20CP4
KINESCOPE

RECTANGULAR GLASS TYPE

MAGNETIC FOCUS MAGNETIC DEFLECTION

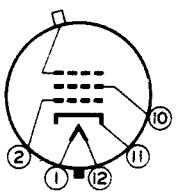
DATA

General:

Heater, for Unipotential Cathode:		
Voltage	6.3	ac or dc volts
Current	0.6	amp
Direct Interelectrode Capacitances:		
Grid No.1 to All Other Electrodes	6	μμf
Cathode to All Other Electrodes	5	μμf
Face Plate (With about 66% light transmission)		Filterglass
Phosphor (For Curves, see front of this Section)		No.4-Sulfide Type
Fluorescence and Phosphorescence		White
Persistence of Phosphorescence		Short
Focusing Method		Magnetic
Deflection Method		Magnetic
Deflection Angles (Approx.):		
Diagonal		70°
Horizontal		66°
Vertical		50°
Ion-Trap Gun	Requires External, Single-Field Magnet	
Overall Length	21-7/16" ± 3/8"	
Greatest Diagonal of Tube at Face	20-3/32" ± 3/16"	
Greatest Width of Tube at Face	18-11/16" ± 3/16"	
Greatest Height of Tube at Face	14-15/16" ± 3/16"	
Screen Size	17-1/4" x 13-1/4"	
Mounting Position		Any
Cap	Recessed Small Cavity (JETEC No.J1-21)	
Base	Small-Shell Duodecal 5-Pin (JETEC No.B5-57)	

BOTTOM VIEW

Pin 1 - Heater
Pin 2 - Grid No.1
Pin 10 - Grid No.2



Pin 11 - Cathode
Pin 12 - Heater
Cap - Anode

Maximum Ratings, ***Design-Center Values*****:**

ANODE VOLTAGE	18000 max.	volts
GRID-No.2 VOLTAGE	410 max.	volts
GRID-No.1 VOLTAGE:		
Negative bias value	125 max.	volts
Positive bias value	0 max.	volts
Positive peak value	2 max.	volts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode:		
During equipment warm-up period not exceeding 15 seconds	410 max.	volts
After equipment warm-up period	150 max.	volts
Heater positive with respect to cathode	150 max.	volts

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Typical Operation:

Anode Voltage*	14000	16000	volts
Grid-No.2 Voltage	300	300	volts
Grid-No.1 Voltage for Visual Extinction of Undeflected Focused Spot	-33 to -77	-33 to -77	volts
Focusing-Coil Current (DC)□	104 ± 10%	110 ± 10%	ma
Field Strength of Single-Field, Ion-Trap Magnet (Approx.)†	50	55	gausses

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	1.5 max.	megohms

* Brilliance and definition decrease with decreasing anode voltage. In general, the anode voltage should not be less than 14000 volts.

□ For specimen focusing coil similiar to JETEC Focusing Coil No.109, positioned with air gap toward kinescope screen, and center line of air gap about 3 inches from Reference Line (see Outline Drawing). The indicated currents are for the condition with the combined grid-No.1 bias voltage and video-signal voltage adjusted to produce a highlight brightness of 30 foot-lamberts on a 17" x 12-3/4" picture area sharply focused at center of screen.

† Measured at center of field with General Electric Gauss Meter, Cat. No.409X51.

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OPERATING NOTES

X-Ray Warning. When operated at or below 16000 volts, the 20CP4 does not produce any harmful x-ray radiation. In general, picture tubes may be operated at voltages (if ratings permit) up to 16000 volts without personal injury on prolonged exposure at close range. Above 16000 volts, special shielding precautions for x-ray radiation may be necessary.

Direction of the field of the ion-trap magnet should be such that the north pole is adjacent to vacant pin position No.8 and the south pole to pin No.2.

