TOKYO SHIBAURA ELECTRIC CO., LTD.

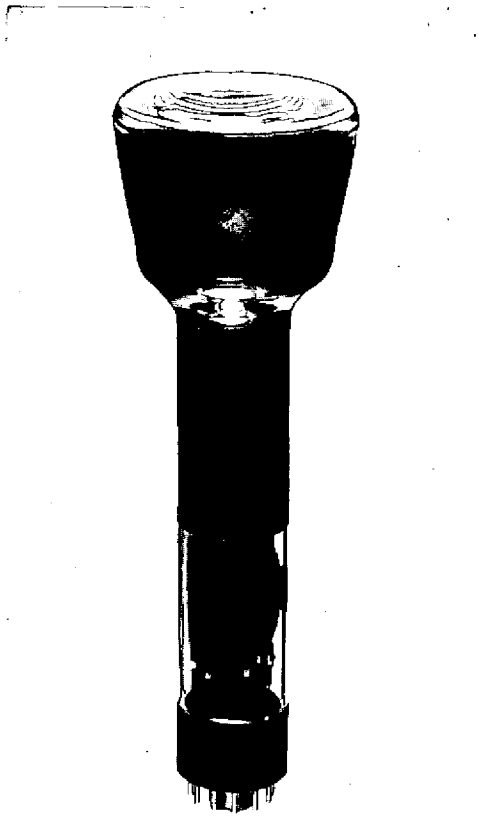
KAWASAKI JPAAN

Toshiba

EIA 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 μμf*
Cathode to all other electrodes	*5 μμf*

Printed in Japan

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	9¼" ± ¼"
Greatest Diameter	3" ± 1/16"
Minimum Useful Screen Diameter	2¾"
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 μA	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*

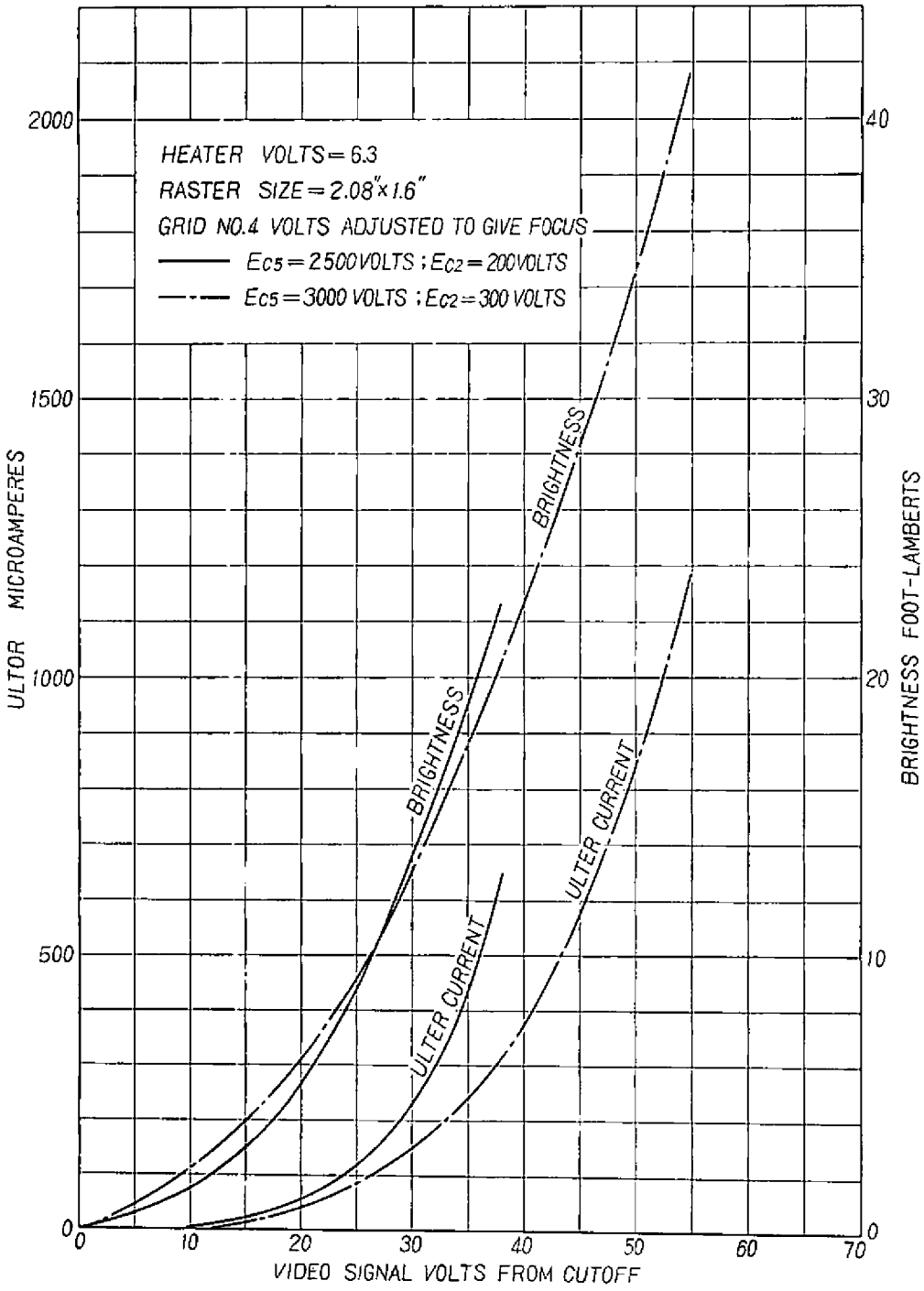
Maximum Circuit Values:

