

12BNP4A

Picture Tube

PAN-O-PLY TYPE
NO ION-TRAP MAGNET REQUIRED

LOW-VOLTAGE ELECTROSTATIC FOCUS
110° MAGNETIC DEFLECTION

Direct Interelectrode Capacitances

Cathode to all other electrodes	5	pF
Grid No.1 to all other electrodes	6	pF
External conductive coating to anode ^a	550 min - 850 max	pF
Heater Current at 6.3 V	450 ± 20	mA
Heater Warm-up Time (Average)	11	s
Electron Gun.	Type Requiring No Ion-Trap Magnet	

OPTICAL

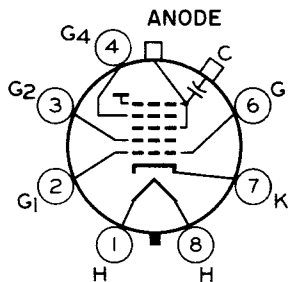
Phosphor.	P4—Sulfide Type, Aluminized
For curves, see front of this section	
Faceplate	Filterglass
Light transmission at center (Approx.).	49%

MECHANICAL

Weight (Approx.).	5 lb
Overall Length.	9.348 ± .250 in
Neck Length	4.375 ± .125 in
Projected Area of Screen.	.74 sq in
External Conductive Coating	

Type (see CRT OUTLINES 1 at front of this section)	Regular-Band
Contact area for grounding.	Near Reference Line
Cap	Recessed Small Cavity (JEDEC No. J1-21)
Base.	Small-Button Neoeightar 7-Pin, Arrangement 1, (JEDEC No. B7-208)
Basing Designation for BOTTOM VIEW.	8HR

Pin 1—Heater
Pin 2—Grid No.1
Pin 3—Grid No.2
Pin 4—Grid No.4
Pin 6—Grid No.1
Pin 7—Cathode
Pin 8—Heater



Cap—Anode
(Grid No.3,
Grid No.5,
Screen,
Collector)
C—External
Conductive
Coating

MAXIMUM AND MINIMUM RATINGS, DESIGN-MAXIMUM VALUES

Voltages are positive with respect to cathode

Anode Voltage	9000 min - 15000 max	V
Grid-No.4 Voltage		
Positive value.	1100 max	V
Negative value.	550 max	V
Grid-No.2 Voltage	125 min - 550 max	V
Grid-No.1 Voltage		
Negative peak value	220 max	V
Negative bias value	155 max	V
Positive bias value	0 max	V
Positive peak value	2 max	V



RADIO CORPORATION OF AMERICA
Electronic Components and Devices
Harrison, N. J.

DATA
9-65

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Heater Voltage. 5.7 min - 6.9 max V

Peak Heater-Cathode Voltage

Heater negative with respect to cathode:
During equipment warm-up period ≤ 15 sec. 450 max V
After equipment warm-up period . . . 300 max V
Heater positive with respect to cathode:
Combined AC & DC voltage. 200 max V
DC component. 100 max V

TYPICAL OPERATING CONDITIONS FOR CATHODE-DRIVE SERVICE

Voltages are positive with respect to grid No.1

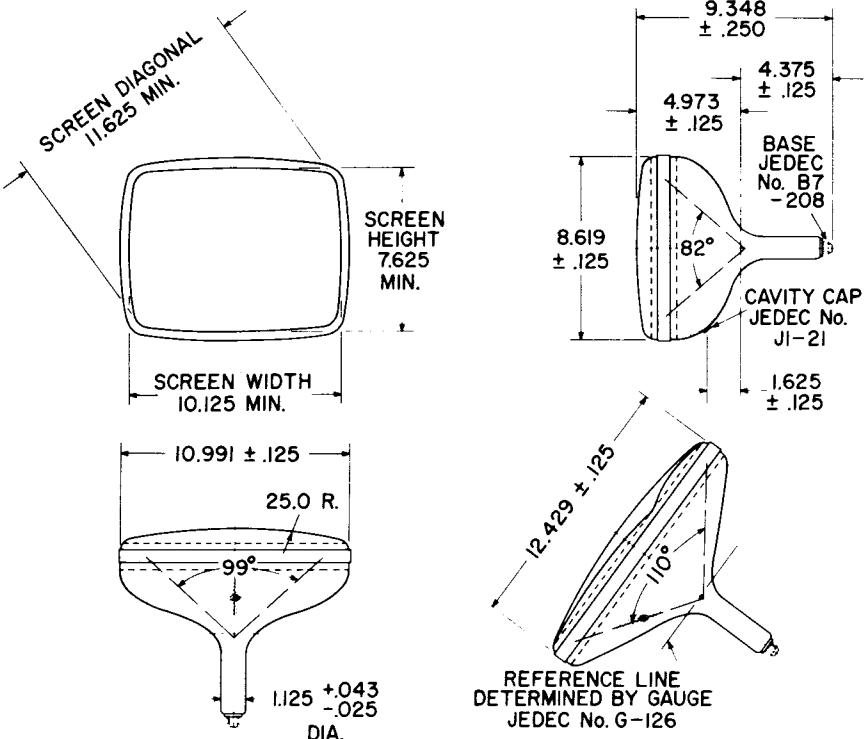
Anode Voltage 13000 V
Grid-No.4 Voltage^b. 100 V
Grid-No.2 Voltage 140 V
Cathode Voltage 22 to 42 V
For visual extinction of focused raster
Field Strength. 0 to 12 G
Of required adjustable centering magnet

MAXIMUM CIRCUIT VALUE

Grid-No.1 Circuit Resistance. 1.5 max M Ω

^a Includes implosion protection hardware.
^b The grid-No.4 voltage required for optimum focus of any individual tube will have a value anywhere between -100 and +300 volts with the combined cathode voltage and video-signal voltage adjusted to give an anode current of 75 microamperes on a 6-3/4-inch by 9-inch pattern from an RCA-2F21 monoscope, or equivalent.

DIMENSIONAL OUTLINE (BULB J99C/E)



92CL-13275

DIMENSIONS IN INCHES