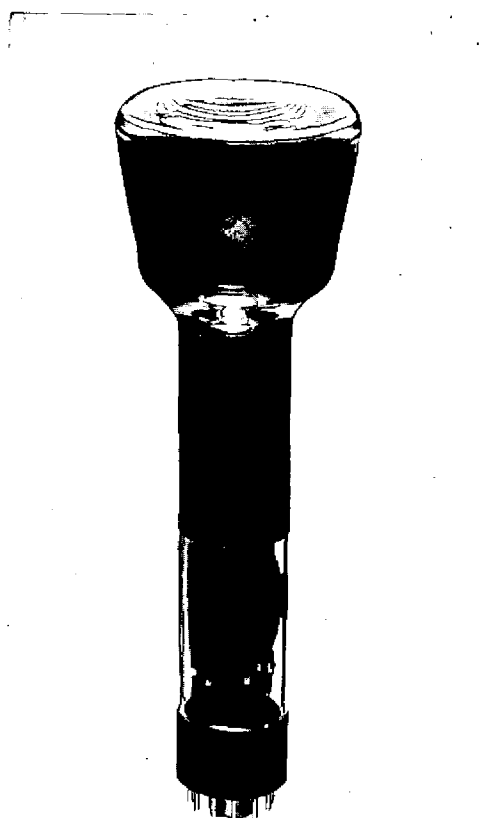


Toshiba

E I A
REGISTRATION DATA

Type **3BJP4**

Date issued **May 30 1960**



Toshiba 3BJP4 is a 3 inch, round face, non-aluminized, electrostatic focus and magnetic deflection view-finder cathode-ray tube, especially suitable for transistorized camera use.

This tube features half-heater-power, high light out put, high resolution and adaptable with conventional 70 degrees deflection yoke.

General:

Heater for Unipotential Cathode:

Voltage (AC or DC) 6.3 volts

Current 0.3 amp

Direct Interelectrode Capacitances; Approximate

Grid No. 1 to all other electrodes 6 $\mu\mu\text{f}$

Cathode to all other electrodes 5 $\mu\mu\text{f}$

Phosphor	P 4
Fluorescent color	white
Persistence	medium
Focusing Method	Electrostatic
Deflection Method	Electromagnetic
Deflection Angle (Approximate)	40 degrees
Electron Gun	Requires external single-field iontrap magnet
Overall Length	9 $\frac{1}{4}$ " $\pm$ $\frac{1}{4}$ "
Greatest Diameter	3" $\pm$ $\frac{1}{8}$ "
Minimum Useful Screen Diameter	2 $\frac{3}{4}$ "
Basing	12 BD
Base	JEDEC No. B 12-43

Maximum Ratings (Design-center Values):

Ultor Voltage	3000 max. volts DC
Ultor Input	6 max. watts
Grid No. 4 (Focusing electrode) Voltage	1500 max. volts DC
Grid No. 2 Voltage	410 max. volts DC
Grid No. 1 Voltage	
Negative-bias value	125 max. volts DC
Positive-bias value	0 max. volts DC
Positive-peak value	2 max. volts
Heater to Cathode Voltage	
Heater positive with respect to cathode	125 max. volts
Heater negative with respect to cathode	125 max. volts
Peak value during a warm-up period not exceed 15 second; heater negative	410 max. volts

Characteristics Range Values for Equipment Design:

For any ultor voltage (E_{C5}) between 2500 and 3000 volts	
Grid No. 4 voltage for focus with ultor current of 200 μ A	30 to 48% of E_{C5} volts
Grid No. 1 voltage for visual extinction	
of undeflected focused spot when circuit design utilizes	
grid No. 2 voltage (E_{C2}) at fixed value	11 to 26% of E_{C2} volts
Grid No. 4 current for any operating conditing	15 to 10 μ amp

Examples of Use of Design Ranges :