Grid No. 1 circuit resistance ..... *1.5 max. megohm*

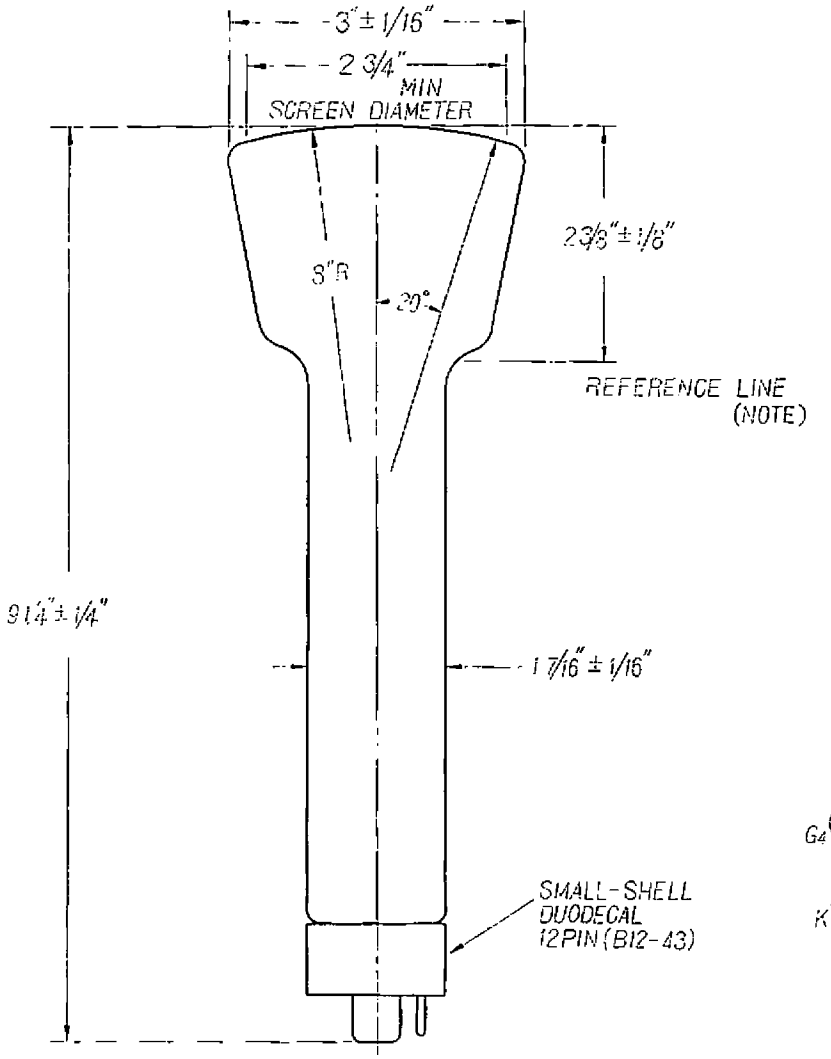
NOTES: 1. With the combined grid No. 1 bias and signal voltage adjusted to give an anode current of 200 μA in 2.08″ × 1.6″ picture size.

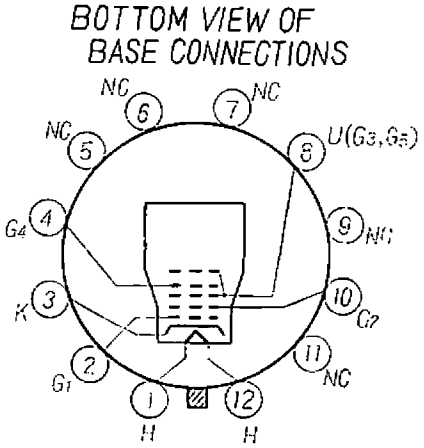
2. Visual extinction of undeflected focused spot.

3BJP4 AVERAGE CHARACTERISTICS



DIMENSIONAL OUTLINE





Note: Reference line is determined by position where hinged gauge 1.500"+0.03"−000" and 2" long will rest on bulb cone.

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

Toshiba

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