from JEDEC release #3803, July 9, 1962

DUMONT

CATHODE-RAY TUBE

TYPE 7BGP-

The Du Mont Type 7BGP- is a 7-inch, flat face, electrostatic focus and deflection cathode-ray tube with very high deflection sensitivities and full scan.

This tube features a linear post accelerator for maximum deflection uniformity and minimum pattern distortion. The extremely low deflection factors permit use of this tube in compact transistorized equipment.

GENERAL CHARACTERISTICS

Electrical Data

Focusing Method	Electrostatic	
Deflecting Method	Electrostatic	
Direct Interelectrode Capacitances, Approximate		
Cathode to all other electrodes	3.1	μμf
Grid No. 1 to all other electrodes	6.5	μμf
D1 to D2	2.4	μμf
D3 to D4	1.4	μμf
D1 to all other electrodes	5.4	μμf
D2 to all other electrodes	5.4	μμf
D3 to all other electrodes	3.5	μμf
D4 to all other electrodes	3.7	μμf

Optical Data

Phosphor Number	1	2	7	11
Fluorescence	Green	Blue-Green	Blue-White	Blue
Phosphorescence	-----	Green	Yellow	----
Persistence	Medium	Medium	Long	Short

Faceplate: Flat, clear

Mechanical Data

Overall Length	18 3/4 ± 1/4	Inches
Greatest Diameter of Bulb	7 ± 1/8	Inches
Minimum Useful Screen Diameter	6.0	Inches
Base	B14-38	

Allen B. Du Mont Laboratories, Inc.
Division of Fairchild Camera and Instrument Corp.
Clifton, New Jersey

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GENERAL CHARACTERISTICS (Mechanical Data) (Continued)

Basing	14AY	
Base Alignment:		
D1D2 trace aligns with Pin No. 5 and tube axis	± 10	Degrees
Positive voltage on D1 deflects beam approximately toward Pin No. 5		
Positive voltage on D3 deflects beam approximately toward Pin No. 1		
Angle between D3D4 and D1D2 traces	90 ± 1	Degrees
Bulb Contact Alignment:		
J1-22 cap aligns with D1D2 trace	± 10	Degrees
J1-22 cap aligns with Pin No. 5	± 10	Degrees
J1-22 cap on same side as Pin No. 5		

RATINGS (Design Maximum Values)

Heater Voltage	6.3	Volts
Heater Current at 6.3 Volts	0.6 ± 10%	Ampere
Post Accelerator Voltage	8,000	Max. Volts DC
Post Accelerator Resistance	200 to 500	Megohms
Accelerator Voltage	2,000	Max. Volts DC
Ratio Post Accelerator Voltage to Accelerator Voltage [1]	4.0	Max.
Accelerator Input	6	Max. Watts
Focusing Voltage	500	Max. Volts DC
Grid No. 1 Voltage		
Negative Bias Value	200	Max. Volts DC
Positive Bias Value	0	Max. Volts DC
Positive Peak Value	0	Max. Volts
Peak Heater-Cathode Voltage		
Heater negative with respect to cathode	180	Max. Volts
Heater positive with respect to cathode	180	Max. Volts
Peak Voltage between Accelerator and any Deflection Electrode	200	Max. Volts

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TYPICAL OPERATING CONDITIONS

Post Accelerator Voltage	2,000	4,000	Volts
Accelerator Voltage	1,000	1,000	Volts
Post Accelerator Current [1]	2 to 5	6 to 15	Microamperes
Focusing Voltage	100 to 300	100 to 300	Volts
Grid No. 1 Voltage [2]	-60 to -100	-60 to -100	Volts
Line Width "A" [3]	.030	.024	Inch Max.
Modulation [3]	45	45	Volts Max.
P1 Light Output [3]	3.0	8.0	Ft. L. Min.
Useful Scan:			
D1D2	Full Scan	5	Inches Min.
D3D4	Full Scan	5	Inches Min.
Deflection Factors:			
D1D2	15 to 21	20 to 27	Volts DC/Inch
D3D4	15 to 21	19 to 26	Volts DC/Inch
Focusing Current for any operating condition		-15 to +15	Microamperes
Spot Position (Undeflected) [4]		Within a 5/16-inch radius circle	

MAXIMUM CIRCUIT VALUES

Grid No. 1 Circuit Resistance	1.5	Max. Megohms
Resistance in any Deflecting-Electrode Circuit [5]	5	Max. Megohms

NOTES

1. Measured with the beam cut off. All readings of beam current shall be in addition to the reading obtained for post accelerator current.
2. Visual extinction of the undeflected, focused spot.
3. Measured in accordance with MIL-E-1 specifications at a beam current of 15 μA.
4. When the tube is operated at typical operating conditions, with Ec1 adjusted to avoid damage to the screen, with each of the deflecting electrodes connected to the accelerator, and with the tube shielded against external influences, the focused spot will fall within a 5/16-inch radius circle centered on the tube face.
5. It is recommended that the deflecting-electrode circuit resistances be approximately equal.