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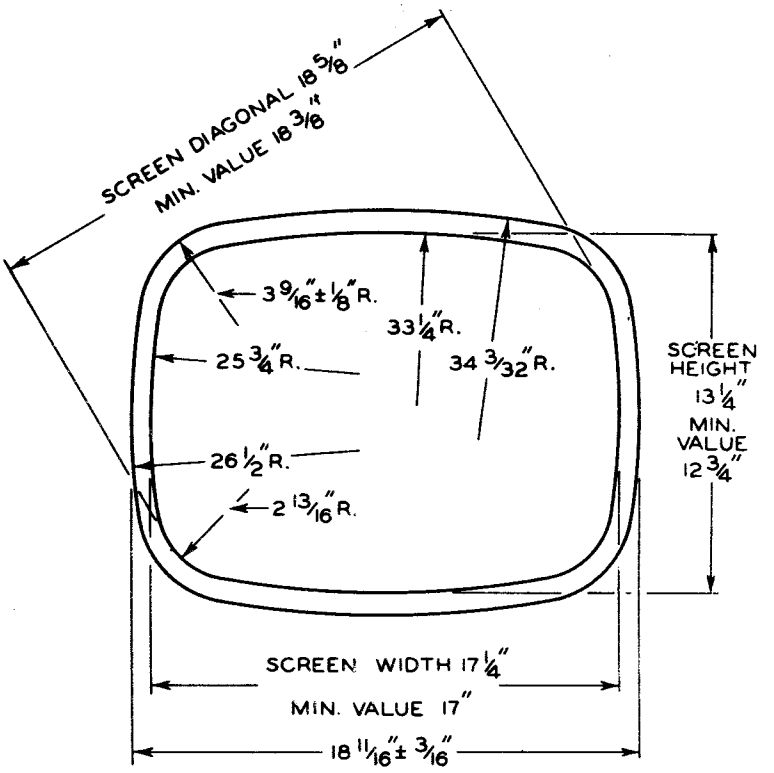