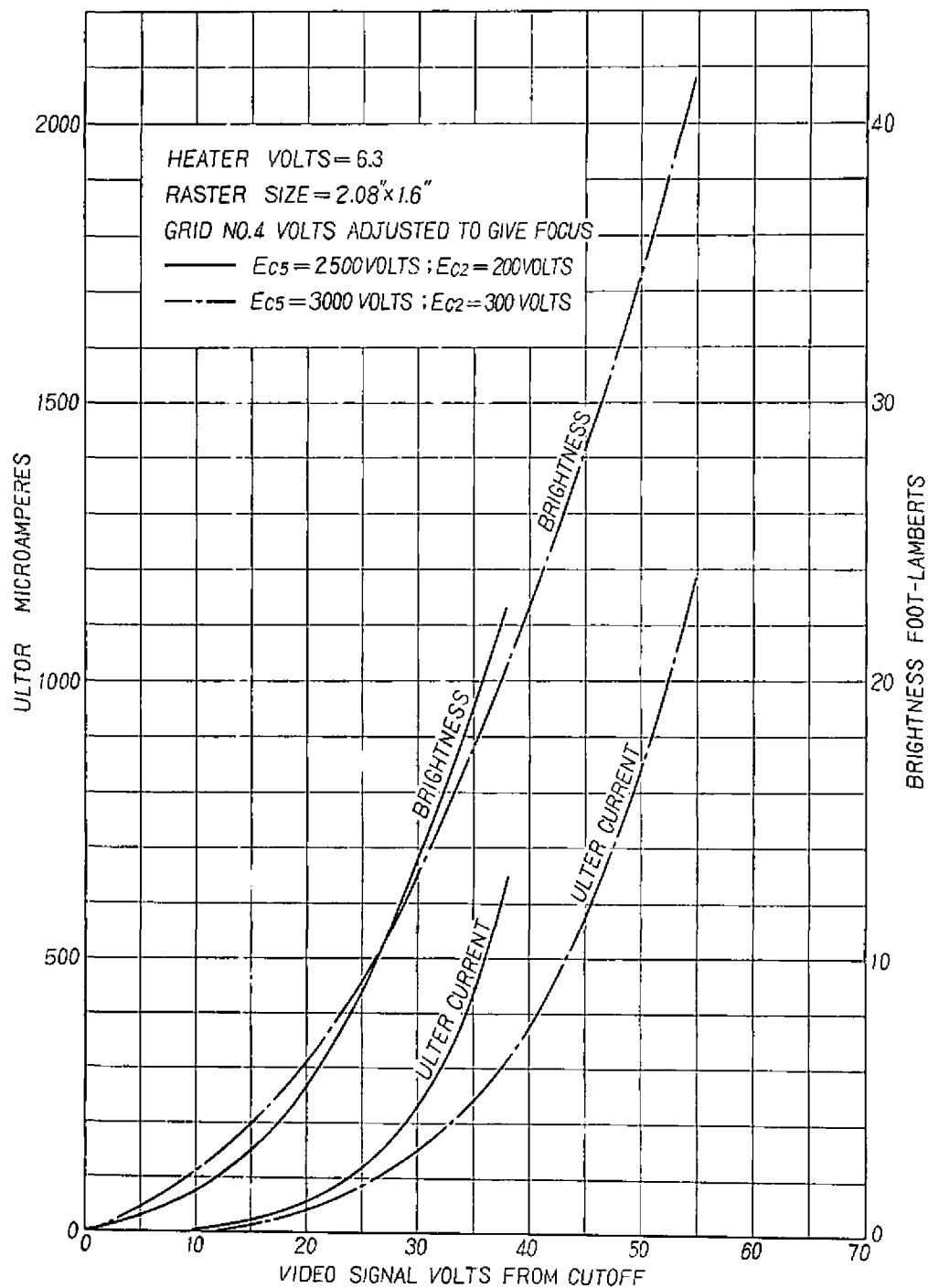
Ultor voltage	2500	3000	volts DC
Grid No. 4 voltage (Focusing electrode) (Note 1)	750~1200	900~1500	volts DC
Grid No. 2 voltage	200	300	volts DC
Grid No. 1 voltage (Note 2).....	-22~-51	-33~-77	volts
Field strength of iontrap magnet	12	14	gausses

Maximum Circuit Values :

