

DUMONT
CATHODE-RAY TUBE
TYPE 5EBP-

The Du Mont Type 5EBP- is a 5-inch diameter, single beam, low voltage electrostatic focus, magnetic deflection cathode-ray tube. The bulb is an all-glass blank only 8 1/8 inches long, having a 7/8-inch diameter neck offset for sector scanning.

The Type 5EBP- is particularly suitable for miniaturization techniques employed in airborne marine and portable radar receivers.

The screen is aluminized to provide high brightness and for stabilization of screen potential.

GENERAL CHARACTERISTICS

Electrical Data

Focusing Method	Electrostatic
Deflecting Method	Magnetic
Direct Interelectrode Capacitances, Approximate	
Cathode to all other electrodes	3.2 μf
Grid #1 to all other electrodes	7.9 μf

Optical Data

Phosphor Number	7
Fluorescent Color	Blue
Phosphorescent Color	Yellow
Persistence	Long
Faceplate	Clear

Mechanical Data

Overall Length (Seated Height)	8 1/8 ⁺⁰ / _{-1/8}	Inches
Greatest Diameter of Bulb	4.950 $\pm$ 1/16	Inches
Minimum Useful Screen Diameter	4 1/4	Inches
Bulb Contact	J1-22	
Base *	E9-37	
Bulb Contact Alignment:		
Plane of J1-22 cap passes halfway between Pins		
No. 1 and No. 9	$\pm$ 10	Degrees
J1-22 cap on same side as Pins No. 1 and No. 9		

* A socket with a center opening to clear the tubulation should be used. Care should be taken in handling the tube to avoid damaging the exposed tubulation and bending the base pins.

CATHODE-RAY TUBETYPE 5EBP-RATINGS (DESIGN CENTER VALUES) ¹

Heater Voltage	6.3	Volts
Heater Current at 6.3 Volts	0.3 ± 5%	Ampere
Accelerator Voltage	11,000	Max. Volts DC
Accelerator Input	6	Max. Watts
Focusing Electrode Voltage	-500 to +1,000	Max. Volts DC
Grid #2 Voltage	500	Max. Volts DC
Cathode Voltage		
Negative Bias Value	0	Max. Volts DC
Negative Peak Value	0	Max. Volts
Positive Bias Value	150	Max. Volts DC
Positive Peak Value	180	Max. Volts
Peak Heater-Cathode Voltage		
Heater Negative with respect to cathode	180	Max. Volts
Heater Positive with respect to cathode	180	Max. Volts

TYPICAL OPERATING CONDITIONS ¹

Accelerator Voltage	8,000	Volts DC
Focusing Electrode Voltage ²	-105 to +250	Volts DC
Grid #2 Voltage	250	Volts DC
Cathode Voltage ³	40 to 85	Volts DC
Modulation ⁴	-20 to -40	Volts
Line Width A ⁴	0.014	Inch Max.
Focusing Electrode Current for any operating condition	-15 to +15	Microamperes

