

—Standard Valves—

VALVE TYPE 5C/450-A

PENTODE.

SPECIFICATION.

Cathode.

Thoriated tungsten filament.
Constant voltage type.

Base.

Diameter of pins and pin spacing identical with that of extra large 4 pin bayonet base.

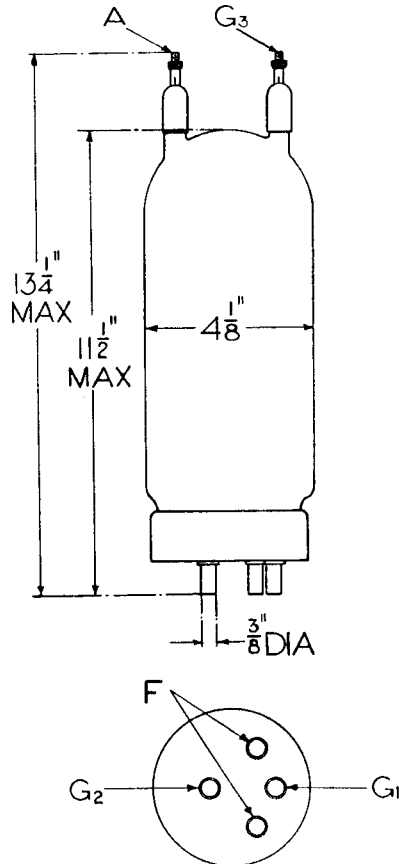
Dimensions.

Max. overall length	13 $\frac{1}{4}$ " (33.6 cm.)
Max. diameter	4 $\frac{1}{8}$ " (10.5 cm.)
Net weight	2 lb. (940 gm.)

Constants.

Filament voltage	10 volts
Nominal filament current	12.5 amps.
Total emission	5 amps.
*Mutual conductance	6.5 mA. per volt
Grid-anode capacity	0.2 $\mu\mu\text{F}$.
Input capacity	26 $\mu\mu\text{F}$.
Output capacity	39 $\mu\mu\text{F}$.

* at $V_p = 3,000$, $V_{g2} = 600$ volts,
 $I_p = 0.2$ amps.



LIMITING CONDITIONS FOR SAFE OPERATION.

Maximum direct anode voltage	3,000 volts
Maximum direct screen voltage	650 volts
Maximum anode dissipation	450 watts
Maximum screen dissipation	100 watts
Maximum frequency for above ratings	10 Mc.
Maximum anode voltage for frequency of 20 Mc.	2,250 volts

For intermediate or higher frequencies the anode voltage should be reduced proportionately.

Tentative data
(500)

W.5C/450-A.1
Jan., 1940

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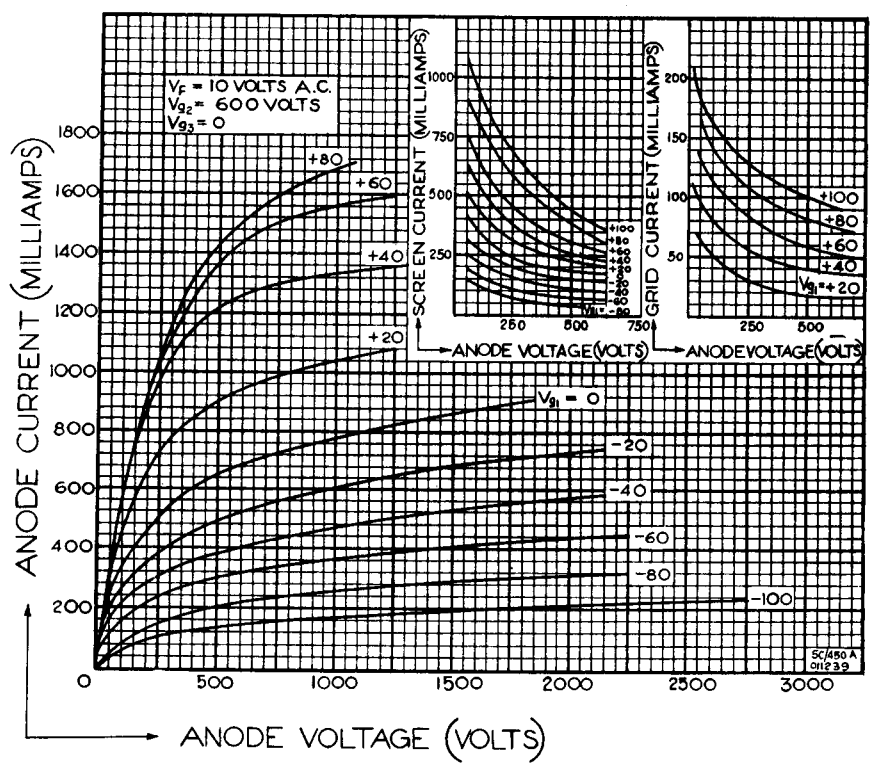
TYPICAL OPERATING CONDITIONS.

	Unmodulated Amplifier for Frequencies below 12 Mc.	
Anode voltage	2,000	2,500 volts
Screen voltage	650	600 volts
Suppressor voltage	+90	+110 volts
Grid bias—Grid resistor	1,000	3,500 ohms
Fixed bias	—110	—100 volts
Total	—136	—165 volts
Anode current	520	590 mA.
Screen current	80	80 mA.
Grid current	16	19 mA.
Screen resistor	—	2,500 ohms
Driving power (approx.)	3	4.5 watts
Output power	760	1,070 watts
Efficiency	73	73 %

	Class C Amplifier— Suppressor Grid Modulation.
Anode voltage	2,500 volts
Screen voltage	530 volts
Suppressor voltage	—90 volts
Grid bias—Grid resistor	3,500 ohms
Fixed bias	—100 volts
Total	—165 volts
Anode current	300 mA.
Screen current	110 mA.
Grid current	19 mA.
Carrier output	300 watts
Screen resistor	2,500 ohms
Distortion less than 5% at 80% modulation.	

NOTE.—This Valve operates at a high temperature. Free circulation of air is absolutely essential. When the valve is housed in a confined space, such as a cabinet, circulation of air should preferably be provided by means of a fan. The inside of cabinet walls should be matt finished and should, on no account, be polished.

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