

EDISWAN

13E1

BEAM TETRODE

Indirectly heated—for D.C. Control Applications

GENERAL

This Low Impedance Beam Tetrode is intended for general D.C. Control applications and has a centre tapped heater. It is suitable for Triode connection and has a maximum anode dissipation of 90 watts.

RATING

Heater Voltage (volts)	V_h	26.0	13.0
Heater Current (amps)	I_h	1.3	2.6
Maximum Anode Voltage (volts)	$V_a(\text{max})$	800	1500† ←
Maximum Screen Voltage (volts)	$V_{g2}(\text{max})$	300	
Maximum Control Grid Voltage (volts)	$V_{g1}(\text{max})$	—100	
Maximum Anode Dissipation (watts)	$P_a(\text{max})$	90	
Maximum Screen Dissipation (watts)	$P_{g2}(\text{max})$	10	
Maximum Anode plus Screen Dissipation (Triode Connection) (watts)	$P_a + g2(\text{max})$	95	←
Maximum Control Grid Dissipation (watts)	$P_{g1}(\text{max})$	1	←
Maximum Cathode Current (mA)	$I_k(\text{max})$	800	5000† ←
Maximum Heater/Cathode Voltage (volts D.C.) (Heater—ve)	$V_{h-k}(\text{max})$	300	
Mutual Conductance (Triode Connection) (mA/V)	g_m	35*	
Amplification Factor (Triode Connection)	μ_t	4.5*	
Anode Resistance ($\delta v_a / \delta I_a$) Triode Connection (ohms)	$r_a(t)$	130*	
* $V_a = 150$ volts $I_a = 500$ mA.			

All maximum ratings are absolute values not design centres.

† Series pulse rating. For peak currents greater than 2 amps, the product of the peak current and pulse duration in amp-microseconds should not exceed 10. The valve should not operate for longer than 5 μ s in any 100 μ s period.

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13E1 JEDEC Type 7972

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INTER-ELECTRODE CAPACITANCES (pF)

Control Grid/Earth	c_{in}	56
Anode/Earth	c_{out}	20.4
Anode/Control grid	c_{a-g1}	1.3

DIMENSIONS

Maximum Overall Length	(mm)	140.0 ←
Maximum Diameter	(mm)	65.0 ←
Maximum Seated Height	(mm)	128.0 ←
Approximate Nett Weight	(ozs)	6.0
Approximate Packed Weight	(ozs)	30.0

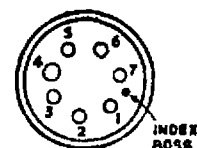
MOUNTING POSITION—Vertical

BULB—Clear

BASE—B7A

BASING—7GF

Viewed from free
end of pins.



VALVEHOLDER—Ediswan Clix Cat. No. VH117/701

CONNECTIONS

Pin 1	Heater	h
Pin 2	Heater Centre Tap	h tap
Pin 3	Control Grid	g1
Pin 4	Cathode	k
Pin 5	Screen Grid	g2
Pin 6	Anode	a
Pin 7	Heater	h

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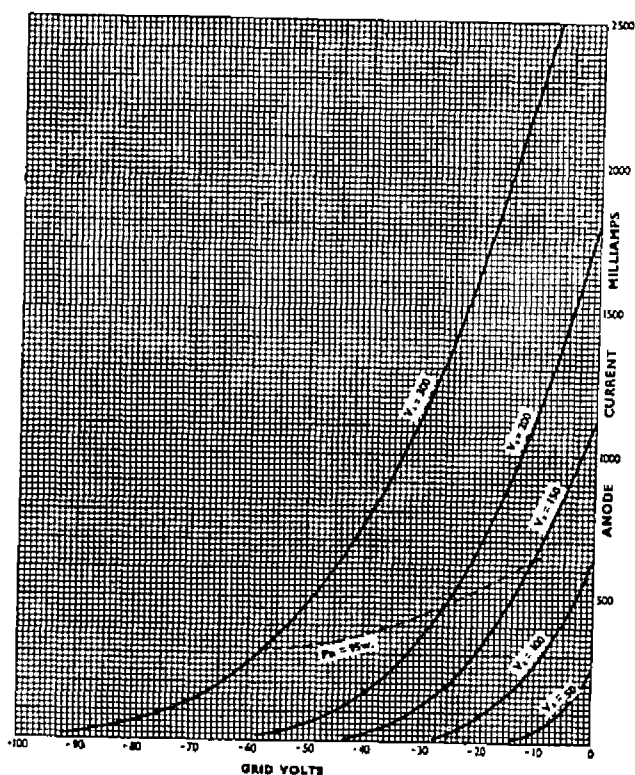
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AVERAGE CHARACTERISTIC CURVES: I_a/V_{g1}
TRIODE CONNECTED

