CBS 6BU4

TRIODE HV REGULATOR TUBE

CBS 6BU4 is a high-voltage, low-current, sharp-cutoff beam triode designed for voltage regulation of the anode and focus supplies of color television receivers. This tube will provide voltage control over the wide range of 5,000 to 25,000 volts.

The CBS 6BU4 will give excellent voltage stabilization with small values of signal voltage because of its efficient electron-gun type structure that results in a high amplification factor of 1515 at 25 kv anode voltage.

MECHANICAL DATA

Cathode, coated unipotential
Bulb
Base, short medium shell octal 8-pin
Maximum over-all length
5 1/16 inches
Seated height
4 11/32 ± 3/16 inches
Maximum diameter
1 23/32 inches
Cap
(Cl-1) small
Mounting position
Any

BASING DIAGRAM

from JETEC release #1688, July 9, 1956
ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater voltage (a-c) 6.3 volts
Heater current 0.45 amp
Peak heater-cathode voltage, max.
Heater negative to cathode 225 volts
(Heater positive to cathode not recommended)

DIRECT INTERELECTRODE CAPACITANCES

Control grid to plate .03 μf
Control grid to cathode 2.0 μf
Plate to cathode 8.0 μf

MAXIMUM RATINGS (Design Center Values)

Anode voltage 25 kv
Unregulated d-c supply 55 kv
Grid voltage -125 volts
Cathode current 10 ma
Anode dissipation 25 watts
Grid circuit resistance 3.0 meg

CHARACTERISTICS

Anode voltage 25 kv
Grid voltage -8.4 volts
Anode current 1.0 ma
Plate resistance 8.2 meg
Transconductance (approx.) 185 μmhos
Amplification factor 1515
TYPICAL OPERATION

Shunt Regulator Service for Circuit Shown

Unregulated supply voltage, d-c (approx.) 37 kv
Equivalent resistance, $R_s$ 10 meg
Reference supply voltage, d-c 200 volts
Equivalent resistance, $R_f$ 1000 ohms
Transconductance, effective $g_{l}$ to $p$ 200 $\mu$hos
Voltage divider resistances
- $R_1$, 5W (10, 1/2W units in series) 220 meg
- $R_2$, 2W potentiometer 2.0 meg
- $R_3$, 1/2W 2.7 meg
Plate current, d-c
- Load current = 0 ma 1 ma
- Load current = 1 ma 50 $\mu$a
Output voltage, regulated, d-c
- Load current = 0 ma 25 kv
- Load current = 1 ma 24.5 kv

![Circuit Diagram]