30C3

5½" MEASUREMENT CATHODE RAY TUBE ELECTROSTATIC FOCUS AND DEFLECTION

GENERAL

The 30C3 is a precision Measurement Cathode Ray Tube having a 5½" diameter polished glass face. The Deflector Plates are connected through side arms to achieve low values of lead inductance and capacitance.

RATING

Heater Voltage (volts)	V_h	4.0
Heater Current (amps)	I_h	0.72
Maximum 1st Anode Voltage (volts)	$V_{a1(max)}$	2,500
Maximum 2nd Anode Voltage (volts)	$V_{a2(max)}$	1,000
Maximum 3rd Anode Voltage (volts)	$V_{a3(max)}$	6,000
Average Sensitivity of " X " Plates (mm/V)		600/V†
Average Sensitivity of " Y " Plates (mm/V)		1,100/V†

† Where " V " denotes the voltage on the 3rd Anode and Bulb Coating.

INTER-ELECTRODE CAPACITANCES (pF)

X1 Plate/All other electrodes	$c_{x1\text{-}all}$	6.0
X2 Plate/All other electrodes	$c_{x2\text{-}all}$	6.0
Y1 Plate/All other electrodes	$c_{y1\text{-}all}$	8.6
Y2 Plate/All other electrodes	$c_{y2\text{-}all}$	8.6
X1 Plate/Y1 Plate	$c_{x1\text{-}y1}$	0.25
X1 Plate/Y2 Plate	$c_{x1\text{-}y2}$	0.25
X2 Plate/Y1 Plate	$c_{x2\text{-}y1}$	0.25
X2 Plate/Y2 Plate	$c_{x2\text{-}y2}$	0.25
Grid/All other electrodes	$c_{g\text{-}all}$	8.2
X1 Plate/X2 Plate	$c_{x1\text{-}x2}$	2.5
Y1 Plate/Y2 Plate	$c_{y1\text{-}y2}$	3.2

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DIMENSIONS

Maximum Overall Length	(mm)	430
Maximum Diameter	(mm)	142
Nominal Screen Diameter	(ins)	5½
Approximate Nett Weight	(ozs)	30
Approximate Packed Weight	(lbs)	11¼

NOTES

The connections to the deflector plates are brought out to side contacts on the neck of the tube in order to reduce the inductance and capacitance of the leads, and the coupling between the X and Y plates. It is intended, particularly, for H.F. and pulse measurements.

For general measurement work the 30C3/T1 is recommended. This has a screen with a medium persistence green phosphor. For special applications, however, the tube may be supplied with any of the standard phosphors described on the Introductory Page to this section, except T7.

The Final Anode and the Bulb coating are brought out separately in order that a finer spot or a higher writing speed may be obtained by increasing the Final Anode voltage above the limit set for the First Anode Voltage.

In use the Third Anode and Bulb coating are normally joined.

All Maximum Ratings are Absolute Values not Design Centres.

TYPICAL OPERATION

3rd Anode Voltage (volts)	V_{a3}	2,000	6,000
2nd Anode Voltage for focus (approx.) (volts)	V_{a2}	440	960
1st Anode Voltage (volts)	V_{a1}	2,000	2,000
Average Bias on Control Grid for Cut-off of Beam Current (volts)	V_g	—60	—60
Average Working Bias for 20μA Beam (volts)		—33	—33
Approximate Sensitivity of " X " Plates (mm/V)		0.30	0.1
Approximate Sensitivity of " Y " Plates (mm/V)		0.57	0.19

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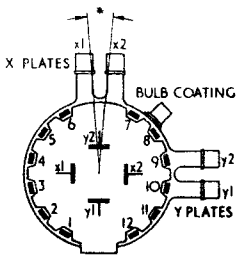
$5\frac{1}{2}$" MEASUREMENT CATHODE RAY TUBE ELECTROSTATIC FOCUS AND DEFLECTION

CAPS—CT2

BASE—B12D

*Permissible angular variation of mounts $\pm 10°$



Viewed from free end of base.

CONNECTIONS

Pin 1	Control Grid	g
Pin 2	Cathode	k
Pin 3	Heater	h
Pin 4	Heater	h
Pin 5	Anode 1	a1
Pin 6	Anode 2	a2
Pin 7	No Connection	NC
Pin 8	No Connection	NC
Pin 9	No Connection	NC
Pin 10	Anode 3	a3
Pin 11	No Connection	NC
Pin 12	No Connection	NC

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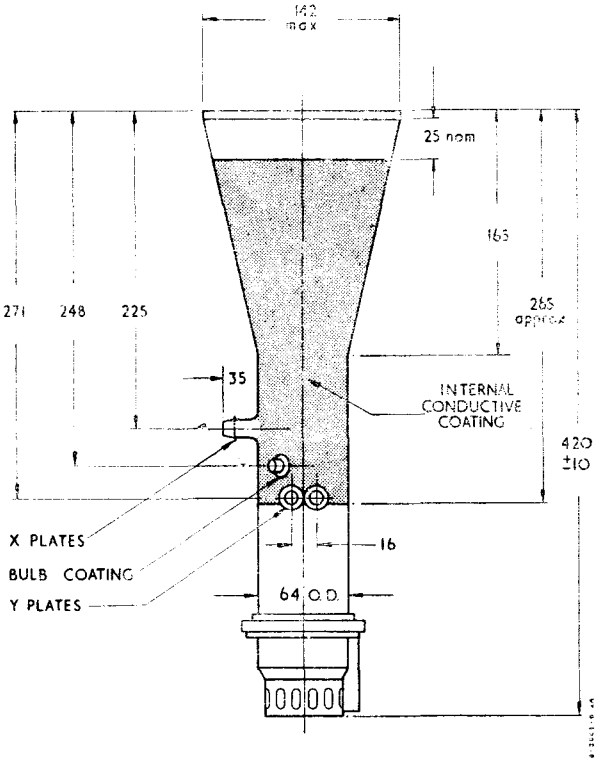

All Dimensions in mm.

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