DUMONT

CATHODE-RAY TUBES

TYPE 7AJP-

The DuMont Type 7AJP- is a 7 inch diagonal, square face, magnetic focus and deflection cathode-ray tube. The use of this square type of face allows the maximum possible screen display area in relation to the bulb area. The Type 7AJP-, also, features an extended neck to accommodate more than one deflection coil. One of the suggested uses for this feature is to form letters or symbols with one deflection yoke while positioning them on the screen with the other yoke.

The Type 7AJP- is supplied with a metal backed screen to increase the light output and minimize the build-up of spurious charges on the screen by successive transients.

Screen types other than those listed below are available on order.

GENERAL CHARACTERISTICS

Electrical Data

Focusing Method	Magnetic	
Deflecting Method	Magnetic	
Deflection Angle, Approximate		
Horizontal	28	Degrees
Vertical	28	Degrees
Diagonal	40	Degrees
Direct Interelectrode Capacitances, Approx.		
Cathode to all	5	µµf
Grid No. 1 to all	7	µµf

Optical Data

Phosphor Number	1	2	7	11	14	19 (Note 1)	25 (Note 2)
Fluorescent Color	Green	Bl-Grn.	Bl-Wh.	Blue	Purple	Orange	Orange
Phosphorescent Color	Green	Green	Yellow	Blue	Orange	Orange	Orange
Persistence	Med.	Long	Long	Short	Med. Long	Long	Long
Faceplate							Clear

Mechanical Data

Overall Length	19 ± 3/8	Inches
Greatest Dimensions of Bulb		
Diagonal	6 15/16 ± 1/16	Inches
Width	5 1/2 + 1/32 -1/16	Inches
Height	5 1/2 + 1/32 -1/16	Inches

from JETEC release #1866, March 11, 1957

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Passaic, New Jersey

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Mechanical Data (Cont'd)

Minimum Useful Screen Dimensions (Note 3)		
Diagonal	6	Inches
Width	4.5	Inches
Height	4.5	Inches
Neck Length	11	Inches
Bulb Contact	J1-21	
Base	B6-63	
Basing	12D	
Bulb Contact Alignment		
J1-21 contact aligns with Pin position No. 3	± 30	Degrees
J1-21 contact located on tube center line	± 1/4	Inch

RATINGS (Design Center Values)

Heater Voltage	6.3	Volts
Heater Current at 6.3 Volts	0.6 ± 10%	Ampere
Accelerator Voltage	16000	Max. Volts DC
Accelerator Input (Notes 1 & 2)	8	Max. Watts
Grid No. 2 Voltage	700	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		
During warm-up period not to exceed 15 seconds	410	Max. Volts
After Equipment warm-up period	180	Max. Volts
Heater positive with respect to cathode	180	Max. Volts

TYPICAL OPERATING CONDITIONS

Accelerator Voltage	14000	Volts DC
Grid No. 2 Voltage	550	Volts DC
Grid No. 1 Voltage (Note 4)	-75 to -150	Volts DC
Focusing Coil Current (Notes 5 & 6)	77	Approx. mA. DC
Modulation (Notes 6 & 7)	40	Max. Volts DC
Line Width "A" (Notes 6 & 7)	.008	Max. Inches
Spot Position (Note 8)	12	Max. mm

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MAXIMUM CIRCUIT VALUES

Grid No. 1 Circuit Resistance	1.5	Max. Megohms

NOTES

1. The P19 screen can be permanently damaged if the current density is permitted to rise too high. To prevent burning, use minimum current densities with this screen.

2. To prevent burning the P25 screen, the power input to the screen should not be allowed to rise more than 5×10^{-3} watts/cm^2.

3. Following bulb contour.

4. Visual extinction of undeflected focused spot.

5. For JETEC Focus Coil No. 109 or equivalent. Distance from reference line to center of air gap on focus coil shall be 3 3/4 inches. For other locations of the air gap different values of coil current and line width will be obtained.

6. For an Ib2 of 100 μADC measured in accordance with MIL-E-1 specifications.

7. Because of their tendency to burn, the P19 and P25 screens should always be used with much lower beam currents and therefore the modulation will be lower and finer spot size will be obtained with these screens.

8. The center of the undeflected, unfocused spot will fall within a circle of 12 millimeters radius concentric with the tube face.

