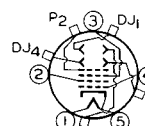
912

HIGH-VACUUM CATHODE-RAY TUBE

HIGH-INTENSITY ELECTROSTATIC-DEFLECTION TYPE
WITH 5" MEDIUM-PERSISTENCE SCREEN FOR OSCILLOGRAPHIC USE

Heater	Coated Unipotential Cathode	
Voltage	2.5	a-c or d-c volts
Current	2.1	amp.
Fluorescent Screen:		
Material		Phosphor No.1
Pattern Color		Greenish
Direct Interelectrode Capacitances:		
Grid to all other electrodes		14 max. μμf
DJ_1 to DJ_2		3 max. μμf
DJ_3 to DJ_4		1.5 max. μμf
Overall Length		16-1/2" ± 3/8"
Maximum Diameter		5-1/4" + 1/16" - 3/32"
Bulb		J-42
Caps:		
Anode No.2		Medium Metal
Deflecting Electrodes (Four)		Small Metal
Base		Medium 5-Pin Micanol ←

BOTTOM VIEW



Pin 1 - Heater
Pin 2 - Grid No.2
Pin 3 - Anode No.1
Pin 4 - Grid No.1
Pin 5 - Heater, Cathode
Single Medium Cap - Anode No.2
Cap Over Pin 3 } { Deflecting Electrode DJ_1

Cap Over Pins 1 & 5 } { Deflecting Electrode DJ_2
Cap Over Pin 2 } { Deflecting Electrode DJ_3
Cap Over Pin 4 } { Deflecting Electrode DJ_4

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS

Maximum Ratings Are Based on a Line-Voltage Design Center of 117 Volts

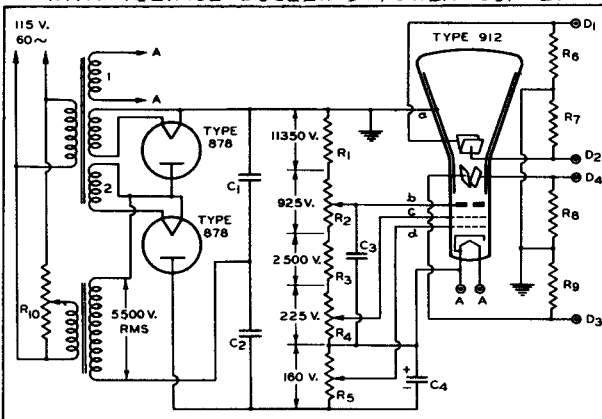
High-Voltage Electrode (Anode #2) Voltage			15000 max.	volts
Focusing Electrode (Anode #1) Voltage			4500 max.	volts
Accelerating Electrode (Grid #2) Voltage			250 max.	volts
Control Electrode (Grid #1) Voltage			Never positive	
Grid Voltage for Current Cut-off *			-125 approx.	volts
Peak Voltage Between Anode #2 and any deflecting electrode			7000 max.	volts
Typical Operation:				
Heater Voltage	2.5	2.5	2.5	volts
Anode #2 Voltage	5000	10000	15000	volts
Anode #1 Voltage	1000	2000	3000	approx. volts
Grid #2 Voltage	250	250	250	volts
Grid #1 Voltage	Adjusted to give suitable luminous spot			
Deflection Sensitivity:				
DJ_1 to DJ_2	0.083	0.041	0.028	mm/volt d.c.
DJ_3 to DJ_4	0.102	0.051	0.034	mm/volt d.c.

* With maximum voltages on Anode #1 and Grid #2.

← Indicates a change.

