | 141 | 139 | 139 | ma |
| Zero-Signal DC Grid-No.2 Current. . . | 2 | 1 | 0.6 | 0.5 | ma |
| Max.-Signal DC Grid-No.2 Current. . . | 16 | 15 | 15 | 16 | ma |
| Effective Load Resistance (Plate to plate) . . . | 6800 | 8200 | 10000 | 12000 | ohms |
| Max.-Signal Driving Power (Approx.) | 0 | 0 | 0 | 0* | watts |
| Max.-Signal Power Output (Approx.) | 36 | 46 | 56 | 72 | watts |
| Maximum Circuit Values (CCS or ICAS): | | | | | |
| Grid-No.1-Circuit Resistance:°° | | | | | |
| With fixed bias. | | | | | 0.1 max. megohm |
| With cathode bias. | Not recommended | | | | |
| AF POWER AMPLIFIER & MODULATOR - Class AB₂# | | | | | |
| Maximum Ratings, Absolute Values: | | | | | |
| | CCS* | | | ICAS** | |
| DC PLATE VOLTAGE | 600 max. | | | 750 max. volts | |
| DC GRID-No.2 (SCREEN) VOLTAGE. | 300 max. | | | 300 max. volts | |
| MAX.-SIGNAL DC PLATE CURRENT*. | 120 max. | | | 120 max. ma | |
| MAX.-SIGNAL PLATE INPUT* | 60 max. | | | 90 max. watts | |
| MAX.-SIGNAL GRID-No.2 INPUT* | 3.5 max. | | | 3.5 max. watts | |
| PLATE DISSIPATION* | 25 max. | | | 30 max. watts | |
| PEAK HEATER-CATHODE VOLTAGE: | | | | | |
| Heater negative with respect to cathode | 135 max. | | | 135 max. volts | |
| Heater positive with respect to cathode | 135 max. | | | 135 max. volts | |
| * Subscript 2 indicates that the grid-No.1 current flows during some part of the input cycle. | | | | | |
| * Averaged over any audio-frequency cycle of sine-wave form. | | | | | |
| •••, °°, °°: See next page. | | | | | |
| ← indicates a change. | | | | | |

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| Typical Operation: | CCS* | | | ICAS** | |
|--|-------------------------------|------|------|-----------------|-------|
| | <i>Values are for 2 tubes</i> | | | | |
| DC Plate Voltage | 400 | 500 | 600 | 750 | volts |
| DC Grid-No.2 Voltage** | 300 | 300 | 300 | 300 | volts |
| DC Grid-No.1 (Control-Grid) Voltage: | | | | | |
| From fixed-bias source | -28 | -30 | -32 | -35 | volts |
| Peak AF Grid-No.1-to-Grid-No.1 Voltage. | 80 | 86 | 90 | 96 | volts |
| Zero-Signal DC Plate Current. | 72 | 60 | 48 | 30 | ma |
| Max.-Signal DC Plate Current. | 240 | 240 | 200 | 240 | ma |
| Zero-Signal DC Grid-No.2 Current. | 2 | 0.9 | 0.7 | 0.5 | ma |
| Max.-Signal DC Grid-No.2 Current. | 20 | 20 | 18 | 20 | ma |
| Effective Load Resistance (Plate to plate) | 3700 | 4600 | 6900 | 7300 | ohms |
| Max.-Signal Driving Power (Approx.)♦♦ | 0.2 | 0.2 | 0.1 | 0.2 | watt |
| Max.-Signal Power Output (Approx.)▲ | 55 | 75 | 80 | 120 | watts |
| Maximum Circuit Values (CCS or ICAS): | | | | | |
| Grid-No.1-Circuit Resistance:°° | | | | | |
| With fixed bias. | | | | 30000 max. | ohms |
| With cathode bias. | | | | Not recommended | |
| RF POWER AMPLIFIER—Class B Telephony | | | | | |
| <i>Carrier conditions per tube for use with a max. modulation factor of 1.0</i> | | | | | |
| Maximum Ratings, Absolute Values: | | | | | |
| | CCS* | | | ICAS** | |
| DC PLATE VOLTAGE | 600 max. | | | 750 max. | volts |
| DC GRID-No.2 (SCREEN) VOLTAGE | 300 max. | | | 300 max. | volts |
| DC PLATE CURRENT | 80 max. | | | 90 max. | ma |
| PLATE INPUT. | 37.5 max. | | | 45 max. | watts |
| GRID-No.2 INPUT. | 2.5 max. | | | 2.5 max. | watts |
| ** Preferably obtained from a separate source, or from the plate-voltage supply with a voltage divider. | | | | | |
| ♦♦ Driver stage should be capable of supplying the specified driving power at low distortion to the No.1 grids of the class AB ₂ stage. The effective resistance per grid-No.1 circuit of the class AB ₂ stage should be kept below 500 ohms and the effective impedance should not exceed 700 ohms at the highest response frequency. | | | | | |
| ▲ With zero-impedance driver and perfect regulation, plate-circuit distortion does not exceed 2%. In practice, the regulation of the plate-voltage, grid-No.2 voltage, and grid-No.1 voltage should not be greater than 5%, 5%, and 3%, respectively. | | | | | |
| •, ••, °°: See next page. | | | | | |
| → Indicates a change. | | | | | |

