



**Single-ended Water-Cooled
Triode High Power RF
Amplifier and Oscillator
3Q/331E**

CATHODE.

Tungsten filament		
Voltage (operating voltage marked on bulb)	27.5	V
Nominal current	600	A
Peak emission	100	A

RATING.

Amplification factor	$\left\{ \begin{array}{l} \text{Measured at} \\ V_a \text{ 16 kV} \\ V_{g_1} \text{—100V} \end{array} \right\}$	46
Impedance		750

DIRECT INTER-ELECTRODE CAPACITIES.

Grid to anode	98	pF
Grid to filament	145	pF
Anode to filament	7	pF

COOLING.

Water Jacket type	PL125,549/8459	
Normal water flow	50	galls/min.
Pressure drop across the jacket at normal flow	15	lbs/sq. in.
Maximum water pressure	50	lbs/sq. in.
Air cooling for filament and grid seals at a pressure of 7in. SWG	5	cu. ft./min.

DIMENSIONS.

Maximum overall length	104	cms.
Net weight	35	kgms.

MAXIMUM RATINGS.

Maximum direct anode voltage	17.5	kV
Maximum anode dissipation	160	kW
Maximum grid dissipation	3	kW
Maximum direct anode current	16	A
Maximum frequency for above ratings	22	Mc/s

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TYPICAL OPERATING CONDITIONS.

**Class B Audio Frequency Amplifier or modulator for balanced
2 valve operation.**

Direct anode voltage	12,500	V
Grid bias	—150	V
Direct anode current	12.4	A
Load resistance	1,080	Ω
Power output	185	kW

RADIO FREQUENCY.

**Class B Telephony. Modulated carrier applied to grid.
(Carrier conditions for use with 100% modulation.)**

Direct anode voltage	17,000	V
Grid bias	—325	V
Direct anode current	11	A
Power output	65	kW

**Class C Power Amplifier. Anode subjected to modulation.
(Carrier conditions for use with 100% modulation.)**

Direct anode voltage	12,000	V
Grid bias	—1,300	V
Direct anode current	11	A
Power output	90	kW

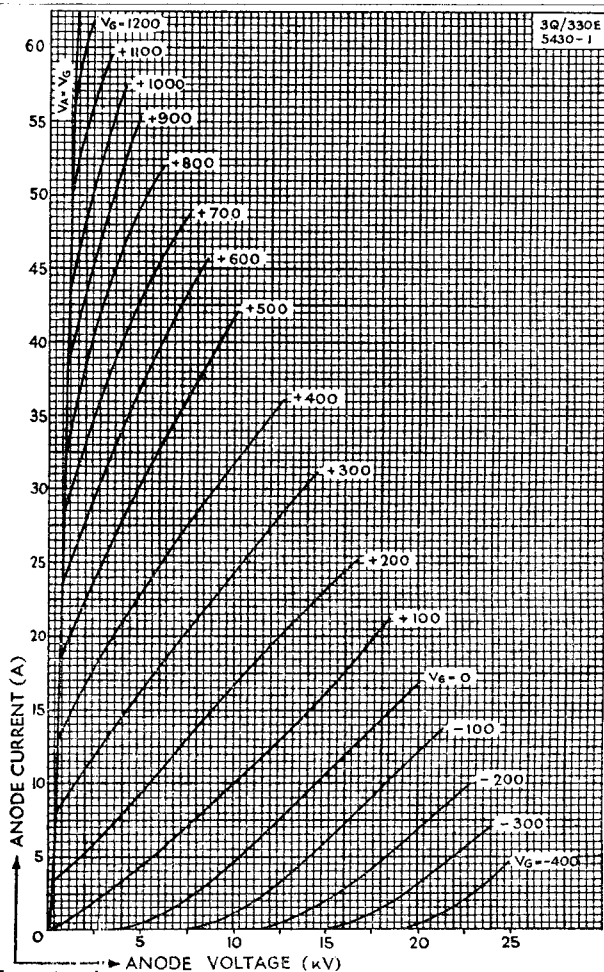
Class C. Amplifier or Oscillator, unmodulated.

Direct anode voltage	12,000	17,000	V
Grid bias	—800	—1,000	V
Direct anode current	11	15	A
Power output	95	180	kW