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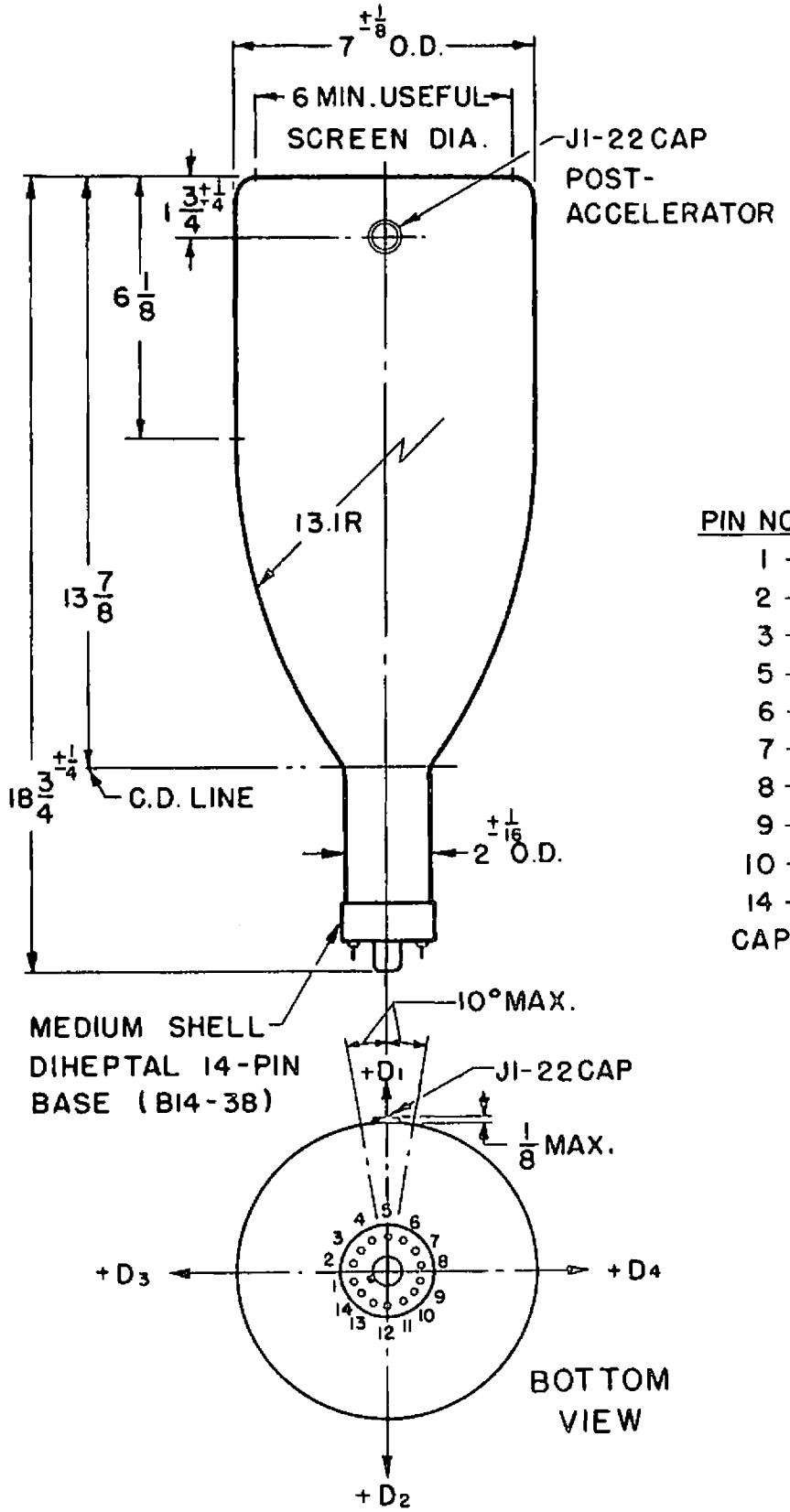

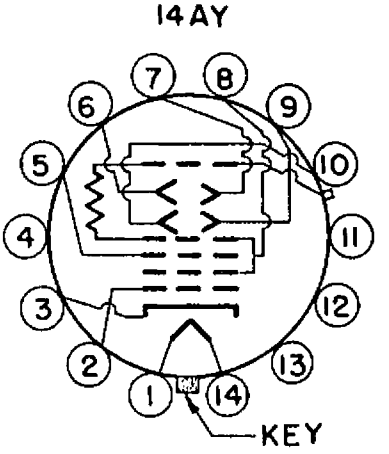

BOTTOM VIEW

PIN NO.	ELEMENT
1	HEATER
2	GRID NO.1
3	CATHODE
5	FOCUSING ELECTRODE
6	DEFLECTING ELECTRODE D_1
7	DEFLECTING ELECTRODE D_2
8	ACCELERATOR
9	DEFLECTING ELECTRODE D_4
10	DEFLECTING ELECTRODE D_3
14	HEATER
CAP	POST-ACCELERATOR

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