

—Standard Valves—

4014-A
Valve

4014-A VALVE

DOUBLE ENDED WATER COOLED TRIODE.

SPECIFICATION.

Cathode.

Pure Tungsten filament.
Constant voltage type.

Dimensions.

Overall length $28\frac{1}{4}"$ (72 cms.)
Bulb diameter $3\frac{1}{2}"$ (8.9 cms.)
Net weight 7 lbs. (3,200 gms.)

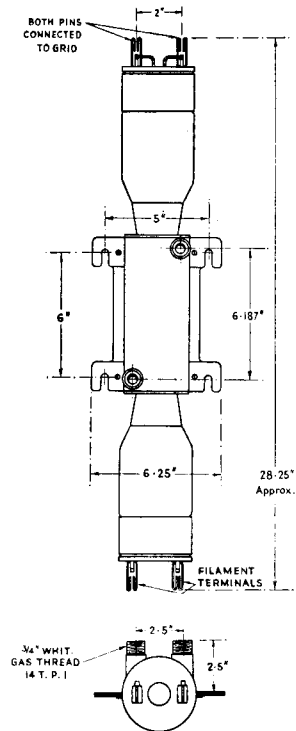
Water Flow.

5 gallons per minute.

Constants.

Filament voltage 21–22 volts
(exact filament voltage marked
on bulb)
Nominal filament current 41 amps.
Total emission 6 amps.
*Impedance 7,500 ohms
*Amplification factor 40
Grid–anode capacity 23 $\mu\mu\text{F}$.
Anode–filament capacity 6.5 $\mu\mu\text{F}$.
Grid–filament capacity 8 $\mu\mu\text{F}$.

* at anode current of 0.75 amp.



LIMITING CONDITIONS FOR SAFE OPERATION.

Maximum direct anode voltage	12,000 volts
Maximum direct anode voltage for anode modulation	9,000 volts
Maximum direct anode current	1.5 amps.
Maximum anode dissipation	12 Kw.
Maximum grid dissipation	200 watts
Maximum frequency for above ratings	15 Mc.
Maximum anode voltage for frequency of 22 Mc.	10,000 volts

Note :—No water jacket required as it forms part of the valve.

V.4014-A.1
Nov. 1937

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TYPICAL OPERATING CONDITIONS.

	Class B A.F. Amp. For balanced 2 valve circuit
Direct anode voltage	10,000 volts
Grid bias	—125 to —175 volts
Direct anode current per valve—zero signal	0.25 amps.
Direct anode current per valve—maximum signal	1.2 amps.
Load resistance—anode to anode	3,700 ohms
Maximum signal output—2 valves	13.2 Kw.
Anode dissipation	5.4 Kw.

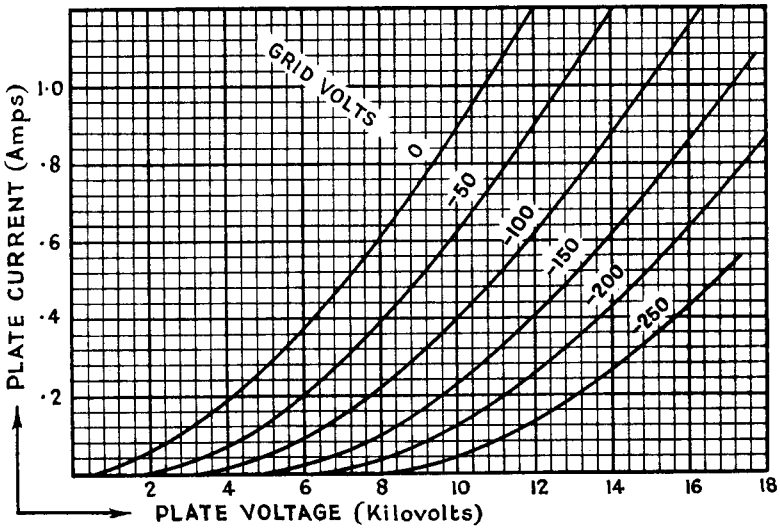
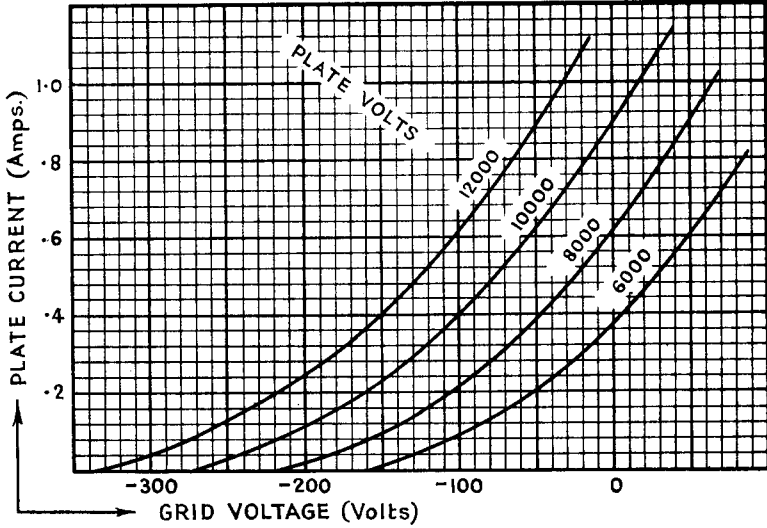
RADIO FREQUENCY OPERATION.

	Class B Telephony	Class C Telephony	Class C Telegraphy
	Modulated Carrier applied to grid	Subject to anode modulation	Unmodulated
Direct anode voltage	10,000	7,000	10,000 volts
Direct anode current	0.75	0.75	1.5 amps.
Grid bias	—230	—400	— 700 to —1,000 volts
Anode dissipation	5	1.75	5 Kw.
Carrier output	2.5	3.5	10 Kw.

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These curves are taken with A.C. filament heating, grid and anode voltages being referred to the centre point of the filament.



V.4014-A.2
Nov. 1937

PRINTED IN
ENGLAND