MAZDA

12.E.1

BEAM TETRODE
Indirectly heated — for parallel operation

TENTATIVE

GENERAL

The 12.E.1 is intended for use as a series or shunt control valve in stabilised power packs.

RATING

Heater Voltage (volts)	V_h	6.3
Heater Current (amps)	I_h	1.6
Maximum Anode Voltage (volts)	$V_{a(max)}$	800
Maximum Screen Voltage (volts)	$V_{g2(max)}$	300
Maximum Control Grid Voltage	$V_{g1(max)}$	100
Maximum Voltage between g1 and g2 (volts)	V_{g1-g2}	400
Mutual Conductance (mA/V)	g_m	• 14
Maximum Anode Dissipation (watts)	P_a	35
Maximum Screen Dissipation (watts)	P_{g2}	5.0
Maximum Cathode Current (mA)	$I_{k(max)}$	300
Maximum Potential Heater/Cathode (volts DC)	$V_{h-k(max)}t$ [	300

• Taken at $V_a = V_{g2} = 150_V I_a = 200$ mA.

[Provided the cathode is positive.

INTER-ELECTRODE CAPACITANCES

Grid/Earth ($\mu\mu F$)	c_{in}	23.0
Anode/Earth ($\mu\mu F$)	c_{out}	8.3
Anode/Grid ($\mu\mu F$)	$c_{a,g1}$	1.3

"Earth" denotes the remaining earthy potential electrodes and heater joined to cathode.

DIMENSIONS

Maximum Overall Length (mm)	150
Maximum Diameter (mm)	54
Maximum Seated Height (mm)	136
Approximate Nett Weight (ozs)	2½
Approximate Packed Weight (ozs)	7

MOUNTING POSITION - Vertical

If run horizontally then the axis AB must be on a horizontal plane.
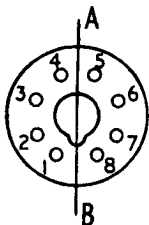
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BULB   Clear

TOP CAP   American miniature

BASE   International Octal (IO8)

Viewed from free end of pins.

CONNEXIONS

Pin 1	-	-
Pin 2	Heater	h
Pin 3	-	-
Pin 4	Screen Grid	g2
Pin 5	Control Grid	g1
Pin 6	-	-
Pin 7	Heater	h
Pin 8	Cathode	k
Top Cap	Anode	a

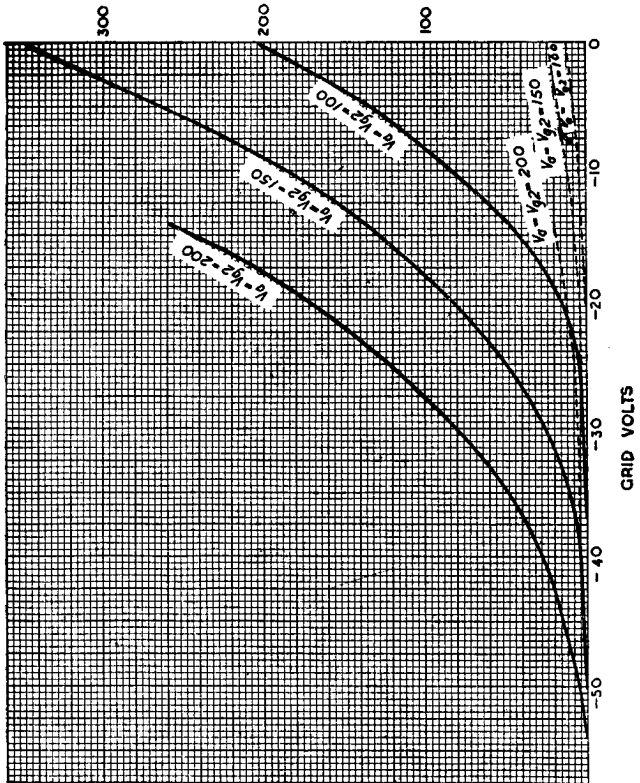## THE EDISON SWAN ELECTRIC COMPANY LTD

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TENTATIVE
AVERAGE CHARACTERISTIC CURVES

Key ⎰ —— Anode Current
⎱ ------ Screen Current

ANODE AND SCREEN CURRENTS IN mA

THE EDISON SWAN ELECTRIC COMPANY LTD.

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TENTATIVE
AVERAGE CHARACTERISTIC CURVES

Curves taken at $V_{g2} = 150v.$

Key $\begin{cases} \text{—— Anode Current} \\ \text{---- Screen Current} \end{cases}$

Y-axis: ANODE AND SCREEN CURRENTS IN mA

X-axis: ANODE VOLTS

Curve labels: $V_{g1} = 0$, $V_{g1} = -4$, $V_{g1} = -8$, $V_{g1} = -12$