NOV. 5, 1954

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

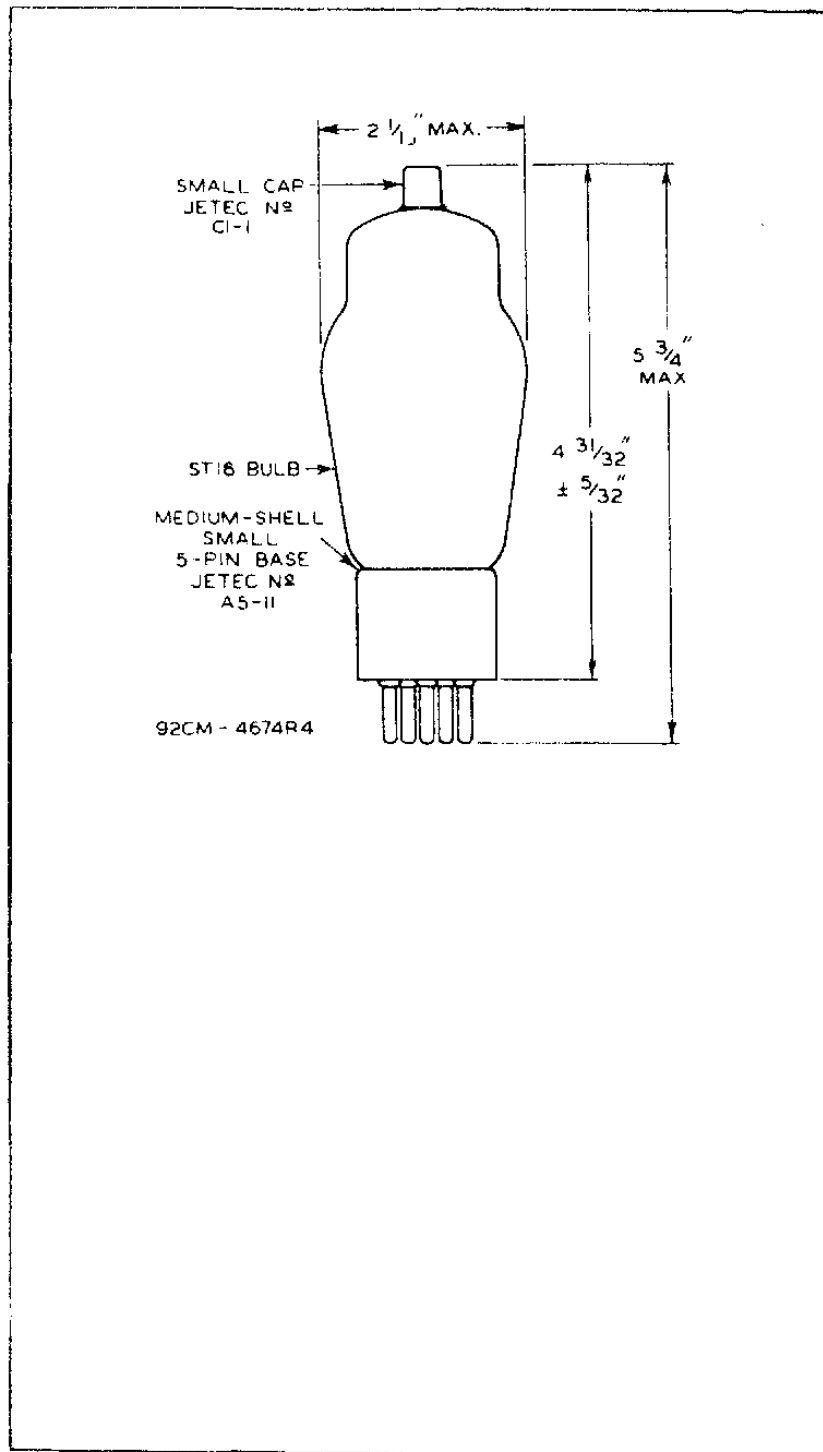
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NOV. 5, 1954