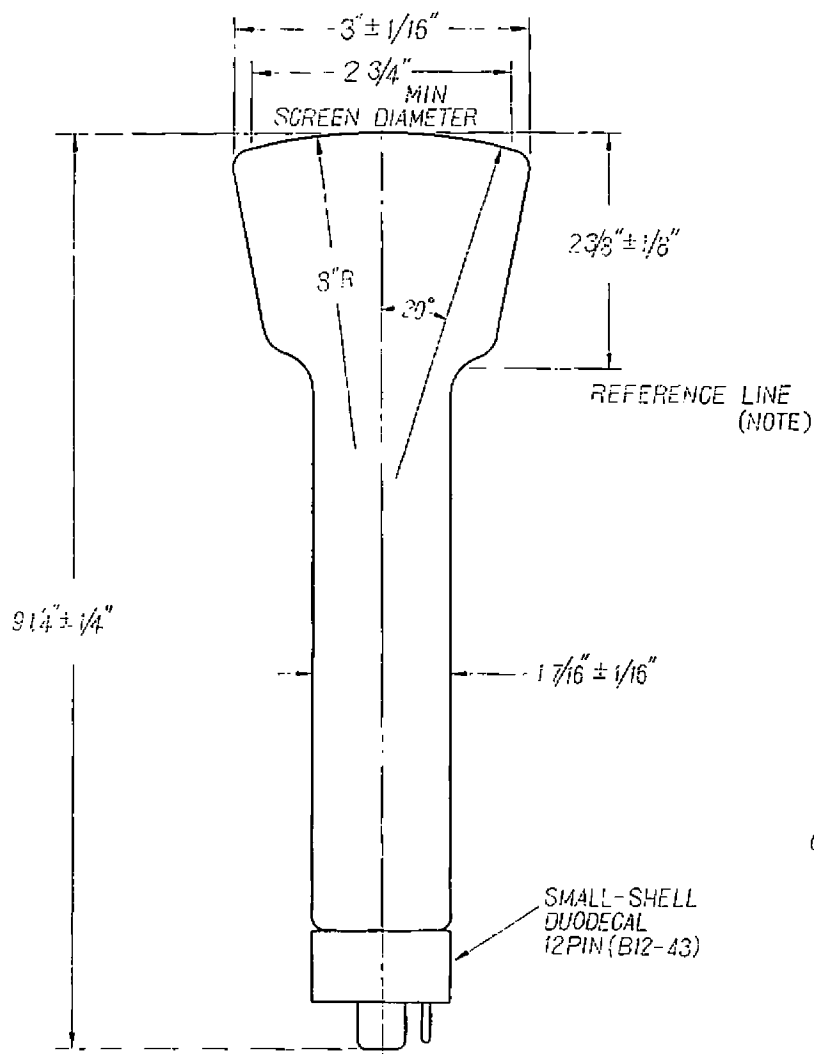
Grid No. 1 circuit resistance	1.5 max. megohm
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- NOTES: 1. With the combined grid No. 1 bias and signal voltage adjusted to give an anode current of 200 μ A in 2.08" $\times$ 1.6" picture size.
2. Visual extinction of undeflected focused spot.

3BJP4 AVERAGE CHARACTERISTICS

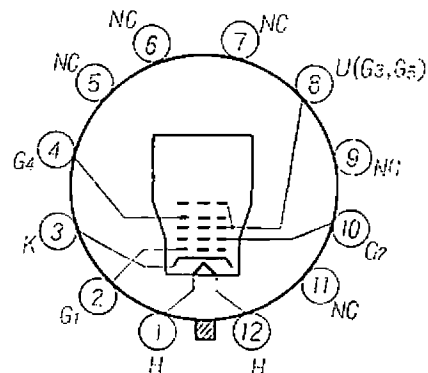


DIMENSIONAL OUTLINE



Note: Reference line is determined by position where hinged gauge 1.500" $\pm$ 0.03" - 0.000" and 2" long will rest on bulb cone.

BOTTOM VIEW OF BASE CONNECTIONS



PIN CONNECTIONS

- PIN 1- Heater
- PIN 2-Grid No. 1
- PIN 3- Cathode
- PIN 4-Grid No. 4
- PIN 5-NC
- PIN 6-NC
- PIN 7-NC
- PIN 8-Ultor (Grid No. 3, Grid No. 5 Collector)
- PIN 9- NC
- PIN 10- Grid No. 2
- PIN 11-NC
- PIN 12-Heater

The Toshiba logo is rendered in a classic, elegant script typeface. The letters are fluidly connected, with a prominent arch over the 'T' and 'o'. The 'h' and 'i' are closely joined, and the 'b' and 'a' also feature a continuous script style. The overall appearance is that of a formal, handwritten-style brand mark.

All inquiries as to the data should be addressed to Tokyo Shibaura Electric Co., Ltd., Lamp and Tube Manufacturing and Sales Division, 72 Horikowacho, Kawasaki, Kanagawa-ken, Japan.