MAXIMUM CIRCUIT VALUES

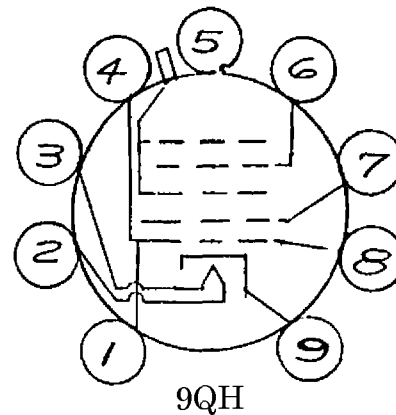
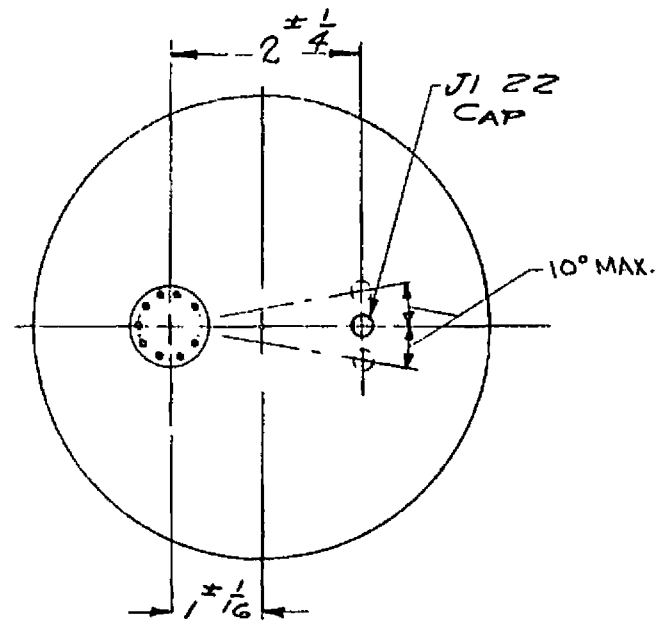
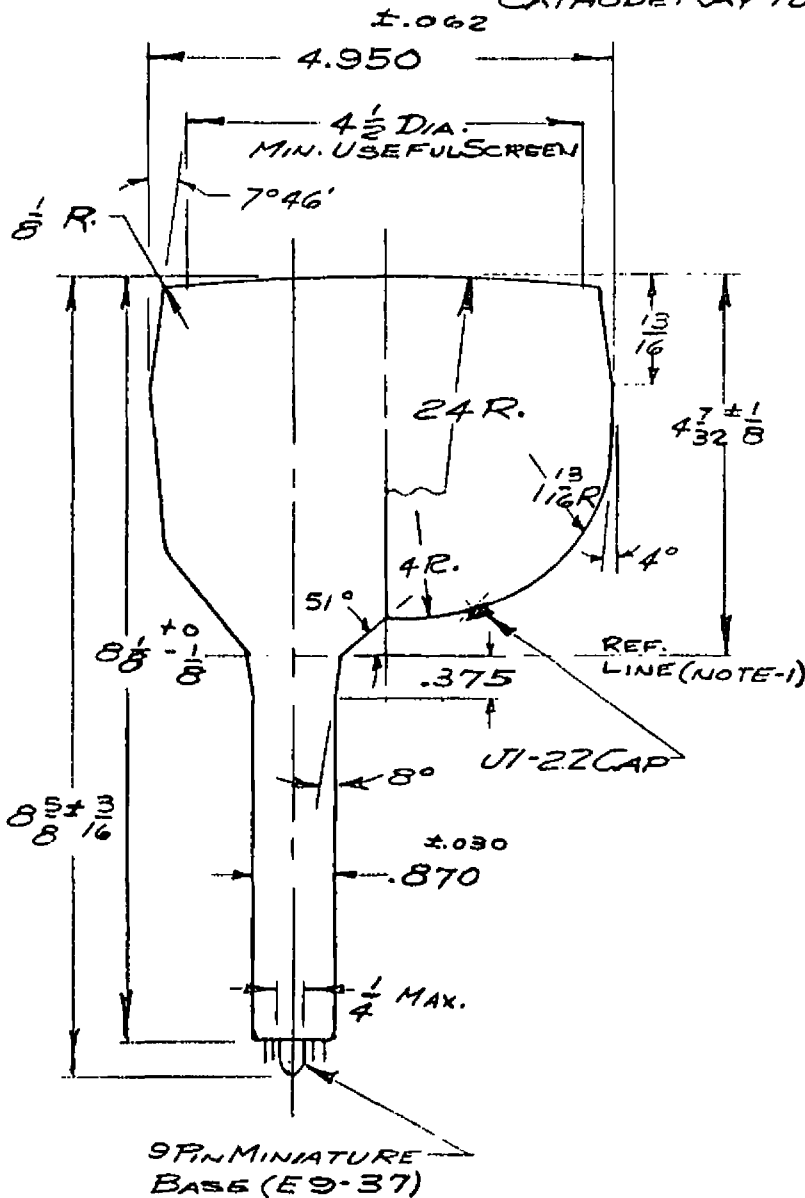
Grid #1 Circuit Resistance	1.5	Max. Megohms
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NOTES

1. Voltage values measured with respect to Grid #1.
2. With the cathode voltage adjusted to give an accelerator current of 100 microamperes on a 2 x 2-inch raster pattern.
3. Visual extinction of undeflected focused spot.
4. Measured in accordance with MIL-E-1 specifications with an accelerator current of 100 microamperes.

DUMONT

5EBP- CATHODE RAY TUBE



BOTTOM VIEW OF BASE
PIN No. ELEMENT

- | | |
|-----------------|--------------------|
| 1 | GRID No. 1 |
| 2 | HEATER |
| 3 | HEATER |
| 4 | GRID No. 1 |
| 6 | FOCUSING ELECTRODE |
| 7 | GRID No. 2 |
| 8 | GRID No. 1 |
| 9 | CATHODE |
| CAP ACCELERATOR | |

NOTES:

1- REFERENCE LINE DETERMINED BY POINT WHERE RING GAUGE 1.000 ±.003" I.D., 1.5" LONG WILL STOP.

2 PLANE OF J1-22 CAP ALIGNS ±10° MIDWAY BETWEEN PINS No. 1 & No. 9, & ON THE SAME SIDE