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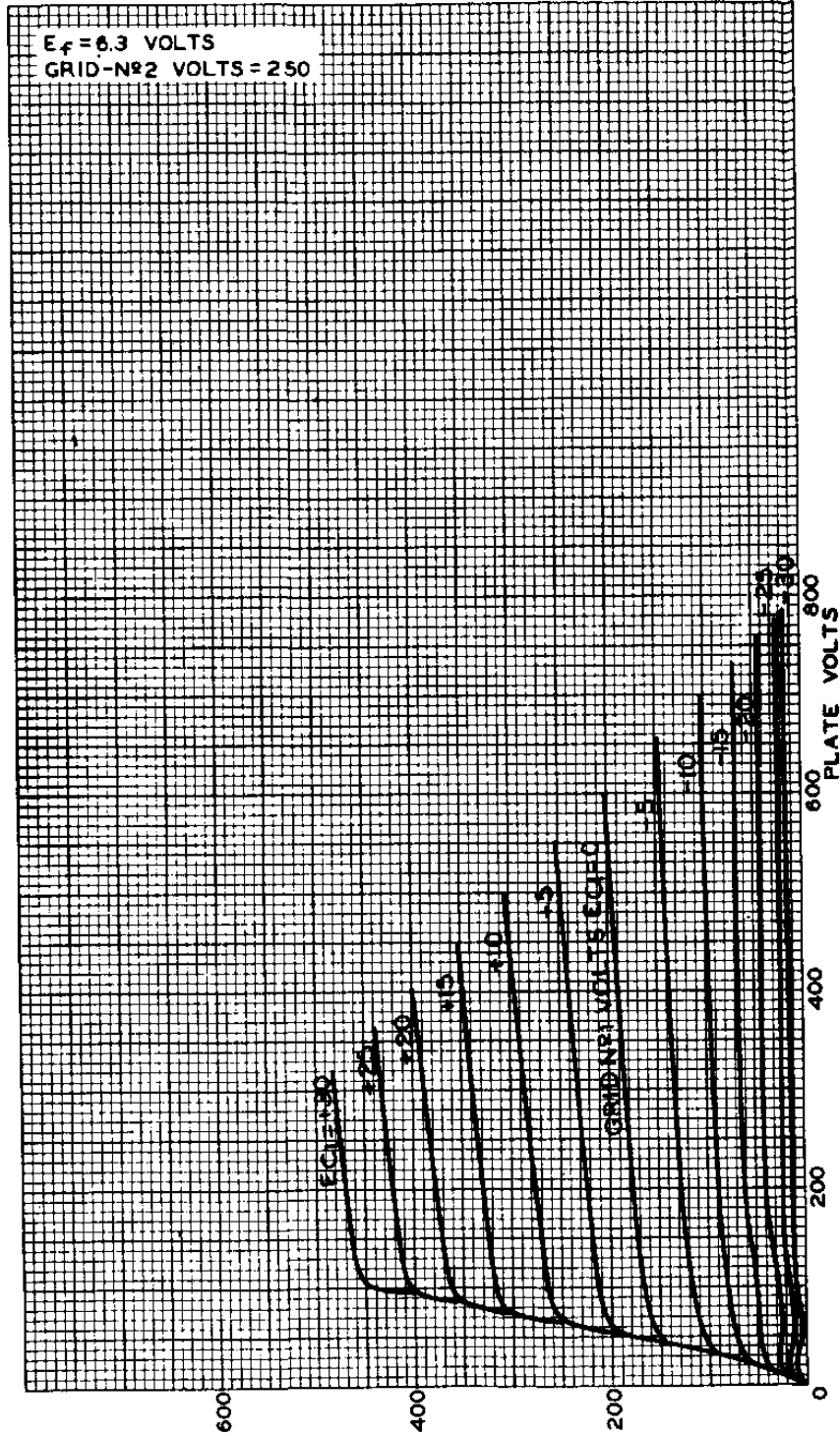
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AVERAGE PLATE CHARACTERISTICS



