

12E1
BEAM TETRODE
 Indirectly heated—for parallel operation

GENERAL

The 12E1 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)	$V_{g_2}(\max)$	300
Maximum Control Grid Voltage (volts)	$V_{g_1}(\max)$	-100
Maximum Voltage between g_1 and g_2 (volts)	$V_{g_1-g_2}(\max)$	400
Mutual Conductance (mA/V)	g_m	14*
Inner μ	μ_{g_1, g_2}	5.3*
Maximum Anode Dissipation (watts)	$P_a(\max)$	35
Maximum Screen Dissipation (watts)	$P_{g_2}(\max)$	5.0
Maximum Cathode Current (mA)	$I_k(\max)$	300
Maximum Potential Heater/Cathode (volts D.C.)	$V_{h-k}(\max)$	300†

* Taken at $V_a = V_{g_2} = 150V$ $I_a = 200mA$.

† Provided the cathode is positive.

All maximum ratings are Absolute values not Design Centres.

INTER-ELECTRODE CAPACITANCES (pF)

Grid/Earth	c_{in}	23.0
Anode/Earth	c_{out}	8.0
Anode/Grid	c_{a, g_1}	0.85

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

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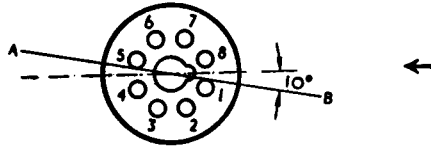
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DIMENSIONS

Maximum Overall Length (mm)	146
Maximum Diameter (mm)	54
Maximum Seated Height (mm)	133
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.

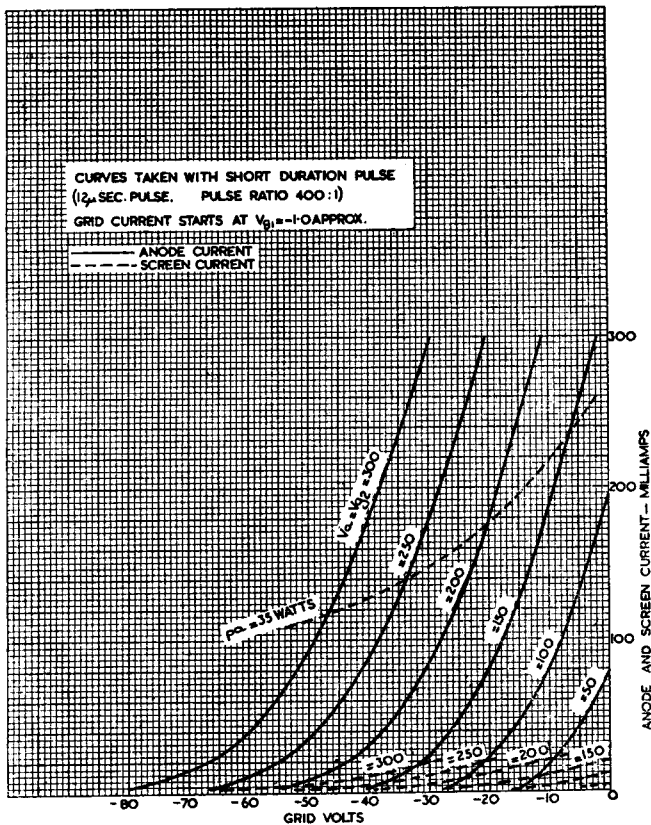
BULB—ClearTOP CAP—American miniature (CT 1)BASE—International Octal (108)CONNECTIONS

Pin 1	No connection	NC
Pin 2	Heater	h
Pin 3	No connection	NC
Pin 4	Screen Grid	g ₂
Pin 5	Control Grid	g ₁
Pin 6	No connection	NC
Pin 7	Heater	h
Pin 8	Cathode	k
Top Cap	Anode	a

