



10BP4-A

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ET-T1125
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CATHODE-RAY TUBE

9 1/8- BY 6 3/4-INCH PICTURE SIZE

10-INCH ROUND, GLASS
FOCUS—MAGNETIC
DEFLECTION—MAGNETIC

50-DEGREE DEFLECTION ANGLE
FACEPLATE—SPHERICAL, GRAY
EXTERNAL CONDUCTIVE COATING

DESCRIPTION AND RATING

The 10BP4-A is a magnetic-focus and deflection, direct-view picture tube for television applications. It provides a 9 1/8- by 6 3/4-inch picture. Features of this tube are an electron gun designed to be used with an external ion-trap magnet for the prevention of ion-spot blemish, and a high-quality gray faceplate which increases picture contrast and detail under high-ambient-light conditions. An external conductive coating serves as a filter capacitor when grounded.

GENERAL

ELECTRICAL

Heater Voltage	6.3	Volts
Heater Current	0.6 ± 10%	Amperes
Focusing Method—Magnetic		
Deflecting Method—Magnetic		
Deflection Angle, approximate	50	Degrees
Direct Interelectrode Capacitances, approximate		
Cathode to All Other Electrodes	5	μf
Grid-No. 1 to All Other Electrodes	6	μf
External Conductive Coating to Anode		
Maximum	2500	μf
Minimum	500	μf

OPTICAL

Phosphor Number—P4, Sulfide Type		
Fluorescent Color—White		
Phosphorescent Color—White		
Persistence—Short		
Faceplate—Gray		
Light Transmission at Center, approximate	74	Percent



MECHANICAL

Over-all Length	17 $\frac{5}{8}$ $\pm$ $\frac{3}{8}$	Inches
Greatest Bulb Diameter	10 $\frac{1}{2}$ $\pm$ $\frac{1}{16}$	Inches
Minimum Useful Screen Diameter	9 $\frac{1}{8}$	Inches
Neck Length	8 $\frac{3}{16}$	Inches

Bulb Number, ASA Designation—J84C

Bulb Contact—Recessed Small-cavity Cap, JETEC No. J1-21

Base—Small-shell Duodecal 5-Pin, JETEC No. B5-57

Basing, JETEC Designation—12N

Bulb Contact Alignment

Anode Contact Aligns with Pin No. 3 Position $\pm$ 30 Degrees

Mounting Position—Any

Net Weight, approximate 10 $\frac{1}{2}$ Pounds

MAXIMUM RATINGS**DESIGN-CENTER VALUES***

Anode Voltage†	12,000 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

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 140 Max Volts

Heater Positive with Respect to Cathode 140 Max Volts

TYPICAL OPERATING CONDITIONS

Anode Voltage§	11,000	Volts DC
Grid-No. 2 Voltage	300	Volts DC
Grid-No. 1 Voltage¶	—28 to —72	Volts DC
Focusing-Coil Current▲, approximate	100	Milliamperes DC
Ion-Trap Field Intensity◆, approximate	33	Gausses

MAXIMUM CIRCUIT VALUES

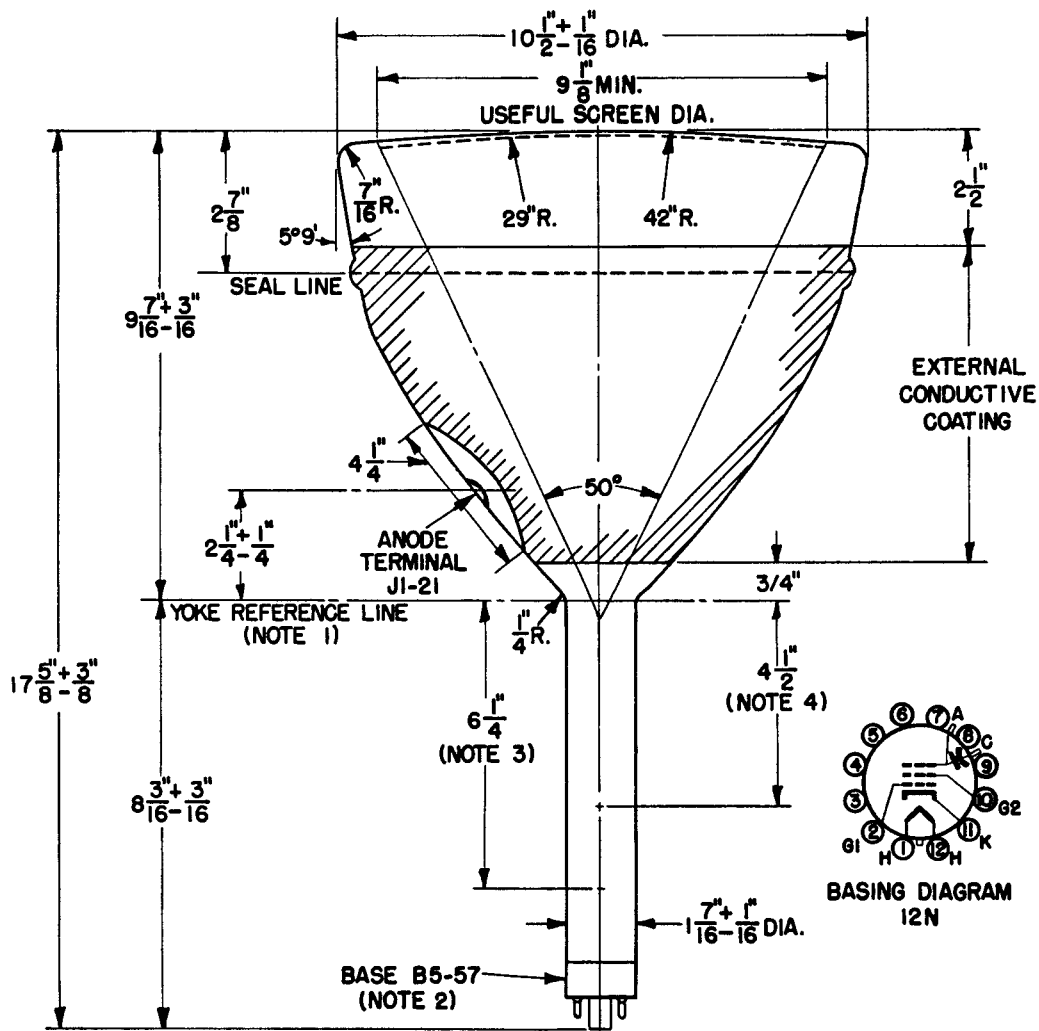
Grid-No. 1 Circuit Resistance 1.5 Max Megohms

* The maximum ratings provide a ten-percent safety factor in accordance with the standard design-center system of rating cathode-ray tubes. The tube will withstand the combined effects of variations in line voltage and components provided the maximum design-center values are not exceeded by more than ten percent.

† Anode and grid-No. 3 which are connected together within the tube are referred to herein as anode.

‡ Cathode should be returned to one side or to the midtap of the heater transformer winding.

◆ Double-field ion-trap magnet adjusted to optimum position.



1. REFERENCE LINE IS DETERMINED BY THE PLANE OF THE UPPER EDGE OF THE REFERENCE-LINE GAGE (RETMA NO. 112) WHEN THE GAGE IS RESTING ON THE CONE.
2. ANODE TERMINAL ALIGNS WITH PIN-NO. 3 POSITION ± 30 DEGREES.
3. APPROXIMATE POSITION OF ION-TRAP MAGNET.
4. RECOMMENDED POSITION FOR CENTER OF FOCUSING FIELD.