APR. 7, 1953

PLATE MILLIAMPERES
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RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

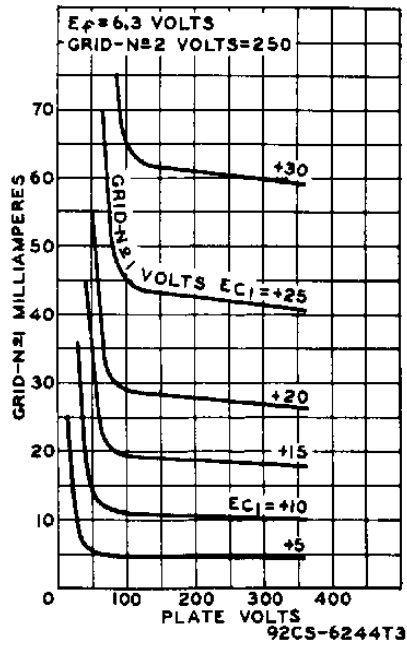
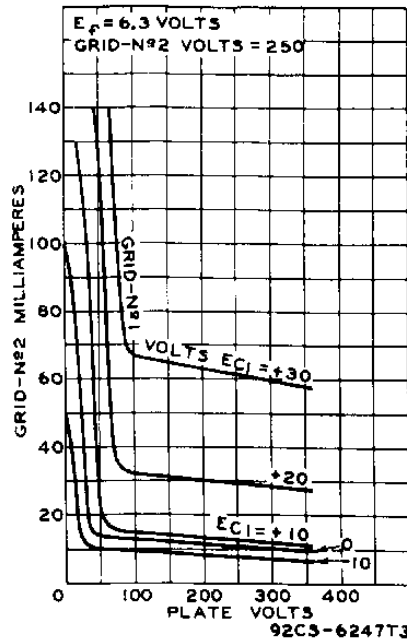
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AVERAGE CHARACTERISTICS



