

Picture Tube

PAN-O-PLY—INTEGRAL IMPLOSION PROTECTION

(Provided by Formed Rim and Welded Tension Bands Around Periphery of Tube Panel)—No Separate Safety-Glass or Integral Protective Window Required)

LOW-VOLTAGE ELECTROSTATIC FOCUS **114° MAGNETIC DEFLECTION**

ELECTRICAL

Direct Interelectrode Capacitances

Cathode to all other electrodes . . .	5	pF
Grid No.1 to all other electrodes. . .	6	pF
External conductive coating to anode. .	1700 min—2500 max	pF
Heater Current at 6.3 volts	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 (Approx.) 42%

MECHANICAL

Weight (Approx.). 28 lb

Overall Length. 14.531 ± 0.281 in

Neck Length 5.125 ± .125 in

Projected Area of Screen. 282 sq in

External Conductive Coating^a

Type. Modified-Band

Contact area for grounding. Near Reference Line

For Additional Information on Coatings and Dimensions

See *Picture-Tube Dimensional-Outlines* and *Bulb J187L* sheets at front of this section

Cap Recessed Small Cavity (JEDEC No. J1-21)

Base. Small-Button Neoeightar 7-Pin, Arrangement 1, (JEDEC No. B7-208)

TERMINAL DIAGRAM (Bottom View)

Pin 1—Heater

Pin 2—Grid No.1

Pin 3—Grid No.2

Pin 4—Grid No.4

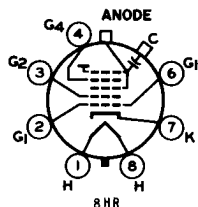
Pin 6—Grid No.1

Pin 7—Cathode

Pin 8—Heater

Cap—Anode (Grid No.3,
Grid No.5, Screen,
Collector)

C—External Conductive
Coating



— Indicates a change.



MAXIMUM AND MINIMUM RATINGS, DESIGN-MAXIMUM VALUES

Unless otherwise specified, voltage values are positive with respect to cathode

Anode Voltage.	11000 min—23000 max	V
Grid-No.4 (Focusing) Voltage		
Positive value	1100 max	V
Negative value	550 max	V
Grid-No.2 Voltage.	200 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
Heater Voltage	5.7 min—6.9 max	V
Peak Heater-Cathode Voltage		
Heater negative with respect to cathode:		
During equipment warm-up period not exceeding 15 seconds.	450 max	V
After equipment warm-up period	300 max	V
Heater positive with respect to cathode:		
Combined AC and DC voltage	200 max	V
DC component	100 max	V

TYPICAL OPERATING CONDITIONS FOR CATHODE-DRIVE SERVICE

Unless otherwise specified, voltage values are positive with respect to grid No.1

Anode Voltage	18000	V
Grid-No.4 Voltage ^b	200	V
Grid-No.2 Voltage.	300	V
Cathode Voltage for visual extinction of focused raster.	28 to 62	V
Field Strength of required adjustable centering magnet.	0 to 12	G

MAXIMUM CIRCUIT VALUE

Grid-No.1 Circuit Resistance	1.5 max	MΩ
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^a External conductive coating and implosion protection hardware must be grounded.

^b The grid-No.4 voltage required for optimum focus of any individual tube will have a value anywhere between 0 and +400 volts with the combined grid-No.1 and video-signal-voltage adjusted to give a 200-microampere anode current.

For X-radiation shielding considerations, see sheet
X-RADIATION PRECAUTIONS FOR CATHODE-RAY TUBES
 at front of this section



Picture Tube

PAN-0-PLY — INTEGRAL IMPLOSION PROTECTION

(Provided by Formed Rim and Welded Tension Bands Around Periphery of Tube Panel — No Separate Safety-Glass or Integral Protective Window Required)

RECTANGULAR GLASS TYPE

ALUMINIZED SCREEN

LOW-VOLTAGE ELECTROSTATIC FOCUS

114° MAGNETIC DEFLECTION

NO ION-TRAP MAGNET REQUIRED

Electrical:

Direct Interelectrode Capacitances:

Cathode to all other electrodes.	5	pf
Grid No.1 to all other electrodes	6	pf
External conductive coating to anode	{ 2500 max. 1700 min.	pf

Heater Current at 6.3 volts 450 ± 20 ma

Heater Warm-Up Time (Average) 11 seconds

Electron Gun Type Requiring No Ion-Trap Magnet

Optical:

Phosphor (For curves, see front of this section) . . P4—Sulfide Type, Aluminized

Faceplate. Filterglass

Light Transmission (Approx.) 42%

Mechanical:

Weight (Approx.) 28 lbs

Overall Length 14.531" ± 0.281"

Neck Length. 5.125" ± .125"

Projected Area of Screen 282 sq. in.

External Conductive Coating:

Type Regular-Band

Contact area for grounding. Near Reference Line

For Additional Information on Coatings and Dimensions:

See *Picture-Tube Dimensional-Outlines and Bulb J187L sheets* at front of this section

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

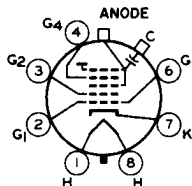
Pin 6—Grid No.1

Pin 7—Cathode

Pin 8—Heater

Cap—Anode (Grid No.3,
Grid No.5, Screen,
Collector)

C—External Conductive
Coating



23EQP4

Maximum and Minimum Ratings, Design-Maximum Values:

Unless otherwise specified, voltage values are positive with respect to cathode

Anode Voltage.	{ 23000 max. 11000 min.	volts volts
Grid-No.4 (Focusing) Voltage:		
Positive value	1100 max.	volts
Negative value	550 max.	volts
Grid-No.2 Voltage.	{ 550 max. 200 min.	volts volts
Grid-No.1 Voltage:		
Negative peak value.	220 max.	volts
Negative bias value.	155 max.	volts
Positive bias value.	0 max.	volts
Positive peak value.	2 max.	volts
Heater Voltage	{ 6.9 max. 5.7 min.	volts volts
Peak Heater-Cathode Voltage:		
Heater negative with respect to cathode:		
During equipment warm-up period not		
exceeding 15 seconds.	450 max.	volts
After equipment warm-up period . . .	300 max.	volts
Heater positive with respect to cathode:		
Combined AC and DC voltage	200 max.	volts
DC component	100 max.	volts

Typical Operating Conditions for Cathode-Drive Service:

Unless otherwise specified, voltage values are positive with respect to grid No.1

Anode Voltage.	18000	volts
Grid-No.4 Voltage ^b	200	volts
Grid-No.2 Voltage.	300	volts
Cathode Voltage for visual extinction of		
focused raster.	28 to 62	volts
Field Strength of required adjustable		
centering magnet.	0 to 12	gauss

Maximum Circuit Values:

Grid-No.1 Circuit Resistance	1.5 max.	megohms
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^a External conductive coating and implosion protection hardware must be grounded.

^b The grid-No.4 voltage required for optimum focus of any individual tube will have a value anywhere between 0 and +400 volts with the combined grid-No.1 and video-signal-voltage adjusted to give a 200-microampere anode current.

For X-radiation shielding considerations, see sheet

X-RADIATION PRECAUTIONS FOR CATHODE-RAY TUBES at
front of this Section