SYLVANIA TYPE 6DQ5
HORIZONTAL DEFLECTION AMPLIFIER

MECHANICAL DATA

Bulb ........................................ T-12
BBase ........................................ 88-118, Short Medium Shell Octal, 8-Pin
Outline ....................................... 12-21
Basing ........................................ 6UC
Top Cap ....................................... C1-1 Small Coated Unipotential
Cathode ........................................ Mounting Position Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage ..................................... 6.3 Volts
Heater Current .................................... 2.5 Amperes
Maximum Heater-Cathode Voltage
Heater Negative with Respect to Cathode
D C and Peak ..................................... 200 Volts
Heater Positive with Respect to Cathode
D C .................................................. 100 Volts
Total D C and Peak ................................ 200 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Grid No. 1 to Plate ................................ 0.5 \( \mu \)F
Input .............................................. 23 \( \mu \)F
Output ............................................. 11 \( \mu \)F

MAXIMUM RATINGS (Design Center Values—Except as Noted)

Horizontal Deflection Amplifier1

D C Plate Supply Voltage
(Boost + D C Power Supply) ................. 900 Volts
Peak Positive Pulse Plate Voltage (Abs. Max.) ................. 7000 Volts
Peak Negative Pulse Plate Voltage .......... 1500 Volts
Plate Dissipation \( ^2 \) ................................ 24 Watts
Grid No. 2 Input ................................ 3.2 Watts
Peak Negative Grid No. 1 Voltage .......... 200 Volts
D C Grid No. 2 Voltage ......................... 175 Volts
Average Cathode Current ...................... 285 Ma
Peak Cathode Current ......................... 1000 Ma
Grid No. 1 Circuit Resistance ............... 0.47 Megohm
Bulb Temperature (At Hottest Point) .......... 240 Degrees C

AVERAGE CHARACTERISTICS

Plate Voltage ..................................... 175 Volts
Grid No. 2 Voltage ..................... 125 Volts
Grid No. 1 Voltage ...................... –25 Volts
Plate Current .................................. 110 Ma
Grid No. 2 Current .................. 5.0 Ma
Transconductance .................. 10,500 \( \mu \)mhos
Amplification Factor \(^3 \) .................. 3.3
Plate Resistance (Approx.) ............. 5500 Ohms
Ecl for Ib = 1.0 Ma (Approx.) .............. –55 Volts
Instantaneous Plate Knee Values
Eh = 70 V, Eo2 = 125 V, and Ec1 = 0 V
Ib = 550 Ma and Ic2 = 42 Ma

NOTES:
1. For operation in a 525-line, 30-frame system as described in "Standards of Good Engineering Practice for Television Broadcasting Stations; Federal Communications Commission". The duty cycle of the voltage pulse must not exceed 15% of one scanning cycle.
2. In stages operating with grid-leak bias, an adequate cathode bias resistor or other suitable means is required to protect the tube in the absence of excitation.
3. Amplification factor obtained with Grid No. 2 tied to plate and operating as a triode connected amplifier. Eh = 125 V and Ecl = –25 V.

APPLICATION

The Sylvania Type 6DQ5 is a beam power amplifier designed for use as a horizontal deflection amplifier in color television receivers.