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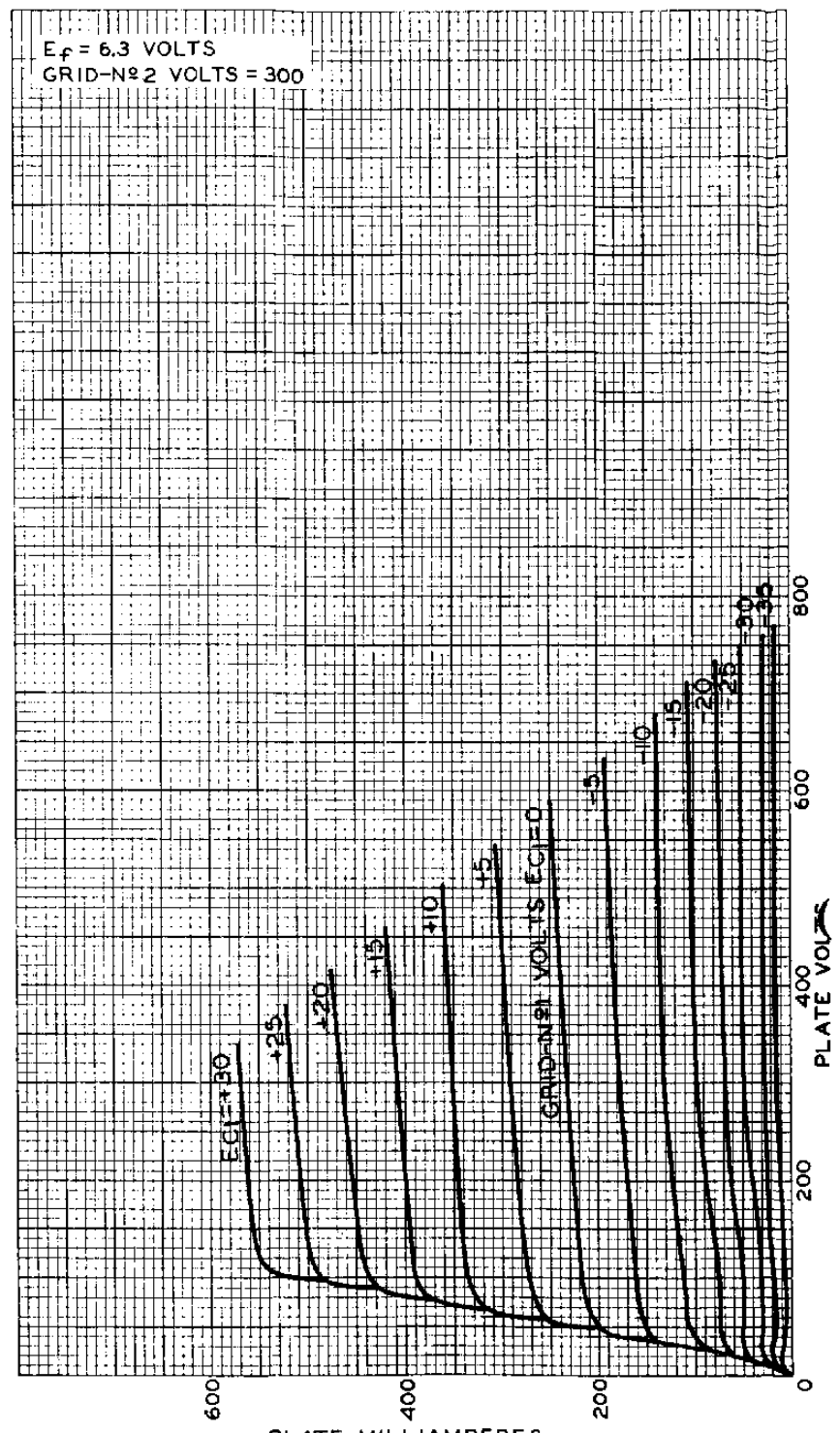
ELECTRON TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