6J6

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# MEDIUM-MU TWIN TRIODE

MINIATURE TYPE

## GENERAL DATA

### Electrical:

Heater for Unipotential Cathode:

| | | |
|---|---|---|
| Voltage | 6.3 | ac or dc volts |
| Current | 0.45 | amp |

Direct Interelectrode Capacitances:

| | *Without External Shield* | *With External Shield°* | |
|---|---|---|---|
| *Unit No.1* | | | |
| Grid to plate | 1.6 | 1.5 | μμf |
| Grid to cathode and heater | 2.2 | 2.6 | μμf |
| Plate to cathode and heater | 0.4 | 1.6 | μμf |
| *Unit No.2* | | | |
| Grid to plate | 1.6 | 1.5 | μμf |
| Grid to cathode and heater | 2.2 | 2.6 | μμf |
| Plate to cathode and heater | 0.4 | 1.0 | μμf |

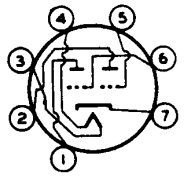
### Characteristics, Class A$_1$ Amplifier (Each Unit):

| | | |
|---|---|---|
| Plate Voltage | 100 | volts |
| Cathode-Bias Resistor■ | 50♦ | ohms |
| Amplification Factor | 38 | |
| Plate Resistance | 7100 | ohms |
| Transconductance | 5300 | μmhos |
| Plate Current | 8.5 | ma |

### Mechanical:

| | |
|---|---|
| Mounting Position | Any |
| Maximum Overall Length | 2-1/8" |
| Maximum Seated Length | 1-7/8" |
| Length, Base Seat to Bulb Top (Excluding tip) | 1-1-2" ± 3/32" |
| Maximum Diameter | 3/4" |
| Bulb | T-5-1/2 |
| Base | Small-Button Miniature 7-Pin (JETEC No.E7-1) |
| Basing Designation for BOTTOM VIEW | 7BF |

Pin 1 - Plate of Unit No.2
Pin 2 - Plate of Unit No.1
Pin 3 - Heater
Pin 4 - Heater
Pin 5 - Grid of Unit No.1
Pin 6 - Grid of Unit No.2
Pin 7 - Cathode




° With external shield JETEC No.316 connected to cathode.

■ Fixed-bias operation is not recommended.

♦ Value is for both units operating at the specified conditions.

← Indicates a change.



TUBE DIVISION
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### AMPLIFIER - Class $A_1$

*Values are for Each Unit*

**Maximum Ratings,** *Design-Center Values*:

| | | |
|---|---|---|
| PLATE VOLTAGE | 300 max. | volts |
| GRID VOLTAGE: | | |
| Positive bias value | 0 max. | volts |
| PLATE DISSIPATION | 1.5 max. | watts |
| → PEAK HEATER-CATHODE VOLTAGE: | | |
| Heater negative with respect to cathode | 100 max. | volts |
| Heater positive with respect to cathode | 100 max. | volts |

**Maximum Circuit Values (For maximum rated conditions):**

| | | |
|---|---|---|
| Grid-Circuit Resistance: | | |
| For cathode-bias operation | 0.5 max. | megohm |

### RF POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy

*Key-down conditions per tube without modulation*

*Values are for Each Unit*

**Maximum Ratings,** *Design-Center Values*:

| | | |
|---|---|---|
| DC PLATE VOLTAGE | 300 max. | volts |
| DC GRID VOLTAGE: | | |
| Negative bias value | -40 max. | volts |
| → Positive bias value | 0 max. | volts |
| DC PLATE CURRENT | 15 max. | ma |
| DC GRID CURRENT | 8 max. | ma |
| DC PLATE INPUT | 4.5 max. | watts |
| PLATE DISSIPATION | 1.5 max. | watts |
| → PEAK HEATER-CATHODE VOLTAGE: | | |
| Heater negative with respect to cathode | 100 max. | volts |
| Heater positive with respect to cathode | 100 max. | volts |

**Typical Push-Pull Operation at Frequencies up to 50 Mc:** •

*Values are for Both Units*

| | | |
|---|---|---|
| DC Plate Voltage | 150 | volts |
| DC Grid Voltage: | | |
| *From a fixed supply of* | -10 | volts |
| *From a grid resistor of* | 625 | ohms |
| *From a cathode resistor of* | 220 | ohms |
| DC Plate Current | 30 | ma |
| DC Grid Current (Approx.)* | 16 | ma |
| Driving Power (Approx.)* | 0.35 | watt |
| Useful Power Output (Approx.) | 3.5 | watts |

• Approximately 1.0 watt can be obtained when the 6J6 is used at 250 Mc as a push-pull oscillator with a plate voltage of 150 volts, with maximum rated plate dissipation, and with a grid resistor of 2000 ohms common to both units.