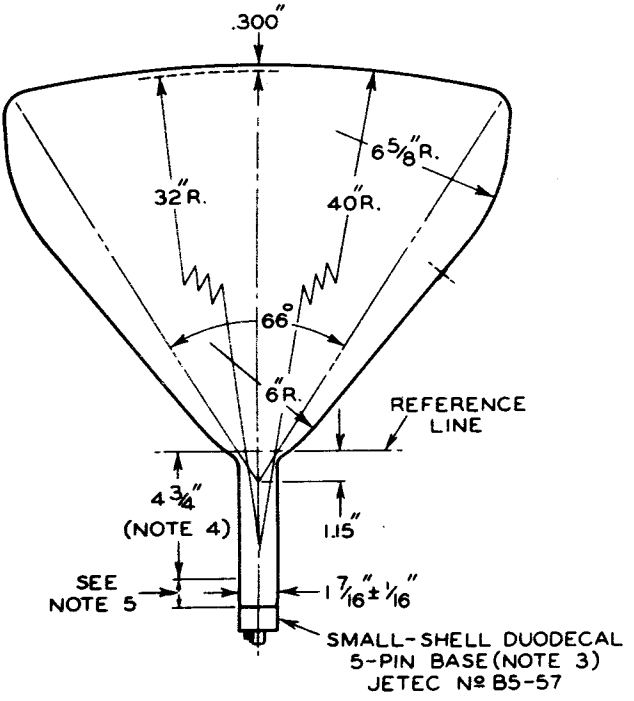

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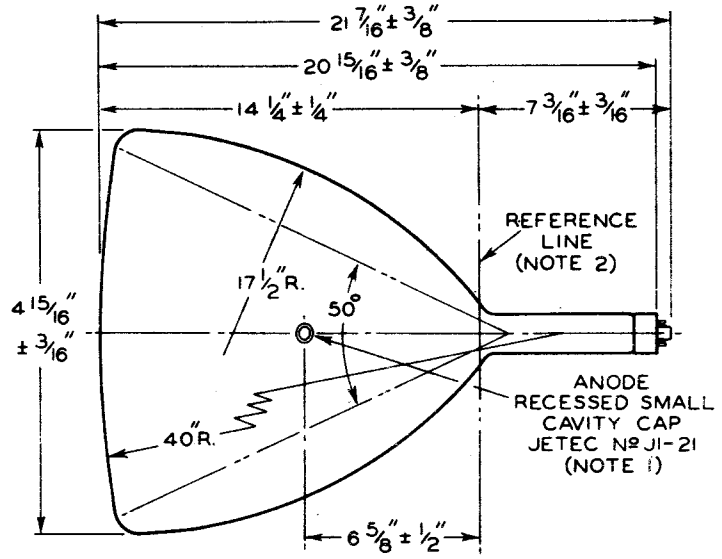

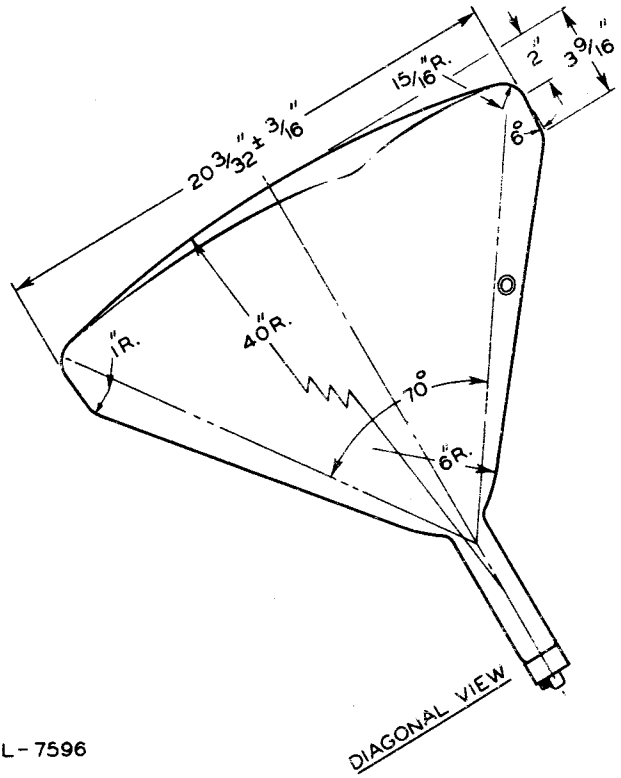

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NOTE 1: THE PLANE THROUGH THE TUBE AXIS AND VACANT PIN POSITION No.6 MAY VARY FROM THE PLANE THROUGH THE TUBE AXIS AND ANODE TERMINAL BY ANGULAR TOLERANCE (MEASURED ABOUT THE TUBE AXIS) OF ± 30°. ANODE TERMINAL IS ON SAME SIDE AS VACANT PIN POSITION No.6.

NOTE 2: WITH TUBE NECK INSERTED THROUGH FLARED END OF REFERENCE-LINE GAUGE JETEC No. 110 (SHOWN AT FRONT OF THIS SECTION) AND WITH TUBE SEATED IN GAUGE, THE REFERENCE LINE IS DETERMINED BY THE INTERSECTION OF THE PLANE CC' OF THE GAUGE WITH THE GLASS FUNNEL.

NOTE 3: SOCKET FOR THIS BASE SHOULD NOT BE RIGIDLY MOUNTED; IT SHOULD HAVE FLEXIBLE LEADS AND BE ALLOWED TO MOVE FREELY. BOTTOM CIRCUMFERENCE OF BASE SHELL WILL FALL WITHIN A CIRCLE CONCENTRIC WITH BULB AXIS AND HAVING A DIAMETER OF 3".

NOTE 4: LOCATION OF DEFLECTING YOKE AND FOCUSING DEVICE MUST BE WITHIN THIS SPACE.

NOTE 5: KEEP THIS SPACE CLEAR FOR SINGLE-FIELD, ION-TRAP MAGNET.

