

ENGINEERING DATA

E-265 2-13-56

CBS-HYTRON

TUBES AND SEMICONDUCTORS

A Division of Columbia Broadcasting System, Inc.
Danvers, Massachusetts

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.

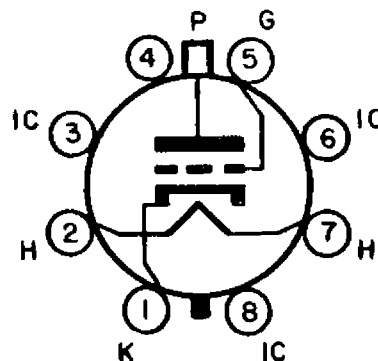
MECHANICAL DATA

Cathode, coated unipotential
Bulb
Base, short medium shell octal 8-pin
Maximum over-all length
Seated height
Maximum diameter
Cap
Mounting position

T-12
B8-118
5 1/16 inches
4 11/32 ± 3/16 inches
1 23/32 inches
(Cl-1) small
Any

BASING DIAGRAM

Pin 1: Cathode
Pin 2: Heater
Pin 3: I.C., do not use
Pin 4: N. C.
Pin 5: Grid
Pin 6: I.C., do not use
Pin 7: Heater
Pin 8: I.C., do not use
Top Cap: Anode



86C

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	μ pf
Control grid to cathode	2.0	μ pf
Plate to cathode	8.0	μ pf

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	μ mhos
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_r	1000	ohms
Transconductance, effective g_l to p	200	μ mhos
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	μ a
Output voltage, regulated, d-c		
Load current = 0 ma	25	kv
Load current = 1 ma	24.5	kv

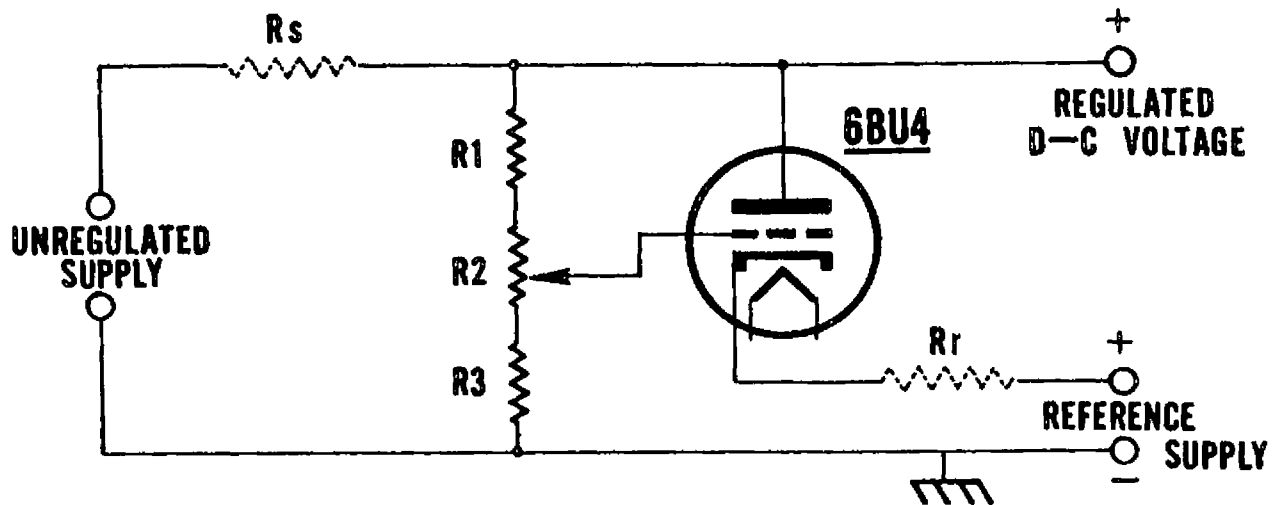
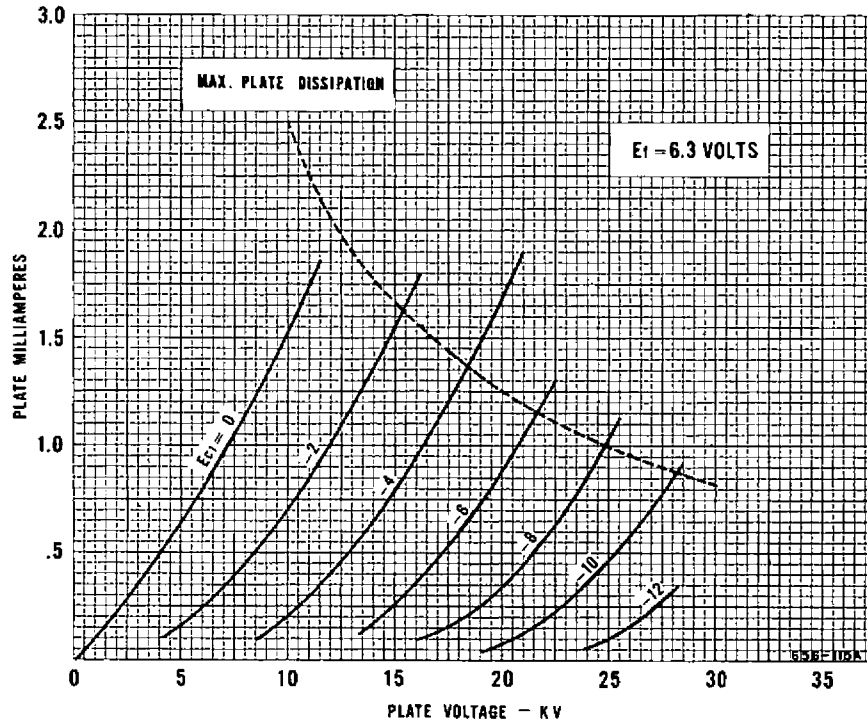


PLATE CHARACTERISTICS



TRANSFER CHARACTERISTICS

