



12KP4-A

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ET-T1126
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CATHODE-RAY TUBE

12-INCH ROUND, GLASS
FOCUS—MAGNETIC
DEFLECTION—MAGNETIC
54-DEGREE DEFLECTION ANGLE

11¼- BY 8½-INCH PICTURE SIZE
FACEPLATE—SPHERICAL, GRAY
ALUMINIZED SCREEN
EXTERNAL CONDUCTIVE COATING

DESCRIPTION AND RATING

The 12KP4-A is a magnetic-focus and deflection, direct-view all-glass picture tube which provides a 11¼- by 8½-inch picture with rounded sides for television applications. The electron gun does not require an external ion-trap magnet. Other features of this tube include a high-quality gray faceplate which increases picture contrast and detail under high-ambient-light conditions and a reflective aluminized screen to increase light output. 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	54	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	66	Percent

GENERAL  **ELECTRIC**

MECHANICAL

Over-all Length	17 ⁵ / ₈ ± ³ / ₈	Inches
Greatest Bulb Diameter	12 ⁷ / ₁₆ ± ¹ / ₈	Inches
Minimum Useful Screen Diameter	11 ¹ / ₄	Inches
Neck Length	7 ¹ / ₈	Inches

Bulb Number, ASA Designation—J99 ¹/₂A1

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 ±30 Degrees

Mounting Position—Any

Net Weight, approximate 11 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	250	Volts DC
Grid-No. 1 Voltageπ	—22 to —58	Volts DC
Focusing Coil Current▲, approximate	135	Milliamperes DC

MAXIMUM CIRCUIT VALUES

Grid-No. 1 Circuit Resistance	1.5 Max	Megohms
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* 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.

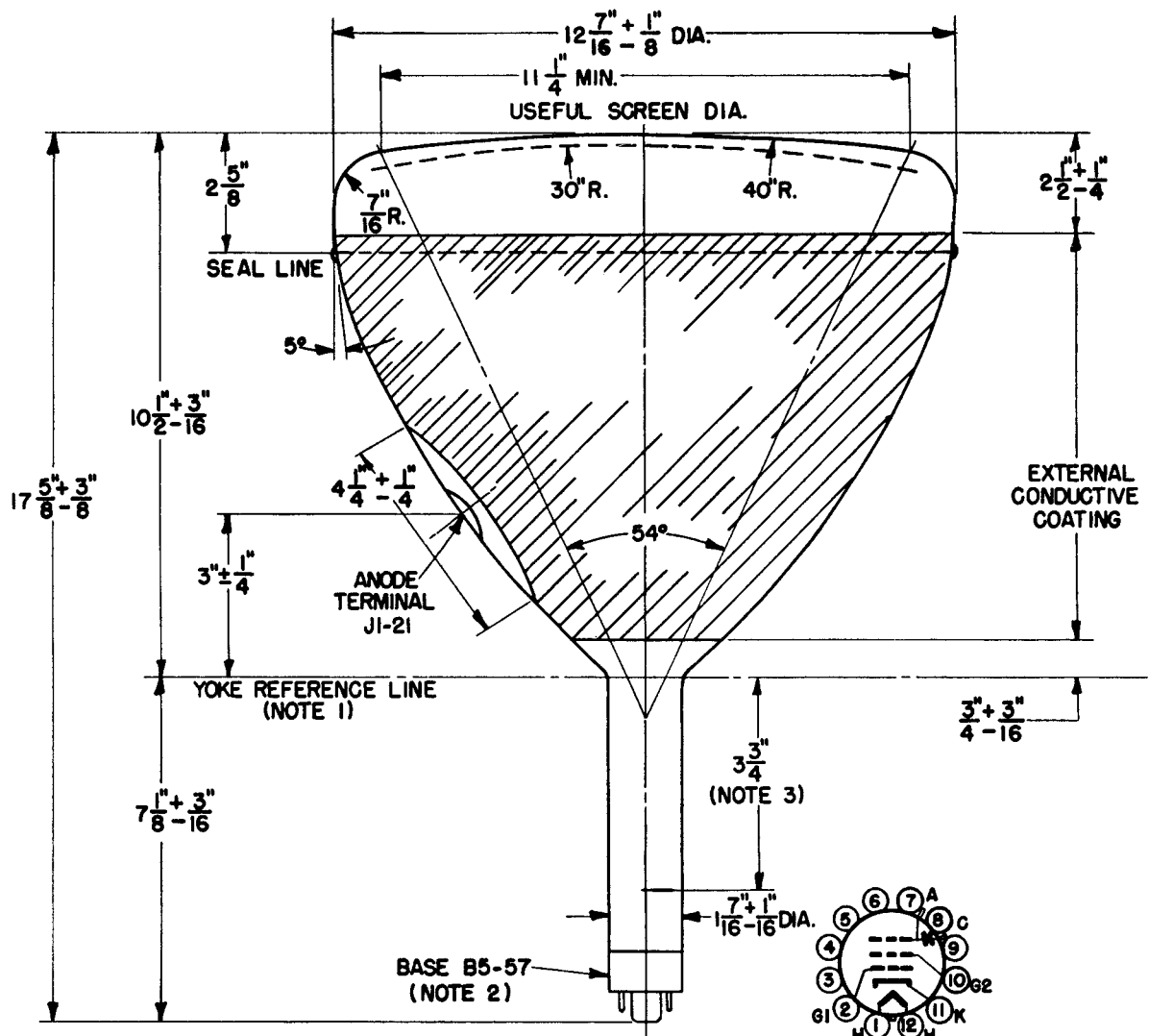
† Anode and grid-No. 3 which are connected together within the tube are referred to herein as anode.

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

§ Brightness and focus quality decrease with decreasing anode voltage. In general, the anode voltage should not be less than 9000 volts.

π For visual extinction of focused raster.

▲ For JETEC focusing coil No. 106 with distance from the yoke-reference-line to center-of-air-gap equal to $3\frac{1}{4}$ inches.



NOTES:

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. RECOMMENDED POSITION FOR CENTER OF FOCUSING FIELD.