Curves taken with short duration pulse



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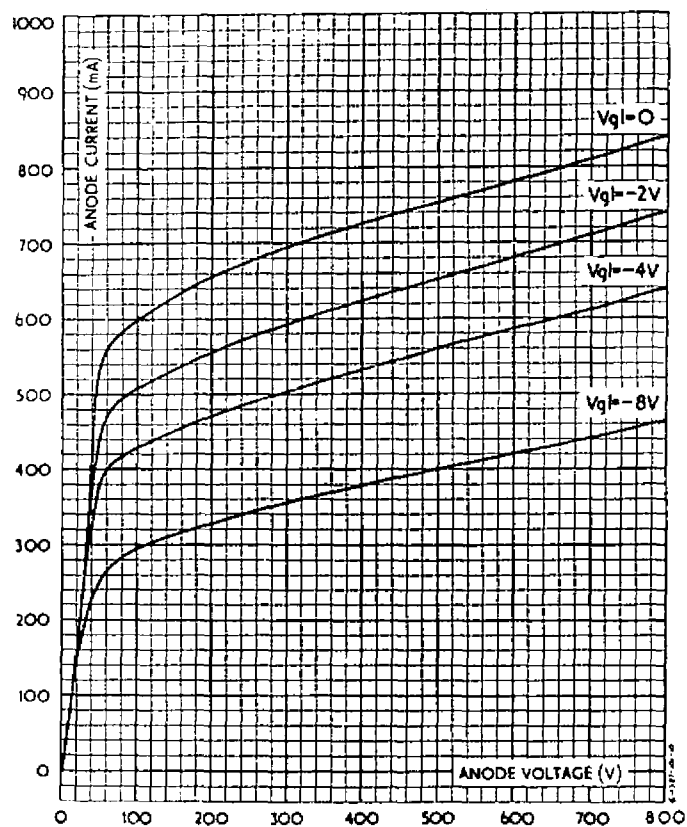
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AVERAGE CHARACTERISTIC CURVES: I_a/V_a
 $V_{g2}=100V$

Curves taken with short duration pulse



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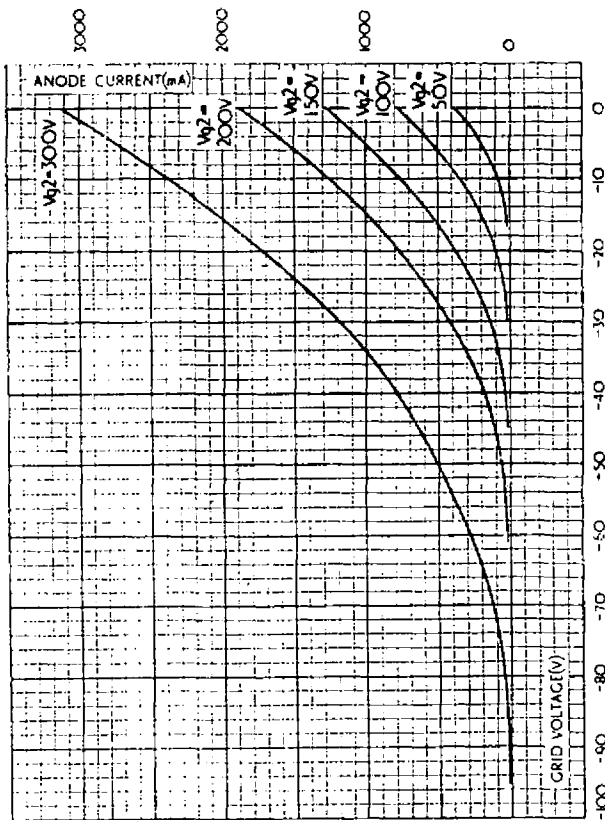
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AVERAGE CHARACTERISTIC CURVES: I_a/V_{g1}

