# 6GT5A

## Beam Power Tube

**NOVAR TYPE**

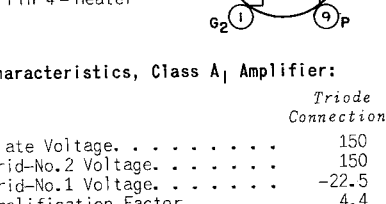
**For Horizontal-Deflection-Amplifier Service in Black-and-White TV Receivers**

### Electrical:

| | | |
|---|---|---|
| Heater Characteristics and Ratings: | | |
| Voltage (AC or DC) | 6.3 ± 0.6 | volts |
| Current at heater volts = 6.3 | 1.200 | amp |
| Peak heater-cathode voltage: | | |
| Heater negative with respect to cathode | 200 max. | volts |
| Heater positive with respect to cathode | 200[a] max. | volts |
| Direct Interelectrode Capacitances (Approx):[b] | | |
| Grid No.1 to Plate | 0.26 | pf |
| Input: G1 to (K+G3,G2,H) | 15.0 | pf |
| Output: P to (K+G3,G2,H) | 6.5 | pf |

### Mechanical:

| | |
|---|---|
| Operating Position | Any |
| Type of Cathode | Coated Unipotential |
| Maximum Overall Length | 2.880" |
| Seated Length | 2.250" to 2.500" |
| Diameter | 1.438" to 1.562" |
| Dimensional Outline | See *General Section* |
| Bulb | T12 |
| Base | Large-Button Novar 9-Pin with Exhaust Tip (JEDEC No.E9-88) |
| Basing Designation for BOTTOM VIEW | 9NZ |




Pin 1 – Grid No.2
Pin 2 – Grid No.1
Pin 3 – Cathode, Grid No.3
Pin 4 – Heater
Pin 5 – Heater
Pin 6 – Grid No.1
Pin 7 – Grid No.2
Pin 8 – Do Not Use
Pin 9 – Plate

### Characteristics, Class $A_1$ Amplifier:

| | *Triode Connection*[c] | *Pentode Connection* | | |
|---|---|---|---|---|
| Plate Voltage | 150 | 60 | 250 | volts |
| Grid-No.2 Voltage | 150 | 150 | 150 | volts |
| Grid-No.1 Voltage | -22.5 | 0 | -22.5 | volts |
| Amplification Factor | 4.4 | – | – | |
| Plate Resistance (Approx.) | – | – | 15000 | ohms |
| Transconductance | – | – | 7100 | μmhos |
| Plate Current | – | 390[d] | 70 | ma |
| Grid-No.2 Current | – | 32[d] | 2.1 | ma |
| Grid-No.1 Voltage (Approx.) for plate ma = 0.1 | – | – | -42 | volts |

# 6GT5A

## HORIZONTAL-DEFLECTION AMPLIFIER

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

*For operation in a 525-line, 30-frame system*[e]

| | | |
|---|---|---|
| DC Plate-Supply Voltage | 770 max. | volts |
| Peak Positive-Pulse Plate Voltage[f] | 6500 max. | volts |
| Peak Negative-Pulse Plate Voltage | 1500 max. | volts |
| DC Grid-No.2 (Screen-Grid) Voltage | 220 max. | volts |
| DC Grid-No.1 (Control-Grid) Voltage | -55 max. | volts |
| Peak Negative-Pulse Grid-No.1 Voltage | 330 max. | volts |
| Cathode Current: | | |
| Peak | 550 max. | ma |
| Average | 175 max. | ma |
| Grid-No.2 Input | 3.5 max. | watts |
| Plate Dissipation[g] | 17.5 max. | watts |
| Bulb Temperature (At hottest point on bulb surface) | 240 max. | °C |

**Maximum Circuit Values:**

| | | |
|---|---|---|
| Grid-No.1-Circuit Resistance: | | |
| For grid-resistor-bias operation | 1 max. | megohm |

[a] The dc component must not exceed 100 volts.

[b] Without external shield.

[c] With grid No.2 connected to plate.

[d] This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

[e] As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.

[f] This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.

[g] An adequate bias resistor or other means is required to protect the tube in the absence of excitation.

## AVERAGE CHARACTERISTICS