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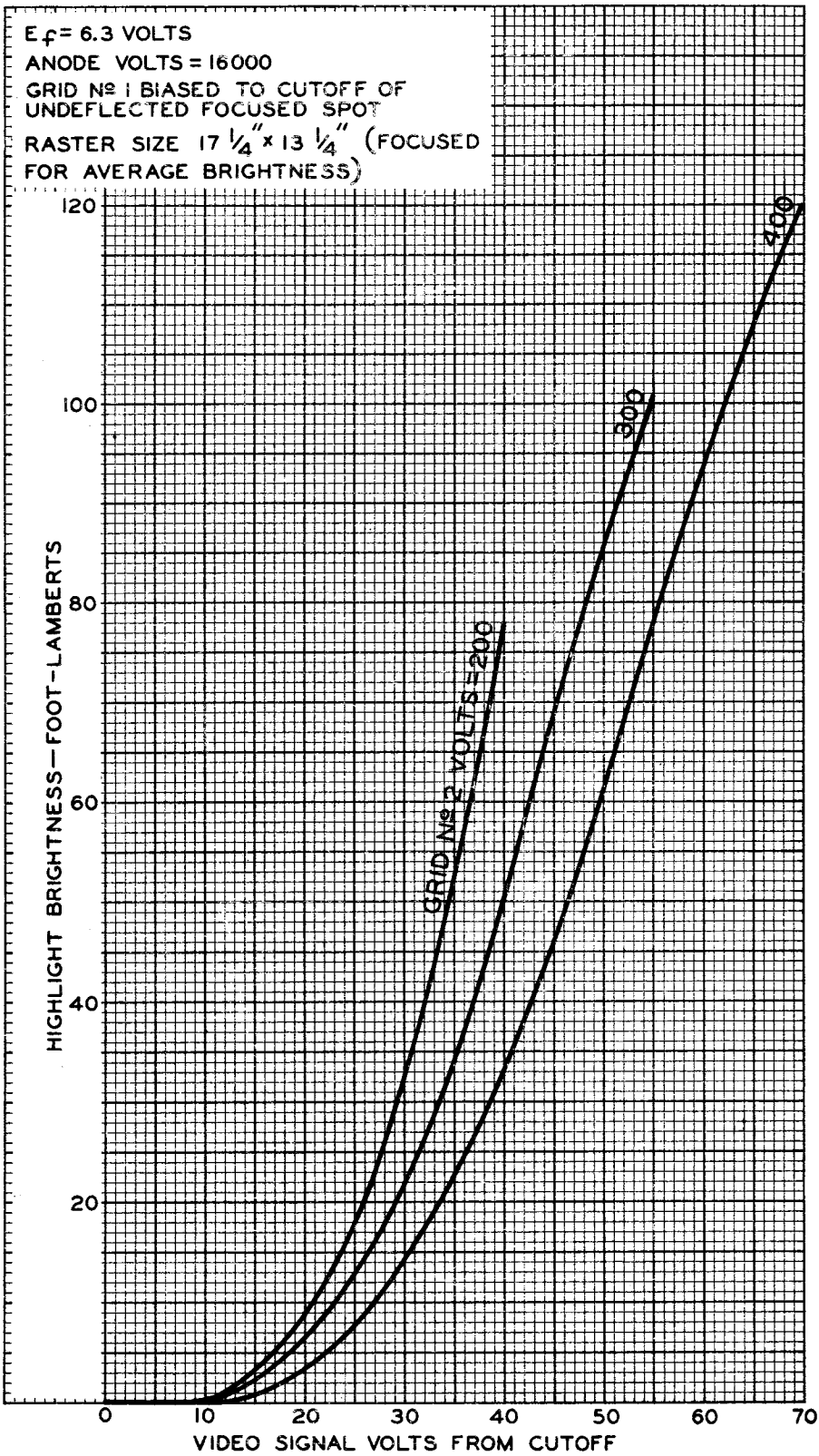
AVERAGE GRID-DRIVE CHARACTERISTICS