$V_a = 600V$

Curves taken with short duration pulse



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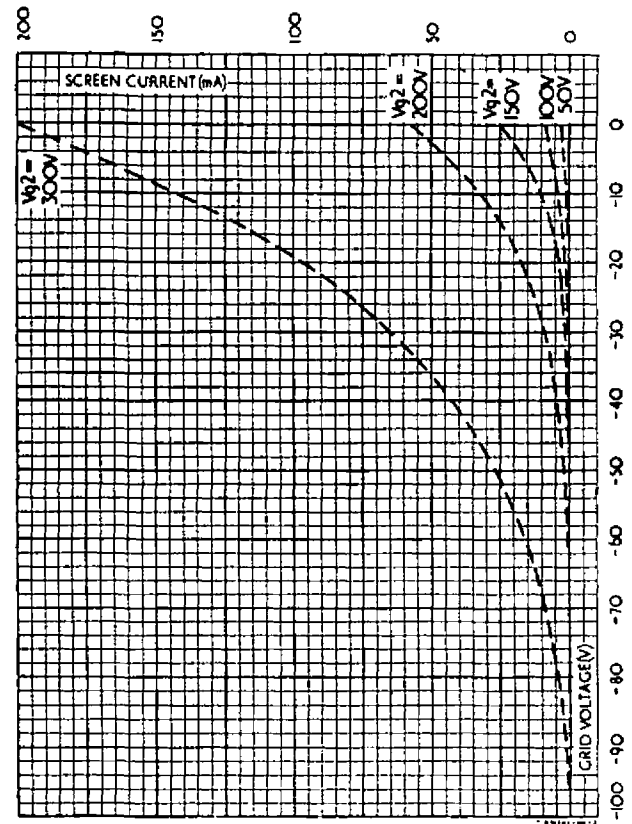
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AVERAGE CHARACTERISTIC CURVES: I_{g2}/V_{g1}

$V_a = 600V$

Curves taken with short duration pulse



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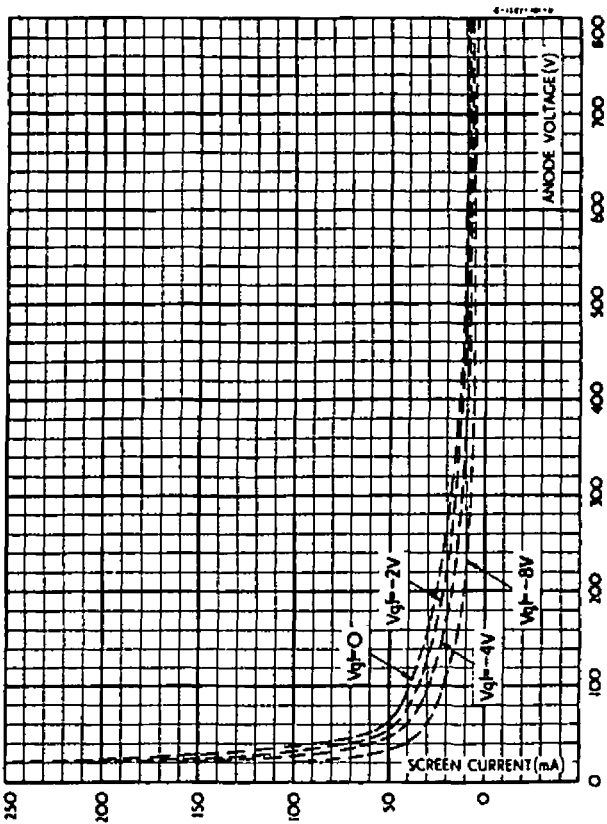
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AVERAGE CHARACTERISTIC CURVES : I_{g2}/V_a

$V_{g2}=100V$

Curves taken with short duration pulse



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