Oscillograph Tube

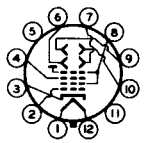
ELECTROSTATIC FOCUS — ELECTROSTATIC DEFLECTION

DATA

General:

Heater, for Unipotential Cathode:		
Voltage (AC or DC)	6.3	volts
Current	0.6 ± 10%	amp
Direct Interelectrode Capacitances (Approx.):		
Grid No.1 to all other electrodes	7.5	μμf
Cathode to all other electrodes	4.3	μμf
Deflecting electrode DJ_1 to deflecting electrode DJ_2	5.2	μμf
Deflecting electrode DJ_3 to deflecting electrode DJ_4	7	μμf
DJ_1 to all other electrodes	10.1	μμf
DJ_2 to all other electrodes	7.5	μμf
DJ_3 to all other electrodes	8.1	μμf
DJ_4 to all other electrodes	9.2	μμf
Faceplate, Spherical		Clear Glass
Phosphor (For Curves, see front of this Section)		P1
Fluorescence		Yellowish-Green
Phosphorescence		Yellowish-Green
Persistence		Medium
Focusing Method		Electrostatic
Deflection Method		Electrostatic
Overall Length		9-1/8" ± 1/4"
Greatest Diameter of Bulb		3" ± 1/16"
Minimum Useful Screen Diameter		2-3/4"
Useful Scan (Centered with respect to tube face):		
By deflecting electrodes DJ_1 & DJ_2		2-3/4"
By deflecting electrodes DJ_3 & DJ_4		2-1/4"
Operating Position		Any
Bulb		J24P1
Base. Small-Shell Duodecal 12-Pin (JEDEC Group 4, No.B12-43)		
Basing Designation for BOTTOM VIEW		12E

Pin 1 – Heater
Pin 2 – Grid No.1
Pin 3 – Cathode
Pin 4 – Grid No.3
Pin 5 – Internal Connection—Do Not Use
Pin 6 – Deflecting Electrode DJ_3
Pin 7 – Deflecting Electrode DJ_4



Pin 8 – Ultor (Grid No.2, Grid No.4, Collector)
Pin 9 – Deflecting Electrode DJ_2
Pin 10 – Deflecting Electrode DJ_1
Pin 11 – Internal Connection—Do Not Use
Pin 12 – Heater

DJ_1 and DJ_2 are nearer the screen
DJ_3 and DJ_4 are nearer the base

3AQP1

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

ULTOR VOLTAGE	2750 max.	volts
	500 min.	volts
ULTOR INPUT (AVERAGE)	6 max.	watts
GRID-No.3 VOLTAGE	1100 max.	volts
GRID-No.1 VOLTAGE:		
Negative-bias value	200 max.	volts
Positive-bias value	0 max.	volts
Positive-peak value	2 max.	volts
PEAK VOLTAGE BETWEEN ULTOR AND ANY DEFLECTING ELECTRODE	550 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	125 max.	volts
Heater positive with respect to cathode	125 max.	volts

Equipment Design Ranges:

For any ultor voltage (E_{c_4}) between 500 and 2750 volts

Grid-No.3 Voltage for focus	16.5% to 31% of E_{c_4}	volts
Negative Grid-No.1 Voltage for visual extinction of undeflected spot	2.8% to 6.7% of E_{c_4}	volts
Grid-No.3 Current for any operating condition	−15 to +10	μa
Deflection Factors:		
DJ_1 & DJ_2	73 to 99	v dc/in./kv of E_{c_4}
DJ_3 & DJ_4	26 to 35	v dc/in./kv of E_{c_4}