21N15

MERCURY VAPOUR THYRATRON

Indirectly heated

GENERAL

The 21N15 is a Mercury Vapour Thyratron suitable for welding and motor control. It has an indirectly heated oxide coated cathode.

RATING

Heater Voltage	V_h	5·0	V
Heater Current	I_h	5·0	A
Maximum Peak Forward Anode Voltage		1·5	kV
Maximum Peak Inverse Anode Voltage	P.I.V.(max)	1·25	kV
Maximum Negative Grid Voltage (before Conduction)		500	V
Maximum Negative Grid Voltage (during Conduction)		10	V
Maximum Mean Cathode Current (maximum averaging 15 seconds)	$I_{k(av)max}$	3·0	A
Maximum Peak Cathode Current (25c/s and above)	$I_{k(pk)max}$	20	
Maximum Surge Cathode Current (Fault protection maximum duration 0·1 seconds)		200	A
Maximum Critical Grid Current (at V_a = 1·0kV)		<10	μA
Maximum Power Supply Frequency		150	c/s
Condensed Mercury Temperature Limits	T_{Hg}	40 to 75	°C
Control Ratio		150:1	
De-ionisation Time (approx)		1,000	μs
Ionisation Time (approx)		10	μs
Anode Voltage Drop		16	V
Maximum Grid Resistance	$R_{g(max)}$	100	kΩ
Recommended Minimum Grid Resistance	$R_{g(min)}$	10	kΩ

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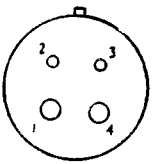
DIMENSIONS

Maximum Overall Length	199 mm
Maximum Diameter	57 mm
Maximum Seated Height	184 mm

MOUNTING POSITION—Vertical, Base down

CAP—CT3

BASE—UX4 (E.I.A. No. A4-10)



Viewed from free end of pins.

CONNECTIONS

Pin 1	Heater	h
Pin 2	Heater, Cathode	h, k
Pin 3	Grid	g
Pin 4	Heater, Cathode	h, k
Cap	Anode	a

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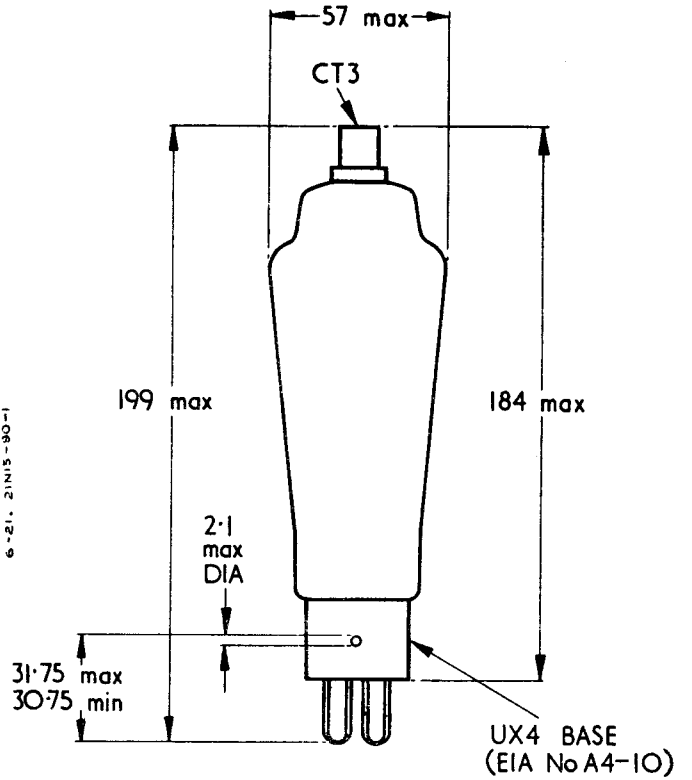

All dimensions in mm.

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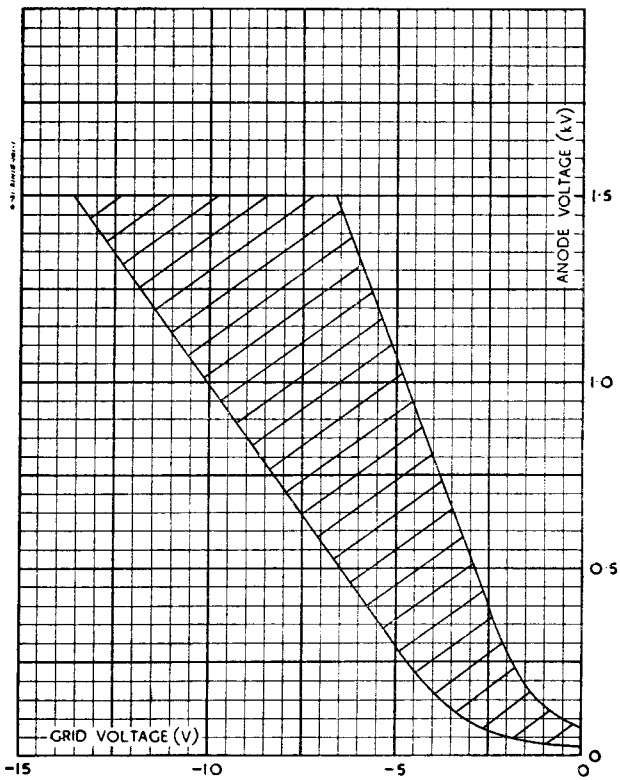
CHARACTERISTIC CURVES: V_a/V_g