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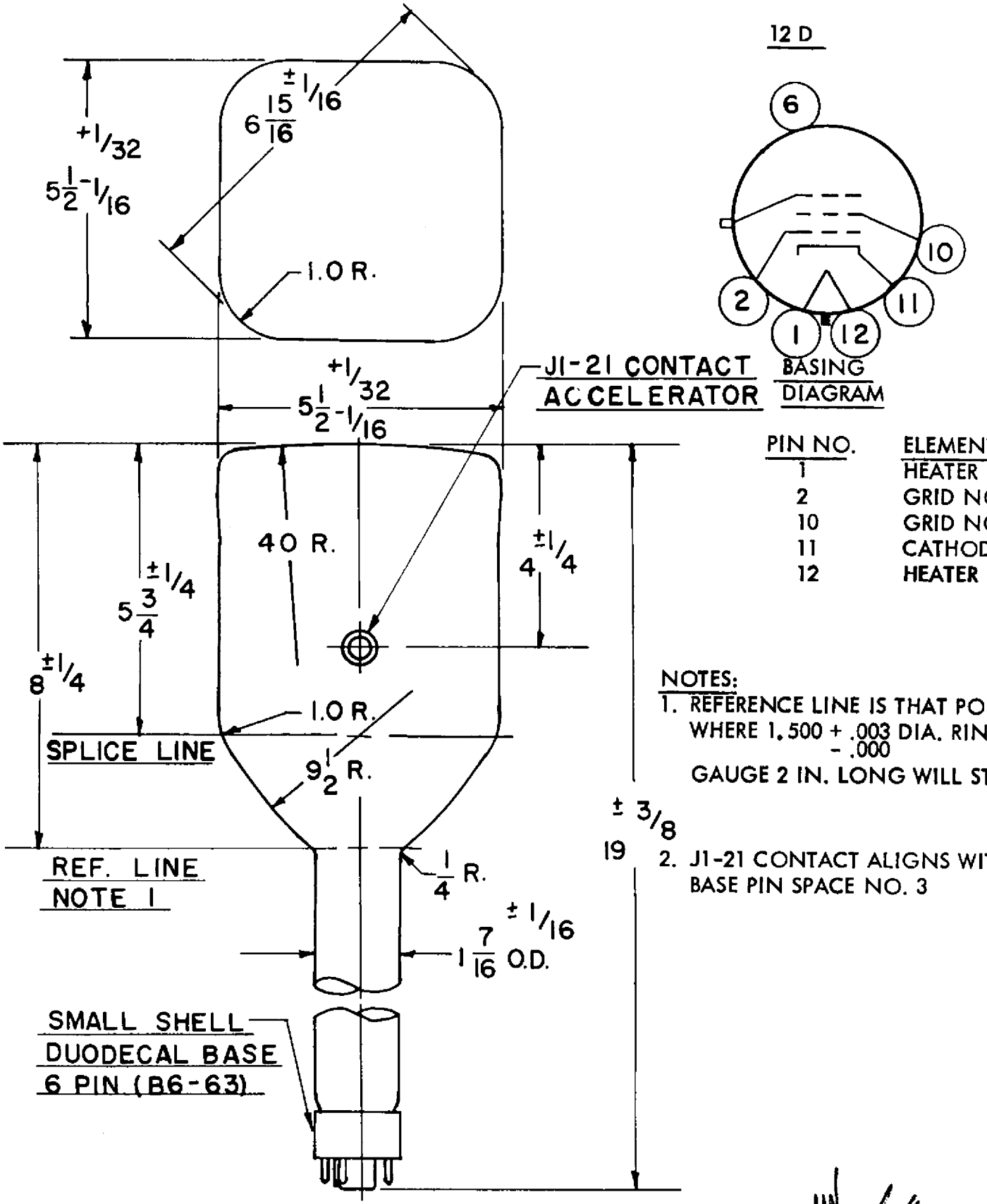

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BASING DIAGRAM

PIN NO.	ELEMENT
1	HEATER
2	GRID NO. 1
10	GRID NO. 2
11	CATHODE
12	HEATER

NOTES:

1. REFERENCE LINE IS THAT POINT WHERE 1.500 +.003 -.000 DIA. RING GAUGE 2 IN. LONG WILL STOP.
2. J1-21 CONTACT ALIGNS WITH BASE PIN SPACE NO. 3

Allen B. Du Mont Laboratories, Inc.
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TD 5021A

N. VACCA 2-8-57

FORM 6097 M1 10-56-6H