19AP4-B
KINESCOPE

METAL-CONE ENVELOPE

MAGNETIC FOCUS MAGNETIC DEFLECTION

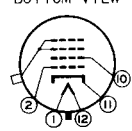
Supersedes Type 19AP4-A

DATA

General:

Heater, for Unipotential Cathode:		
Voltage	6.3	ac or dc volts
Current	0.6	amp
Direct Interelectrode Capacitances (Approx.):		
Grid No.1 to All Other Electrodes	7	μμf
Cathode to All Other Electrodes	5	μμf
Face Plate▲	Frosted RCA "Filterglass"	
Phosphor (For Curves, see front of this Section)	No.4-Sulfide Type	
Fluorescence and Phosphorescence	White	
Persistence of Phosphorescence	Medium	
Focusing Method	Magnetic	
Deflection Method	Magnetic	
Deflection Angle (Approx.)	66°	
Ion-Trap Gun	Requires External Single-Field Magnet	
Overall Length	21-1/2" ± 1/2"	
Greatest Diameter of Envelope	18-5/8" ± 1/8"	
Screen Diameter	17-3/8"	
Mounting Position	Any	
Anode Terminal	Metal-Cone Lip	
Base	Small-Shell Duodecal 5-Pin	
Basing Designation for BOTTOM VIEW	$12D_1$	

Pin 1 - Heater
Pin 2 - Grid No.1
Pin 10 - Grid No.2
Pin 11 - Cathode



Pin 12 - Heater
Metal-Cone Lip:
Anode,
Grid No.3

Maximum Ratings, *Design-Center Values*:

ANODE□ VOLTAGE●	19000 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

□ Anode and grid No.3, which are connected together within tube, are referred to herein as anode.

● The product of anode voltage and average anode current should be limited to 6 watts.

▲ Has transmission of about 65%.

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Typical Operation:

Anode Voltage*	12000	14000	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, Approx.)■	140	150	ma
Ion-Trap Magnet Current (DC, Approx.)#	75	80	ma
Field Strength of Single-Field, Ion-Trap Magnet (Approx.)†	45	50	gausses

Maximum Circuit Values:

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

Minimum Circuit Values:

The power supply should be of the limited-energy type with inherent regulation to limit the continuous short-circuit current to 5 ma. If the supply permits the instantaneous short-circuit current to exceed 1 ampere, or is capable of storing more than 250 microcoulombs, the effective resistance in circuit between indicated electrode and the output capacitor should be as follows:

Grid-No.1-Circuit Resistance	150 min.	ohms
Grid-No.2-Circuit Resistance	470 min.	ohms
Anode-Circuit Resistance	22000 min.	ohms

The resistors used should be capable of withstanding the applied voltage.

* Brilliance and definition decrease with decreasing anode voltage. In general, the anode voltage should not be less than 12000 volts.

■ For JETEC Focusing Coil No.106, or equivalent, 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 18 foot-lamberts for 12000 volts, or 22 foot-lamberts for 14000 volts, on a 15-5/8" x 11-3/4" picture area.

For JETEC Ion-Trap Magnet No.111, or equivalent, located in optimum position and rotated to give maximum brightness.

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

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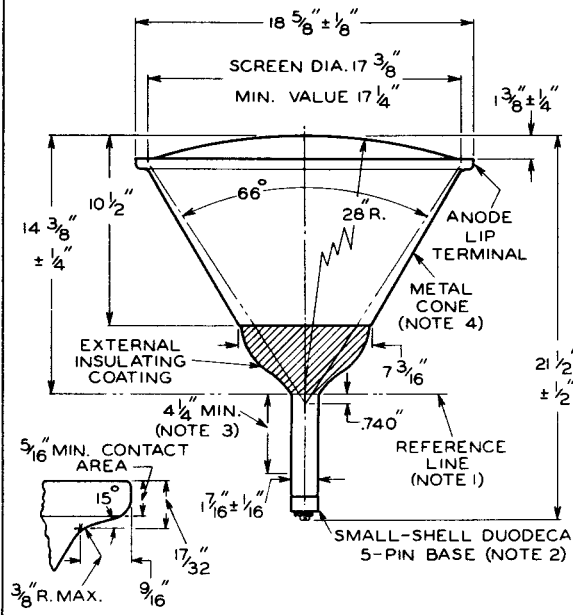

DETAIL OF LIP

92CM-7502R1

NOTE 1: REFERENCE LINE IS DETERMINED BY POSITION WHERE HINGED GAUGE 1.500" + .003" – .000" I.D. AND 2" LONG WILL REST ON CONE.

NOTE 2: 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 CIRCLE CONCENTRIC WITH CONE AXIS AND HAVING DIAMETER OF 3".

NOTE 3: LOCATION OF DEFLECTING YOKE AND FOCUSING COIL MUST BE WITHIN THIS SPACE.

NOTE 4: METAL CONE AND GLASS FACE OPERATE AT HIGH VOLTAGE. ANY MATERIAL IN CONTACT WITH THE CONE OR THE FACE MUST HAVE INSULATING PROPERTIES ADEQUATE TO WITHSTAND THE APPLIED ANODE VOLTAGE PLUS 10%.

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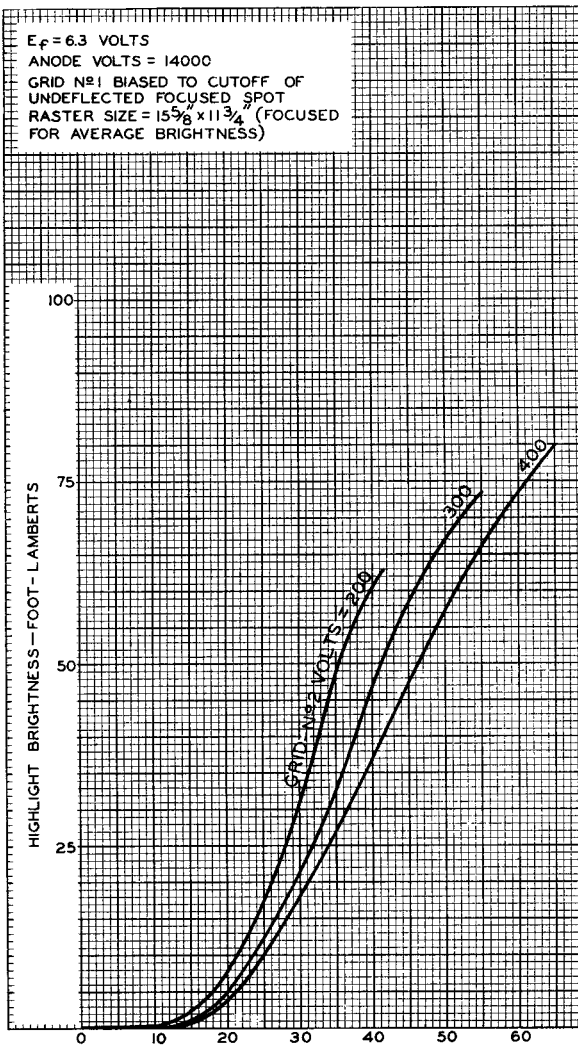
AVERAGE GRID-DRIVE CHARACTERISTICS



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AVERAGE GRID-DRIVE CHARACTERISTICS