* For effect of load resistance on grid current and driving power, refer to *TUBE RATINGS-Grid Current and Driving Power* in the *General Section*.

→ Indicates a change.



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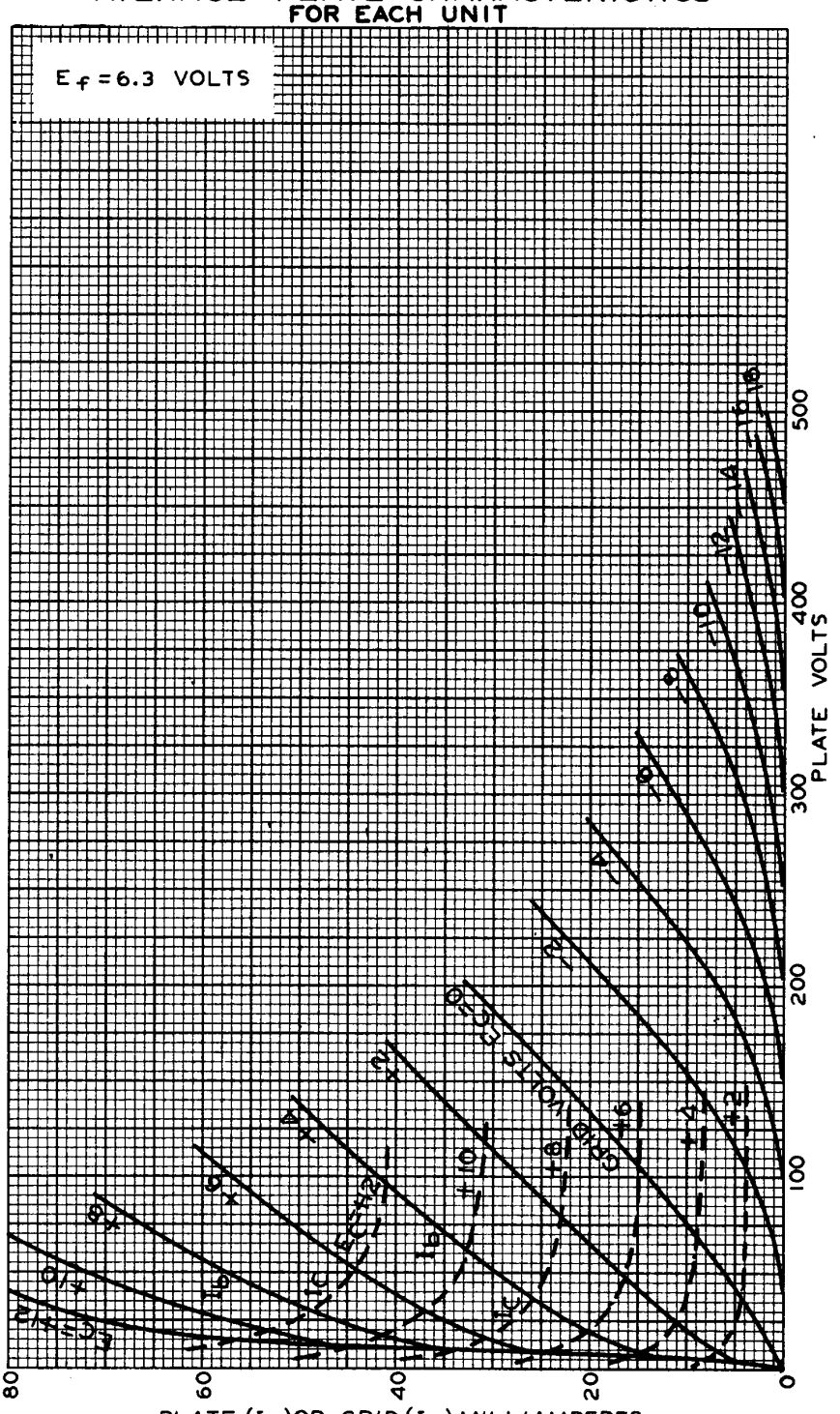
## AVERAGE PLATE CHARACTERISTICS
### FOR EACH UNIT