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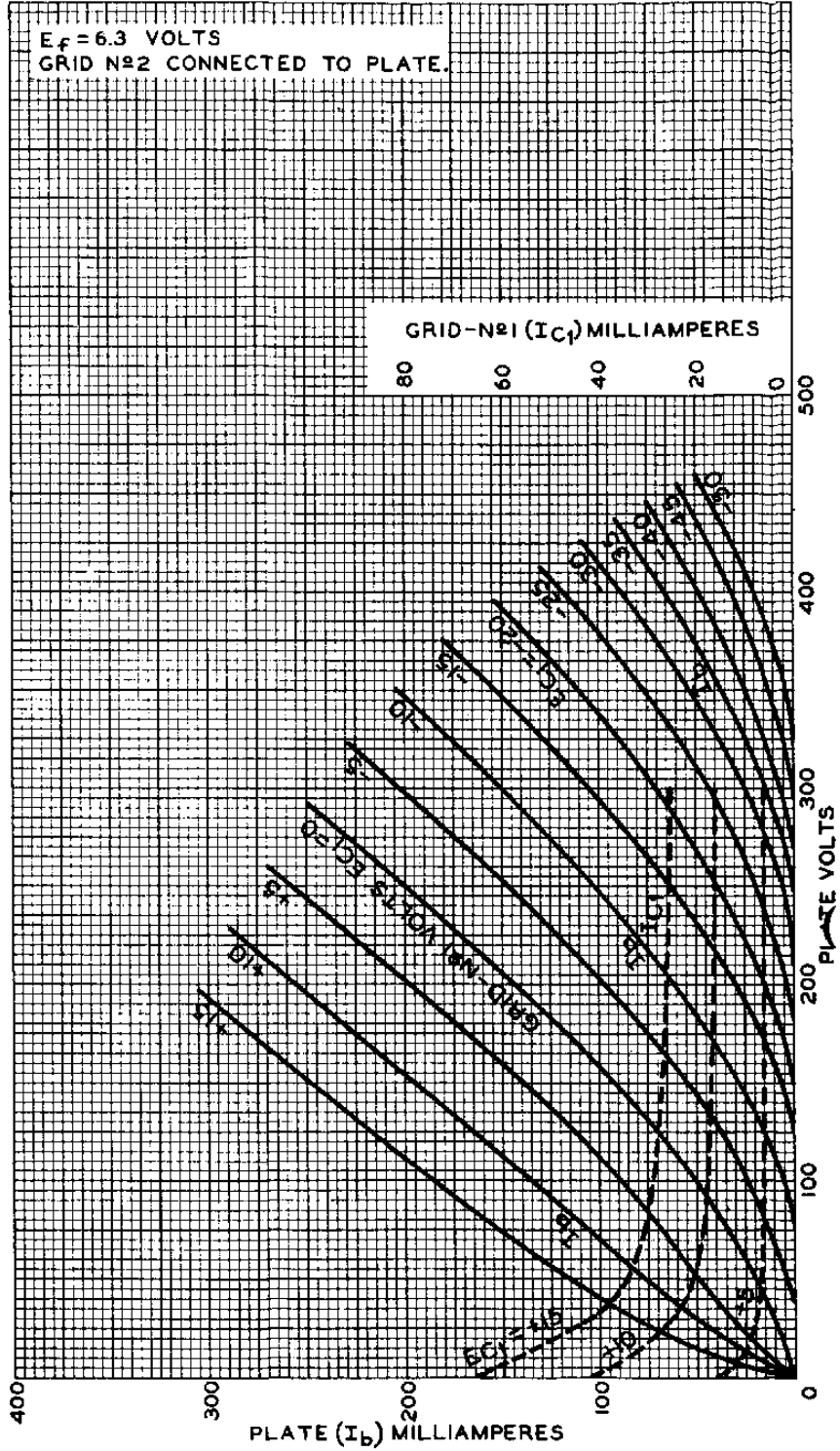
AVERAGE PLATE CHARACTERISTICS



