



6BL7-GT

## MEDIUM-MU TWIN TRIODE

6BL7-GT

## GENERAL DATA

## Electrical:

Heater, for Unipotential Cathodes:

Voltage. . . . . 6.3 . . . . . ac or dc volts

Current. . . . . 1.5 . . . . . amp

Direct Interelectrode

Capacitances:

Without  
External  
ShieldWith External  
Shield No. 308  
Tied to Cathode

## Unit No. 1:

Grid to Plate. . . . . 4.2 . . . . .  $\mu\text{mf}$ Input. . . . . 4.4 . . . . .  $\mu\text{mf}$ Output. . . . . 1.1 . . . . .  $\mu\text{mf}$ 

## Unit No. 2:

Grid to Plate. . . . . 4.0 . . . . .  $\mu\text{mf}$ Input. . . . . 4.8 . . . . .  $\mu\text{mf}$ Output. . . . . 1.2 . . . . .  $\mu\text{mf}$ 

Grid of Unit No. 1

to Grid of Unit No. 2 . . . . . 0.11 . . . . .  $\mu\text{mf}$ 

Plate of Unit No. 1

to Plate of Unit No. 2 . . . . . 1.5 . . . . .  $\mu\text{mf}$ Characteristics, Amplifier Class A<sub>1</sub> (Each Unit):

Plate Voltage. . . . . 250 volts

Grid Voltage. . . . . -9 volts

Plate Current. . . . . 40 ma

Amplification Factor. . . . . 15

Plate Resistance. . . . . 2150 ohms

Transconductance. . . . . 6200  $\mu\text{mhos}$  ←

Grid-No. 1 Bias (Approx.) for

plate current of 25  $\mu\text{amp}$  . . . . . -25 volts

Grid-No. 1 Bias (Approx.) for plate voltage

of 600 volts and plate current of 50  $\mu\text{amp}$ . . . . . -60 volts

## Mechanical:

Mounting Position. . . . . Any

Maximum Overall Length. . . . . 3-5/16"

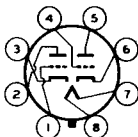
Maximum Seated Length. . . . . 2-3/4"

Maximum Diameter. . . . . 1-9/32"

Bulb . . . . . T-9

Base . Short Intermediate-Shell Octal 8-Pin (JETEC No. B8-46)

Basing Designation for BOTTOM VIEW. . . . . 8BD

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

Pin 7-Heater

Pin 8-Heater

← Indicates a change

OCT. 1, 1953

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA



6BL7-GT

## MEDIUM-MU TWIN TRIODE

## VERTICAL DEFLECTION AMPLIFIER

Values are for Each Unit

## Maximum Ratings, Design-Center Values:

For operation in a 525-line, 30-frame system\*

|                                                          |           |       |
|----------------------------------------------------------|-----------|-------|
| DC PLATE SUPPLY VOLTAGE. . . . .                         | 600 max.  | volts |
| DC PLATE VOLTAGE . . . . .                               | 500 max.  | volts |
| PEAK POSITIVE-PULSE PLATE VOLTAGE <sup>o</sup> . . . . . | 1800 max. | volts |
| PEAK NEGATIVE-PULSE GRID VOLTAGE . . . . .               | 500 max.  | volts |
| DC CATHODE CURRENT . . . . .                             | 60 max.   | ma    |
| PLATE DISSIPATION. . . . .                               | 10 max.   | watts |
| Total for Both Units . . . . .                           | 12 max.   | watts |
| PEAK HEATER-CATHODE VOLTAGE:                             |           |       |
| Heater negative with respect to cathode.                 | 200 max.  | volts |
| Heater positive with respect to cathode.                 | 200 max.  | volts |

