DESCRIPTION

19" Direct View
Rectangular Glass Envelope
Gray Filter Glass
Aluminized Screen
6.3 Volts, 450 Ma. Heater
Cathode Drive Design

Filled Rim Implosion Protection
114° Magnetic Deflection
Electrostatic Focus
External Conductive Coating
No Ion Trap
Low G2 Voltage (45V.)

Rim Provides Mounting Holes

SPECIAL CHARACTERISTICS—Anode Penetration Current 150 uA Max.
(Note 4)

ELECTRICAL DATA
Focusing Method
Deflection Angles (approx.)
Horizontal
Vertical
Diagonal

Electrostatic
103 Degrees
86 Degrees
114 Degrees

Direct Interelectrode Capacitances
Cathode to all other electrodes (approx.)
Grid #1 to all other electrodes (approx.)
External Conductive Coating to Anode
(Including implosion protection hardware)
Heater Current at 6.3 Volts
Heater Warm-up time

5 uuf
6 uuf
1,500 max. uuf
1,000 min. uuf
450 ± 5% Ma.
11 Seconds

OPTICAL DATA
Phosphor Number
Light Transmittance at Center (approx.)

P4 Aluminized
49%

MECHANICAL DATA
Overall Length
Greatest Dimensions of Tube (Metal Rim)
Diagonal
Width
Height
Minimum Useful Screen Dimensions (projected)
Diagonal
Horizontal Axis
Vertical Axis
Area
Neck Length
Bulb
Bulb Contact
Base
Basing
Weight (approx.)
Bulb Contact Alignment

11 5/8" ± 1/4"
20 7/16" ± 3/32"
16 7/8" ± 1/16"
13 13/16" ± 1/16"
17 9/16"
15 1/8"
12"
172 Sq. inches
4 3/8" ± 1/8"
J49F1
J1-21
B6-214
7FA
15 lb. 8 oz.
J1-21 contact aligns with pin position #7 ± 30 Degrees

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RATINGS (Design Maximum System)
Unless otherwise specified, voltage values are positive and measured with respect to Grid #1

Maximum Anode Voltage .......................... 19,800 Volts
Minimum Anode Voltage ......................... 12,000 Volts
Maximum Grid #4 (Focusing Electrode) Voltage .......................... +1100 -500
Maximum Grid #2 Voltage .......................... 55 Volts
Minimum Grid #2 Voltage .......................... 30 Volts
Cathode Voltage ......................... 100 Volts
Maximum Heater Voltage ......................... 7 Volts
Minimum Heater Voltage ......................... 5.8 Volts
Maximum Heater-Cathode Voltage
Heater negative with respect to cathode
During warm-up time not to exceed 15 sec. ......................... 410 Volts
After Equipment warm-up period ......................... 180 Volts
Heater positive with respect to cathode ......................... 180 Volts

TYPICAL OPERATING CONDITIONS

CATHODE DRIVE SERVICE
Unless otherwise specified, all voltage values are positive with respect to Grid #1

Anode Voltage .......................... 16,000 Volts DC
Grid #4 (Focusing Electrode) voltage .......................... 250 Volts DC
(Notes 2 and 3)
Grid #2 Voltage .......................... 45 Volts DC
Cathode Voltage (Note 1) ......................... 35 to 50 Volts DC

MAXIMUM CIRCUIT VALUES
Maximum Grid #1 circuit resistance .......................... 1.5 Megohms

NOTES

1. Visual extinction of focused raster.

2. With the combined Grid #1 bias voltage and video-signal voltage adjusted to give an anode current of 150 microamperes on a 15 1/8" X 12" pattern from RCA 2F21 Monoscope or equivalent.

3. Individual tubes will have satisfactory focus at some value between 0 and 500 volts.

4. This is the maximum beam current with 19,800 volts (design max.) applied to Anode, zero voltage applied to Cathode, Grid #1, and Grid #2, all other elements to have nominal voltages.
NOTE


2. Base pin no. 7 aligns with anode contact within 30°.