CATHODE.

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

RATING.

Amplification factor \{\begin{align*}
\text{Measured at} & \quad 46 \\
V_a & \quad 16 \text{ kV} \\
V_g & \quad 100 \text{ V}
\end{align*}\} \\
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 gallons/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 7 in. 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

Tentative data
May 1947
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 V, 17,000 V
Grid bias: -800 V, -1,000 V
Direct anode current: 11 A, 15 A
Power output: 95, 180 kW

Tentative data
May 1947
Single-ended Water-Cooled Triode High Power RF Amplifier and Oscillator

3Q/331E

Tentative data
May 1947

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

3Q/331E

ANODE VOLTAGE (kV) vs GRID CURRENT (A) diagram for various grid voltages.

Tentative data
May 1947
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3Q/331E

Tentative data
May 1947