912

TYPICAL OSCILLOGRAPH CIRCUIT USING THE 912 WITH VOLTAGE-DOUBLING POWER SUPPLY



C_1, C_2 = 0.5 μf, 10000 V.	R_3 = 0.55 MEGOHM, 20-WATT	a = ANODE №2
C_3 = 1.0 μf, 5000 V.	R_4 = 50000 OHMS, 2-WATT	b = ANODE №1
C_4 = 16 μf, 200 V.	R_5 = 35000 OHMS, 2-WATT	c = GRID №2
→ R_1 = 2.5 MEGOHMS, 75-WATT	R_6, R_7, R_8, R_9 = 2 TO 5 MEGOHMS	d = GRID №1
R_2 = 0.2 MEGOHM, 10-WATT	R_{10} = 100 OHMS, 600-WATT	

NOTE: AS THE TOTAL VOLTAGE ACROSS THE BLEEDER IS REDUCED BY MEANS OF R_{10}, THE ELECTRODE VOLTAGES ARE REDUCED IN CORRECT PROPORTION, EXCEPT FOR GRID NO.2 VOLTAGE; THIS MAY HAVE TO BE READJUSTED BY THE USE OF DIFFERENT VALUES FOR R_3 AND R_4, THEIR TOTAL RESISTANCE BEING KEPT THE SAME. CONDENSERS C_3 AND C_4 CAN BE OMITTED IF GRID-VOLTAGE SWITCHING (FOR HIGH-SPEED PHOTOGRAPHY) IS NOT CONTEMPLATED. FILAMENT WINDINGS NOS. 1 and 2 SHOULD BE INSULATED FOR 20000 VOLTS.

92C-4621R1

FLUORESCENT-SCREEN CHARACTERISTICS

CURVES SHOWING THE AVERAGE CHARACTERISTICS, SPECTRAL ENERGY CHARACTERISTIC, AND PERSISTENCE CHARACTERISTIC OF PHOSPHOR No.1 ARE SHOWN AT THE BEGINNING OF THIS SECTION.

→ Indicates a change.

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

RCA

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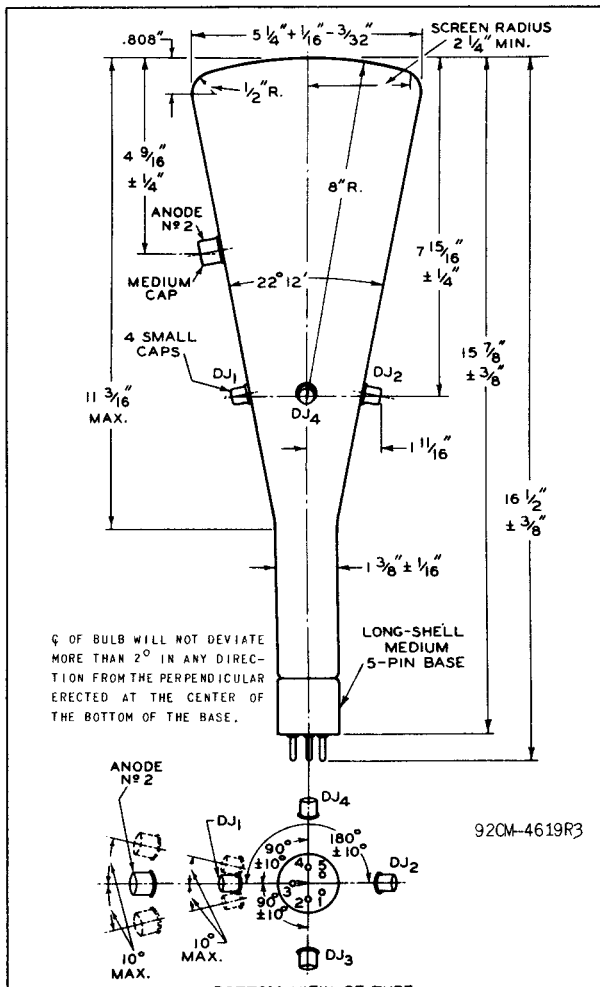

BOTTOM VIEW OF TUBE

DJ_1 AND DJ_2 ARE NEARER THE SCREEN; DJ_3 AND DJ_4 ARE NEARER THE BASE. ANGLE BETWEEN $DJ_1 - DJ_2$ TRACE AND $DJ_3 - DJ_4$ TRACE IS 90° ± 6°.

912

AVERAGE CHARACTERISTICS