## Typical Operation in a Vertical Deflection Circuit:

|                                            |      |       |
|--------------------------------------------|------|-------|
| DC Plate Voltage . . . . .                 | 450  | volts |
| Cathode-Bias Resistor. . . . .             | 1200 | ohms  |
| Grid-Input Voltage, Approx. (See Fig.1):   |      |       |
| Peak-to-peak sawtooth component. . . . .   | 36   | volts |
| Negative peaking component . . . . .       | 44   | volts |
| DC Plate Current . . . . .                 | 11   | ma    |
| Plate-Output Voltage, Approx. (See Fig.2): |      |       |
| Peak-to-peak sawtooth component. . . . .   | 270  | volts |
| Peak positive pulse component. . . . .     | 600  | volts |

## Maximum Circuit Values:

|                                  |          |         |
|----------------------------------|----------|---------|
| Grid-Circuit Resistance. . . . . | 4.7 max. | megohms |
|----------------------------------|----------|---------|

\* As described in "Standards of Good Engineering Practice for Television Broadcast Stations", Federal Communications Commission.

<sup>o</sup> The duration of the voltage pulse must not exceed 15 per cent of one scanning cycle. In a 525-line, 30-frame system, 15 per cent of one scanning cycle is 2.5 milliseconds.

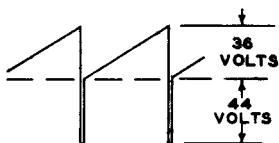


Fig.1 - Waveform at  
Grid of 6BL7-GT

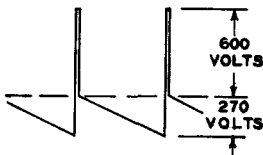


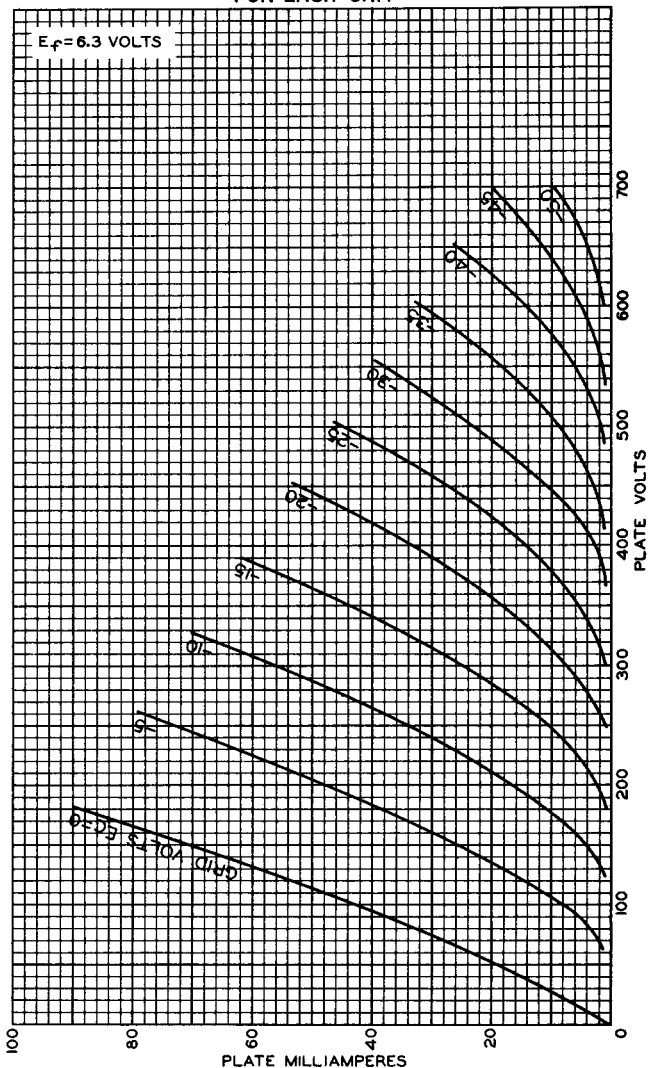
Fig.2 - Waveform at  
Plate of 6BL7-GT



6BL7-GT

# 6BL7-GT

## AVERAGE PLATE CHARACTERISTICS FOR EACH UNIT



OCT. 26, 1953

TUBE DEPARTMENT  
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-8133