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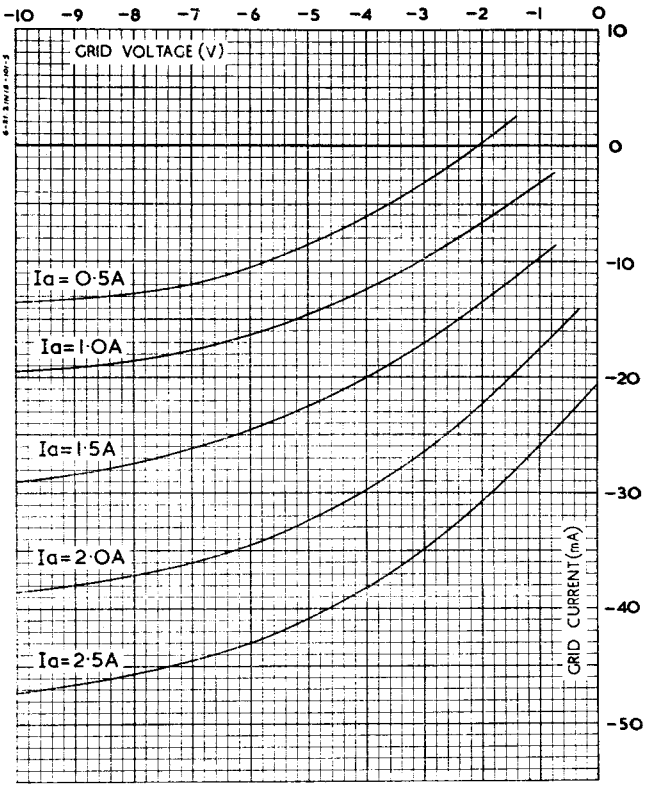
CHARACTERISTIC CURVES: I_g/V_g



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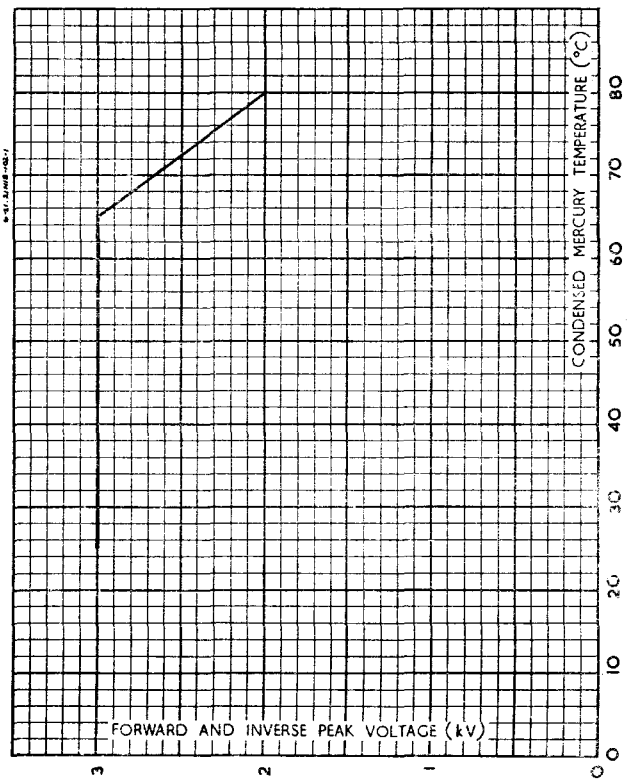
RATING CURVE: Forward Voltage, P.I.V./T_{Hg}

Fault Conditions



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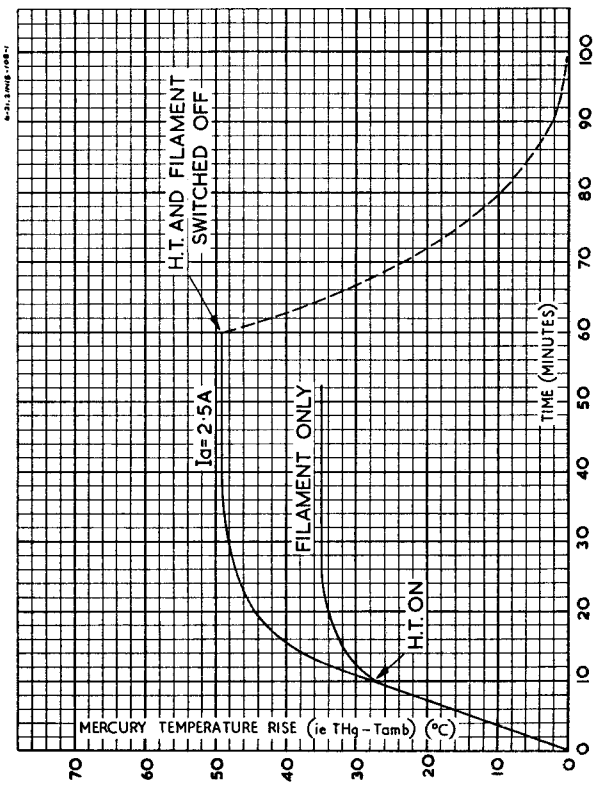
CHARACTERISTIC CURVES: T_{Hg}/t



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