

MAZDA

30C12

CATHODE RAY TUBE—ALL ELECTROSTATIC

Indirectly heated—for Radio D.F. Compass

GENERAL

The 30C12 is a precision constructed instrument which provides bearings with an error not exceeding $\pm 1^\circ$ at any point. No degree scale is attached but a centre cross and mark are provided, in line with the axis of the Y Plates, accurate to $\pm 0.25^\circ$. The tube is suitable for use in "Pulse D.F." systems and may be supplied with any of the standard phosphor screens described on the Introductory Page to this Section.

RATING

Heater Voltage (volts)	V_h	4.0
Heater Current (amps)	I_h	0.72
Maximum 1st Anode Voltage (volts)	$V_{a1}(\max)$	500
Maximum 2nd Anode Voltage (volts)	$V_{a2}(\max)$	1,000
Maximum 3rd Anode Voltage (volts)	$V_{a3}(\max)$	4,000
Average sensitivity of X Plates (mm/V)		520/V*
Average sensitivity of Y Plates (mm/V)		520/V*

* V denotes the voltage on the 3rd Anode.

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INTER-ELECTRODE CAPACITANCES (pF)

X_1 Deflecting Plate/ X_2 Deflecting Plate	c_{x_1, x_2}	4.5
X_1 Deflecting Plate/All other Electrodes	$c_{x_1, \text{all}}$	14.0
X_2 Deflecting Plate/All other Electrodes	$c_{x_2, \text{all}}$	14.6
Y_1 Deflecting Plate/ Y_2 Deflecting Plate	c_{y_1, y_2}	4.4
Y_2 Deflecting Plate/All other Electrodes	$c_{y_2, \text{all}}$	13.8
Y_1 Deflecting Plate/All other Electrodes	$c_{y_1, \text{all}}$	14.9
X_1, X_2 Deflecting Plates/ Y_1, Y_2 Deflecting Plates	$c_{x_1, x_2 / y_1, y_2}$	2.7
Grid/All other Electrodes	c_g / all	8.6

DIMENSIONS

Maximum Overall Length (mm)	495
Maximum Bulb Diameter (mm)	175
Maximum Neck Diameter (mm)	65
Approximate Nett Weight (lbs)	2 $\frac{1}{4}$
Approximate Packed Weight (lbs)	16 $\frac{1}{2}$

TYPICAL OPERATION

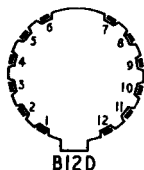
3rd Anode Voltage (volts)	2,200
2nd Anode Voltage (volts)	440\$
1st Anode Voltage (volts)	450
Negative bias on Control Grid for cut-off of Beam Current (volts)	30-90
\$ 2nd Anode Voltage for focus decreases with increase of beam current and the above figure is the voltage required at low currents.	

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BASE—B12D



Viewed from free end of Pins

Permissible angular variation of mount $\pm 10^\circ$.

CONNECTIONS

Pin 1	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 Internal Connection	NC
Pin 8	Deflecting Plate Y_2	Y_2
Pin 9	Deflecting Plate Y_1	Y_1
Pin 10	Anode 3	a3
Pin 11	Deflecting Plate X_2	X_2
Pin 12	Deflecting Plate X_1	X_1