

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

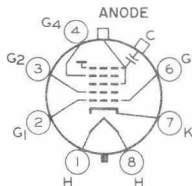
Phosphor	P4—Sulfide Type, Aluminized
For curves, see front of this section	
Faceplate	Filterglass
Light transmission at center (Approx.)	49%

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

12BNP4A

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

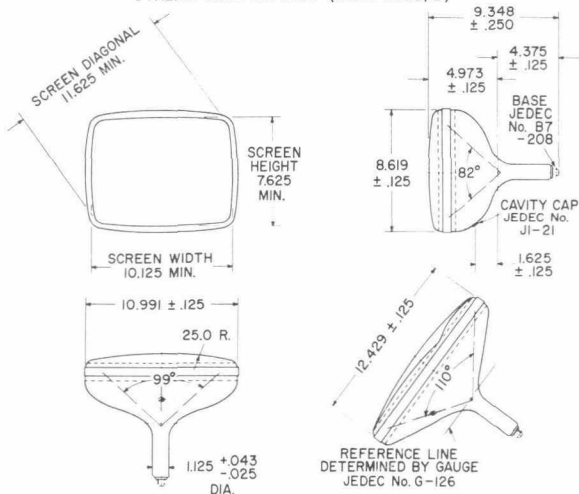
MAXIMUM CIRCUIT VALUE

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

DATA

RADIO CORPORATION OF AMERICA
 Electronic Components and Devices

Harrison, N. J.