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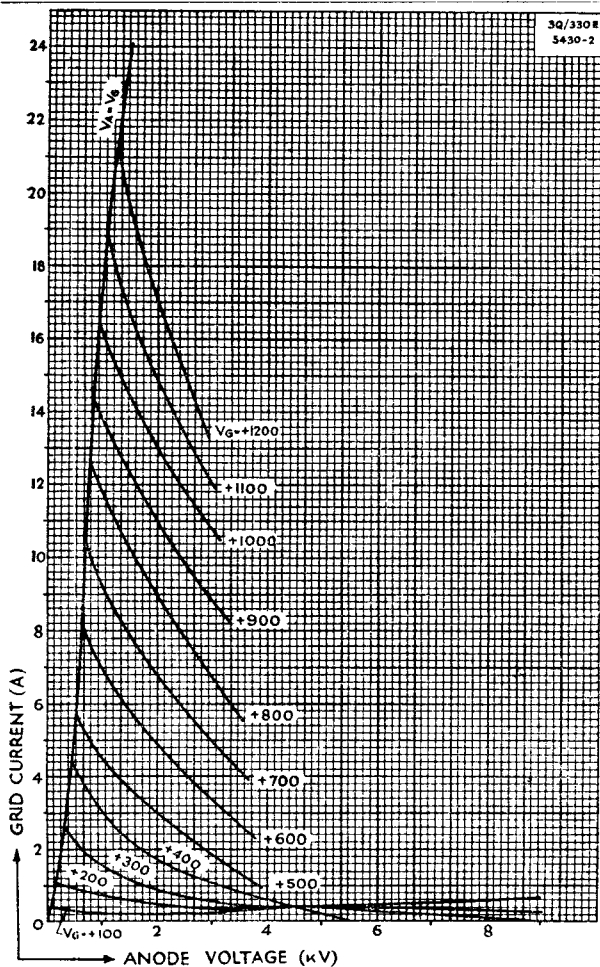
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3Q/331E

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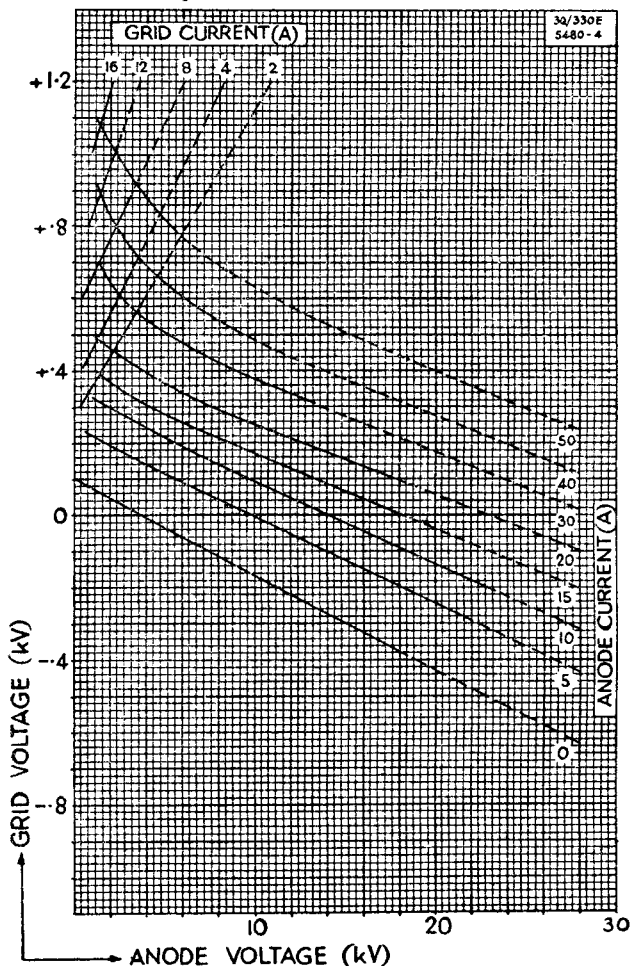
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3Q/331E-4



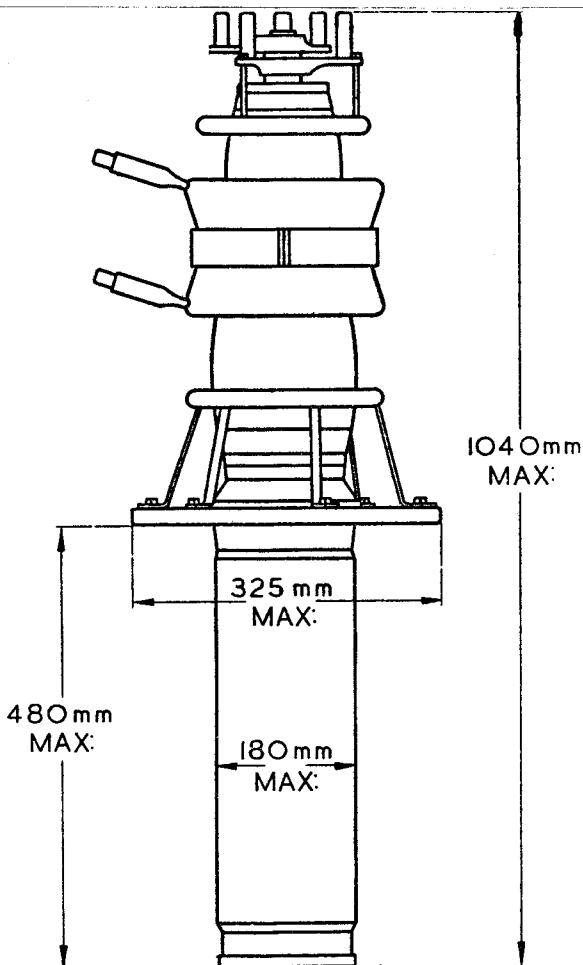
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3Q/331E-6