

—Standard Valves—

4047-B
Valve

4047-B VALVE

(Replaces the 4047-A Valve
which has now been abandoned)

SINGLE ENDED
WATER COOLED TRIODE.

Cathode.

Pure tungsten filament.
Constant voltage type.

Water Jacket.

Type MS.1362 Grp. 1 for anode dissipation
up to 6 Kw.

Type MS.1362 Grp. 20 for anode dissipation
up to 6 Kw., used for below panel
connection.

Types 223 LU 1A or PL 122011 (3001-A) for
anode dissipation over 6 Kw.

Water Flow.

5 gallons per minute.

Dimensions.

Max. overall length $21\frac{1}{4}"$ (54 cms.)
Max. bulb diameter $3\frac{9}{16}"$ (9.05 cms.)
Net weight $3\frac{3}{4}$ lbs. (1,700 gms.)

Constants.

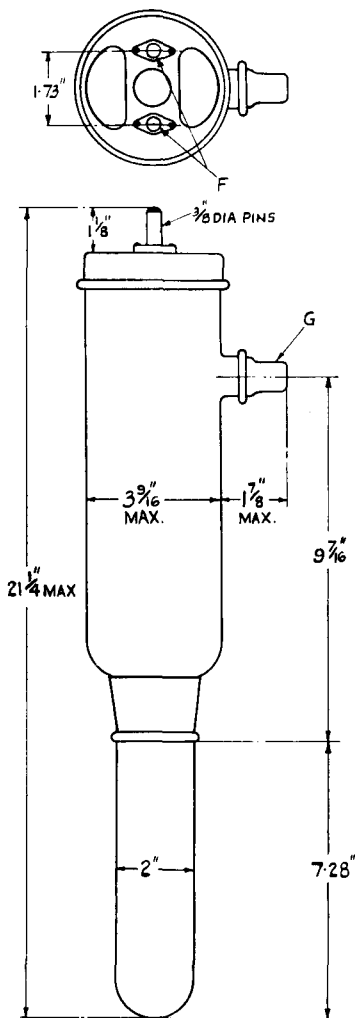
Filament voltage 18—20 volts
(exact filament voltage
marked on bulb)
Nominal filament current 59 amps.
Total emission 6 amps.
*Impedance 7,500 ohms
*Amplification factor 40
*Mutual conductance 5.3 mA. per volt
Grid-anode capacity 24 $\mu\mu\text{F.}$
Anode-filament capacity 2 $\mu\mu\text{F.}$
Grid-filament capacity 17 $\mu\mu\text{F.}$

* at anode current of 0.75 amp.

LIMITING CONDITIONS FOR SAFE OPERATION.

Maximum direct anode voltage	13,000 volts
Maximum direct anode voltage for anode modulation	10,000 volts
Maximum direct anode current	1.5 amp.
Maximum anode dissipation	10 Kw.
Maximum grid dissipation	200 watts
Maximum frequency for above ratings	3 Mc.
Maximum anode voltage for frequency of 6 Mc.	7,500 volts

NOTE.—The characteristics of this valve are identical with those of the 4047-A Valve but the grid lead has been brought out through the side of the bulb. When the 4047-B is used to replace the 4047-A new grid connectors will be required. These connectors type ES.5706-1 should be ordered with the valve.



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TYPICAL OPERATING CONDITIONS.

	Class B A.F. Amp. or Mod. For balanced 2 valve circuit
Direct anode voltage	10,000 volts
Grid bias	—120 to —170 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	7,500 ohms
Maximum signal output—2 valves	13.2 Kw.
Anode dissipation	5.4 Kw.

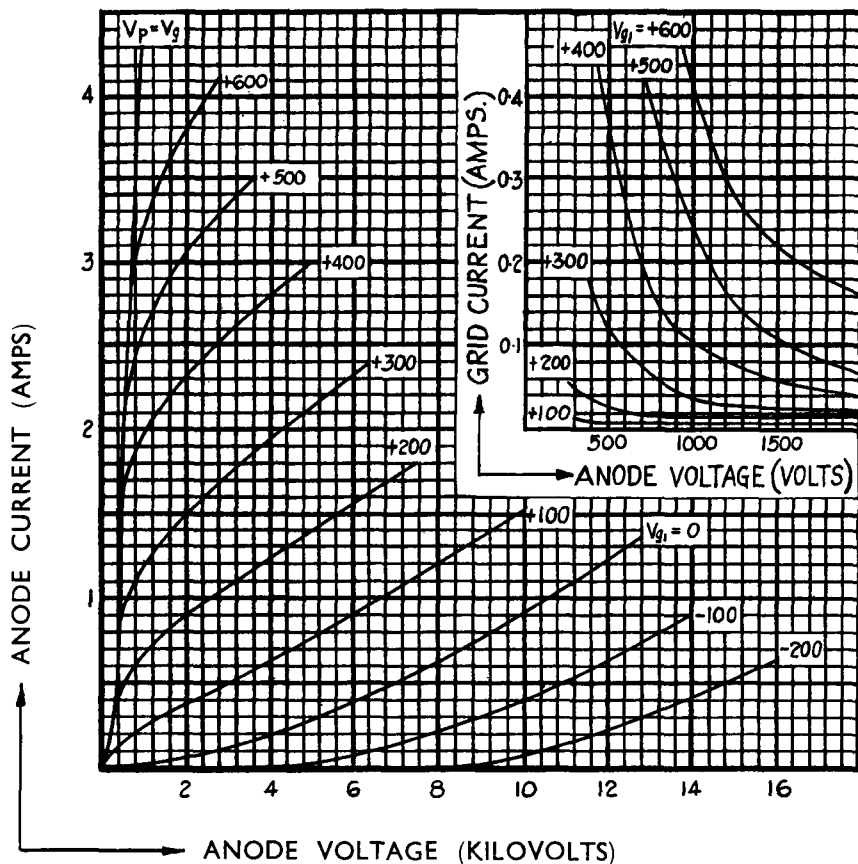
RADIO FREQUENCY OPERATION.

	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	—200	—300	—500 to —750 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.



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