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RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
92CM—6403RI

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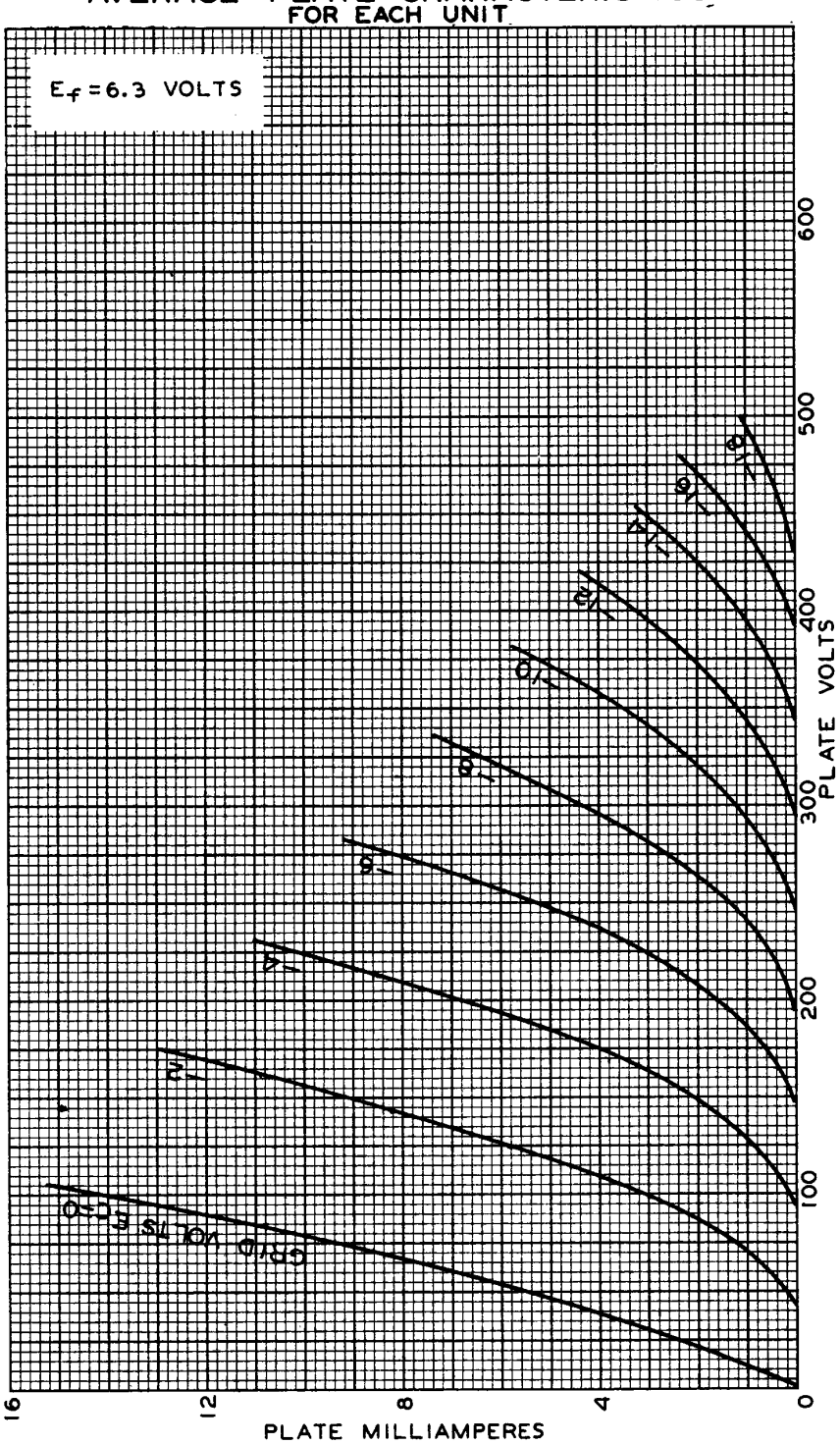
## AVERAGE PLATE CHARACTERISTICS
FOR EACH UNIT



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## AVERAGE CHARACTERISTICS
### FOR EACH UNIT