MECHANICAL DATA

Bulb ........................................ T-12
Base ........................................ B8-118, Short Medium Shell Octal, 8-Pin
Outline ...................................... (See Drawing)
Basing ........................................ 5BT
Top Cap ....................................... C1-1 Small
Cathode ....................................... Coated Unipotential
Mounting Position ......................... Vertical

ELECTRICAL DATA

HEATER CHARACTERISTICS  6DN6  25DN6
Heater Voltage ......................... 6.3  25.0 Volts
Heater Current ......................... 2.5  0.60 Amperes
Heater Warm-up Time\(^2\) ............... 11 Seconds
Heater-Cathode Voltage
(Design Center Values)
Heater Negative with Respect to Cathode
Total DC and Peak ....................... 200  200 Volts Max.
Heater Positive with Respect to Cathode
DC ............................................... 100  100 Volts Max.
Total DC and Peak ....................... 200  200 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES (Approx.)
Grid No. 1 to Plate ......................... 0.8 \(\mu\)f
Input ......................................... 22 \(\mu\)f
Output ....................................... 11.5 \(\mu\)f

RATINGS (Design Center Values — Except as Noted)
Horizontal Deflection Amplifier\(^3\)
DC Plate Supply Voltage
(Boost + DC Power Supply) ................. 700 Volts Max.
Peak Positive Pulse Plate Voltage (Abs. Max.) .................. 6600 Volts
Peak Negative Pulse Plate Voltage .................. 1500 Volts Max.
Plate Dissipation\(^3\) ......................... 15 Watts Max.
Peak Negative Grid No. 1 Voltage ................. 200 Volts Max.
DC Grid No. 2 Voltage .................. 175 Volts Max.
Grid No. 2 Dissipation .................. 3.0 Watts Max.
Average Cathode Current .................. 200 Ma Max.
Peak Cathode Current .................. 700 Ma Max.
Grid No. 1 Circuit Resistance ................. 0.47 Megohm Max.
Bulb Temperature (At Hottest Point) ................. 225 °C Max.

AVERAGE CHARACTERISTICS
Pentode Operation: With \(E_b = 125\) v, \(E_c = 125\) v and \(E_{cl} = -18\) v
Plate Current ......................... 70 Ma
Grid No. 2 Current .................. 6.3 Ma
Transconductance .................. 9000 \(\mu\)hmhos
Plate Resistance (approx.) ................. 4000 Ohms

Zero Bias: With \(E_b = 50\) v, \(E_c = 100\) v and \(E_{cl} = 0\) v
(Instantaneous Values)
Plate Current ......................... 240 Ma
Grid No. 2 Current .................. 30 Ma

Cutoff: For \(I_b = 0.5\) ma with \(E_b = 125\) v and \(E_c = 125\) v
Grid No. 1 Voltage (approx.) ................. -36 Volts

Triode Amplification Factor:
With \(E_b = E_c = 125\) v and \(E_{cl} = -18\) v .................. 4.35
NOTES:

1. Horizontal operation permitted if plane of Pins 1 and 3 is vertical.

2. Heater Warm-up Time is defined as the time required in the circuit shown below for the voltage across the heater terminals to increase from zero to the heater test voltage (V1). The conditions used in conjunction with the test circuit depend upon the rated heater voltage and current of the tube under test. For this type: E — 100 Volts, R — 125 Ohms, V1 — 20 Volts.

   ![Circuit Diagram]

   E — Applied Voltage, RMS or DC
   R — Total Series Resistance
   V1 — Heater Test Voltage, RMS or DC
       (80% Rated Heater Voltage)

3. 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.

4. 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.
AVERAGE PLATE CHARACTERISTICS

\[ E_f = \text{RATED VALUE} \]
\[ E_C2 = 100 \text{ VOLTS} \]

Currents in Milliamperes

Plate Voltage

\( E_C1 = 0 \text{ VOLTS} \)
AVERAGE PLATE CHARACTERISTICS

$E_f = \text{RATED VALUE}$

$E_{C1} = 0 \text{ VOLTS}$

CURRENT IN MILLIAMPERES

PLATE VOLTAGE
AVERAGE TRANSFER CHARACTERISTICS

\[ E_f = \text{RATED VALUE} \]
\[ E_b = 125 \text{ VOLTS} \]
AVERAGE TRANSFER CHARACTERISTICS

Ef = RATED VALUE
Eb = 125 VOLTS