RCA

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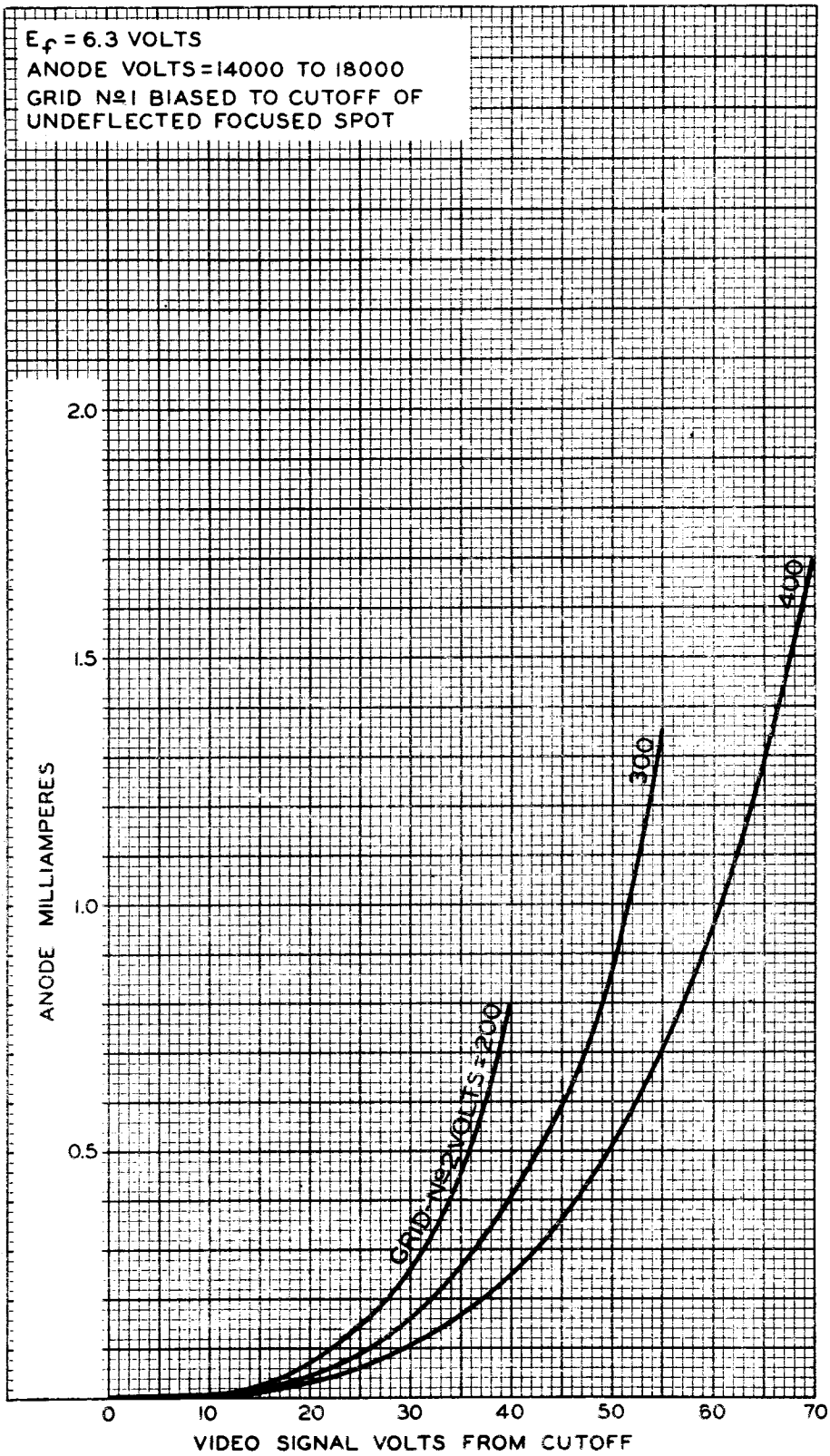
AVERAGE GRID-DRIVE CHARACTERISTICS



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