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AVERAGE CHARACTERISTICS TRIODE CONNECTION

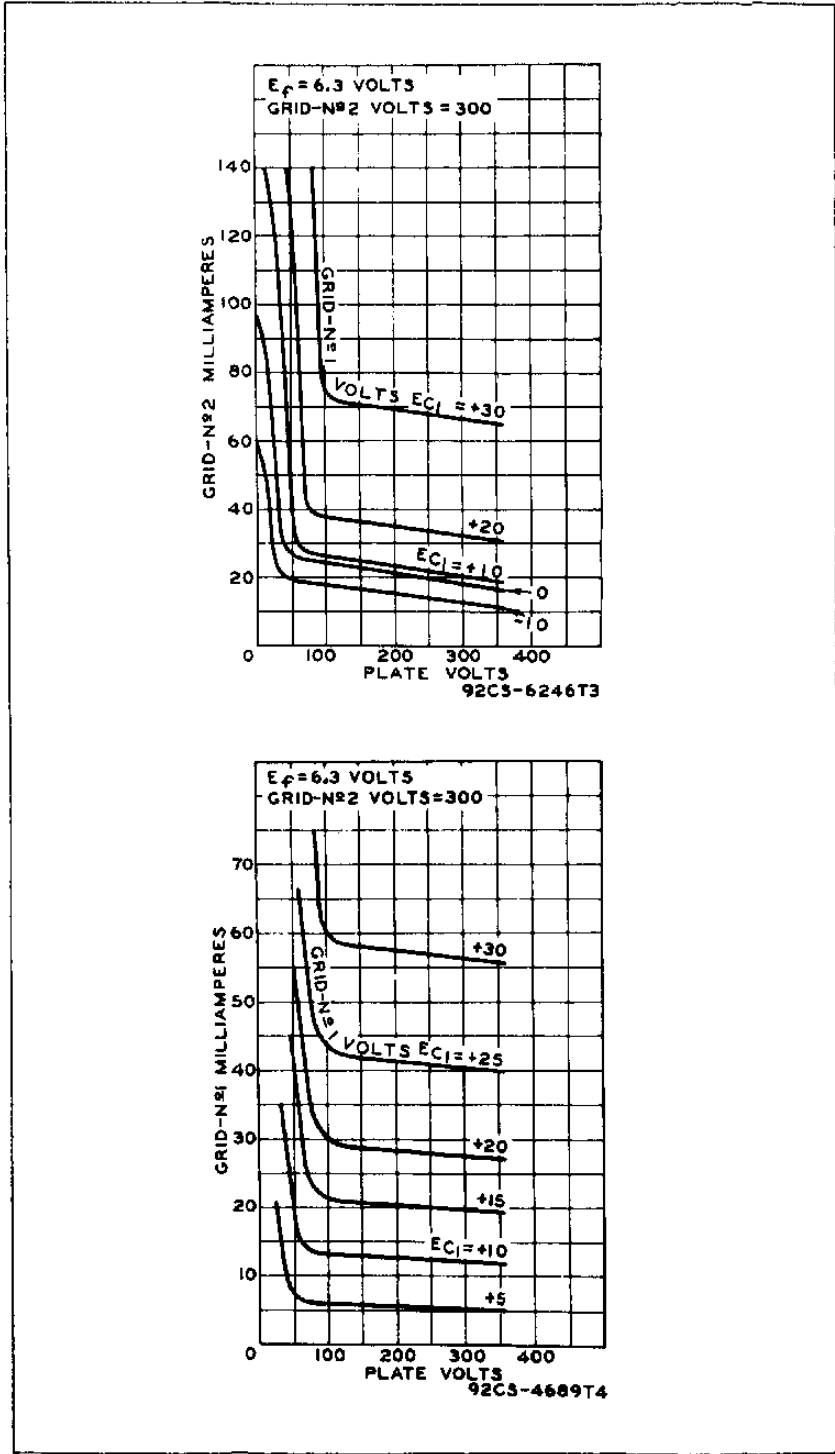




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AVERAGE CHARACTERISTICS



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