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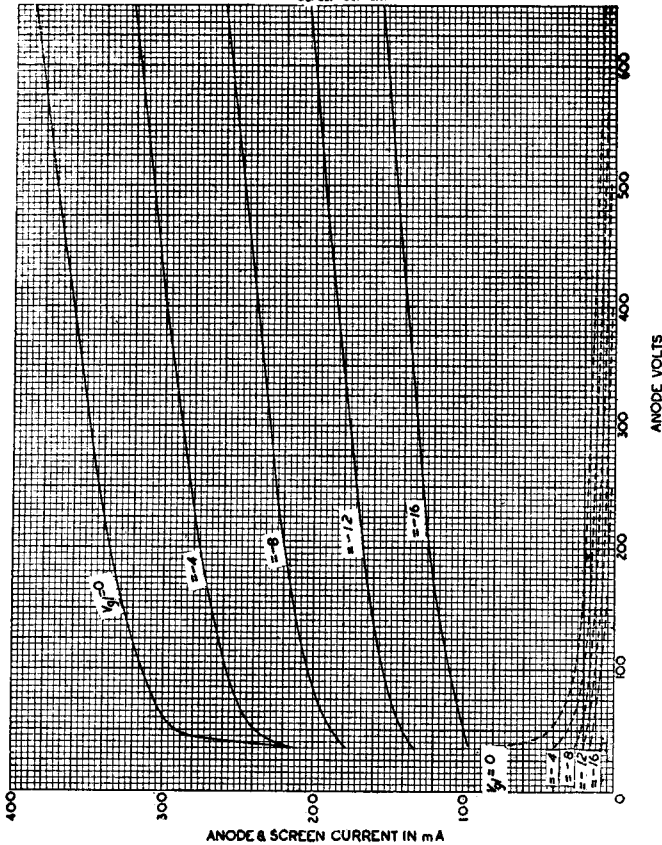


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AVERAGE CHARACTERISTIC CURVES

These curves were taken with a short duration pulse of 12 μ sec. Pulse ratio 400:1. $V_{g2}=150$

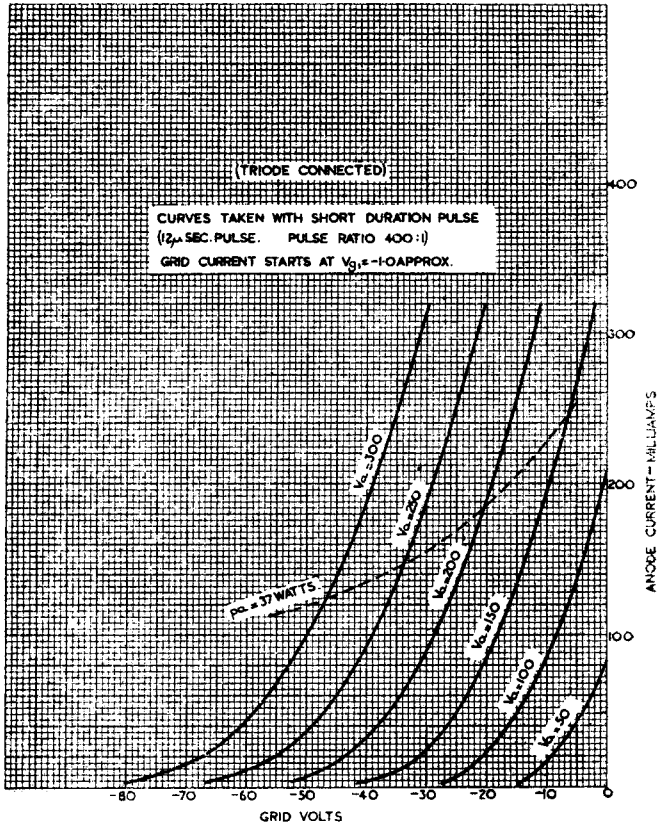
— Anode Current
 ---- Screen Current



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