CATHODE.
Thoriated tungsten filament.
Voltage 10.0 V
Nominal current 9.75 A
Peak emission 4.0 A

RATING.
Amplification factor $\mu$ Measured at $V_{a} 2,500 V \{ 16$
Impedance $I_{a} 120 \text{ mA} \{ 2,800 \text{ ohms}$

DIRECT INTER-ELECTRODE CAPACITIES.
Grid to anode 21 pF
Grid to filament 18 pF
Anode to filament 2 pF

DIMENSIONS.
Maximum overall length 433 mm.
Maximum diameter 102 mm.
Base. Special (see sketch)
Net weight 600 g.

MAXIMUM RATINGS.
Maximum direct anode voltage 3,000 V
Maximum direct anode current 0.375 A
Maximum anode dissipation 350 W
Maximum direct grid current 0.075 A
Maximum frequency for above ratings 7.5 Mc/s.
Maximum anode voltage for frequency 22.5 Mc/s. 1,000 V

It is recommended that the valve be operated in a vertical position. When operated horizontally the plane of the filament must be vertical.

July 1945
**Triode 4270A**

### TYPICAL OPERATING CONDITIONS.
#### AUDIO FREQUENCY.

**Class A. Amplifier and Modulator.**
- Direct anode voltage: 2,500 V, 2,000 V
- Grid bias: —130 V, —95 V
- Direct anode current: 0.120 A, 0.150 A
- Load impedance: 15,000 ohms, 10,000 ohms
- Undistorted output: 90, 70 W

**Class B. Power Amplifier or Modulator.** *(For balanced 2-valve operation.)*
- Direct anode voltage: 2,500 V, 2,000 V
- Grid bias: —140 V, —100 V
- Anode current per valve—zero signal: 60 mA
- Anode current per valve—maximum signal: 375 mA, 357 mA
- Peak A.F. grid drive voltage grid to grid: 480 V, 400 V
- Load resistance—anode to anode: 7,500 ohms, 5,700 ohms
- *Direct grid current per valve: 9 mA approx.
- Power output for 2 valves: 1,200 W, 940 W approx.

### RADIO FREQUENCY

**Class B. Power Amplifier Telephony.** *(Carrier conditions per valve for use with 100% modulation.)*
- Direct anode voltage: 3,000 V, 2,000 V
- Grid bias: —186 V, —155 V
- Direct anode current: 0.175 A, 0.210 A
- *Direct grid current: 0 mA approx.
- Power output: 175 W, 180 W

**Class C. Power Amplifier. Anode subject to modulation.** *(Carrier conditions per valve for use with 100% modulation.)*
- Direct anode voltage: 2,250 V, 1,750 V
- Grid bias: —320 V, —260 V
- Direct anode current: 0.300 A, 0.375 A
- Peak RF grid voltage: 420 V, 380 V
- *Direct grid current: 12 mA approx.
- Power output: 450 W, 430 W approx.

**Class C. Power Amplifier or Oscillator, unmodulated.**
- Direct anode voltage: 3,000 V, 2,000 V
- Grid bias: —270 V, —200 V
- Direct anode current: 0.375 A, 0.375 A
- Peak R.F. grid voltage: 385 V, 335 V
- *Direct grid current: 10 mA approx.
- Power output: 800 W, 540 W

*Subject to wide variation depending upon the impedance of the load circuit.*

*July 1945*
Triode

4270A

A

953 mm
DIA

223 mm

102 mm
DIA.

433 mm
MAX

223 mm

16 mm

953 mm DIA

635 mm DIA

24.6 mm

21.4 mm

F

PLANE OF FILAMENT

G

F

July 1945