

# —Standard Valves—

3A/102-B

## VALVE TYPE 3A/102-B

(Previously coded VLS.407 valve).

TRIODE.

### SPECIFICATION.

#### Cathode.

Indirectly heated oxide coated.  
Constant current type.

#### Base.

Small British 5 pin.  
Anode connected to top cap type B.

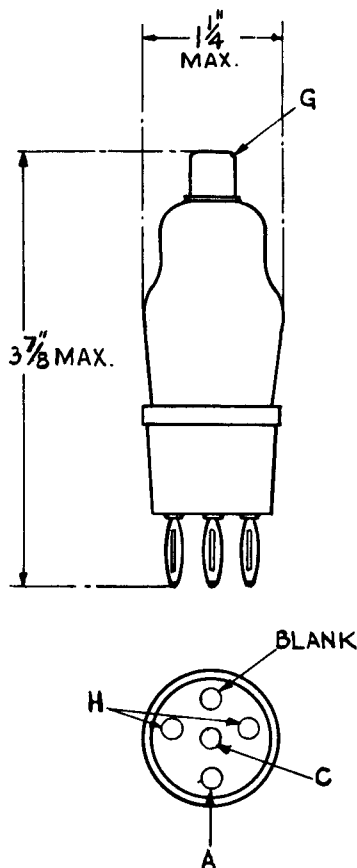
#### Dimensions.

Max. overall length  $3\frac{7}{8}"$  (9.8 cms.)  
Max. bulb diameter  $1\frac{1}{4}"$  (3.2 cms.)

#### Constants.

Heater current 1.0 amp.  
Nominal heater voltage 2.1 volts  
\*Amplification factor 30  
\*Mutual conductance 0.5 mA. per volt  
\*Impedance 60,000 ohms  
Grid-anode capacity  $1.7 \mu\text{F}$ .  
Grid-cathode capacity  $1.5 \mu\text{F}$ .  
Anode-cathode capacity  $3.9 \mu\text{F}$ .

\* at  $V_p = 130$  volts,  $I_p = 0.75$  mA.



### LIMITING CONDITIONS FOR SAFE OPERATION.

Maximum direct anode voltage 190 volts  
Maximum direct anode current 1.5 mA.

Tentative data

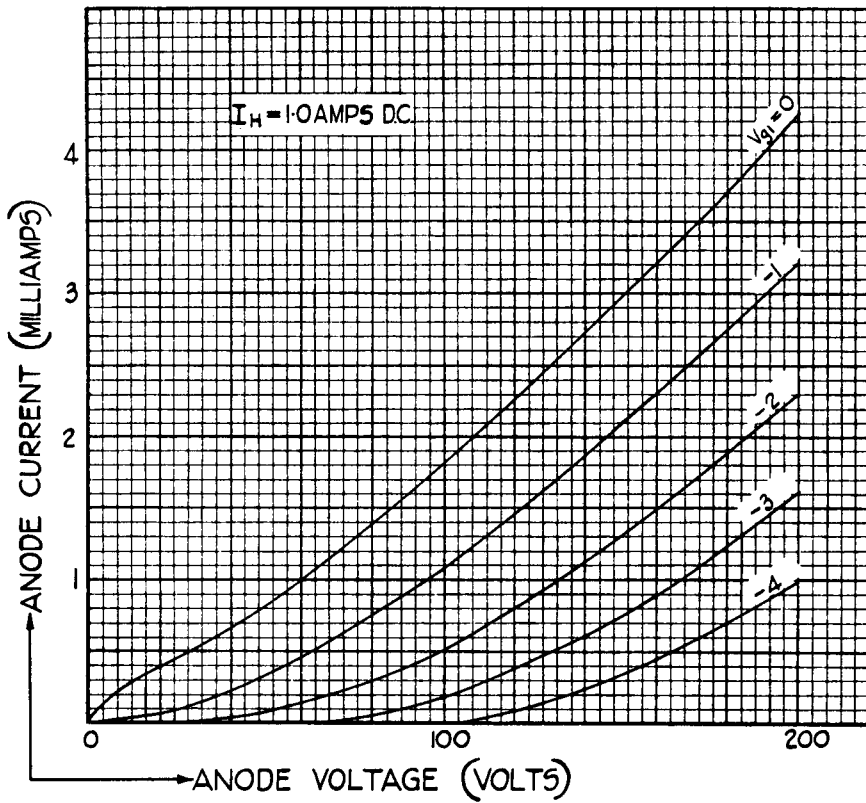
W.3A/102-B.1  
March, 1939

*—Standard Valves—*

**TYPICAL OPERATING CONDITIONS.**

| Anode<br>voltage<br>volts | Grid<br>Bias<br>volts | Anode<br>Current<br>mA. | Load<br>Resistance<br>ohms | Output<br>voltage<br>peak volts | Total harmonic<br>distortion in<br>db below<br>fundamental |
|---------------------------|-----------------------|-------------------------|----------------------------|---------------------------------|------------------------------------------------------------|
| 130                       | —2                    | 1·0                     | 80,000                     | 27                              | 35                                                         |
|                           |                       |                         | 160,000                    | 38                              | 32                                                         |
|                           |                       |                         | 240,000                    | 41                              | 31                                                         |
| 130                       | —1                    | 1·7                     | 50,000                     | 15                              | 34                                                         |
|                           |                       |                         | 100,000                    | 20                              | 31                                                         |
|                           |                       |                         | 150,000                    | 23                              | 32                                                         |
| 160                       | —3                    | 0·9                     | 80,000                     | 40                              | 36                                                         |
|                           |                       |                         | 160,000                    | 57                              | 32                                                         |
|                           |                       |                         | 240,000                    | 62                              | 32                                                         |
| 160                       | —1                    | 2·3                     | 40,000                     | 15                              | 33                                                         |
|                           |                       |                         | 80,000                     | 21                              | 32                                                         |
|                           |                       |                         | 120,000                    | 24                              | 31                                                         |
| 190                       | —3                    | 1·4                     | 50,000                     | 42                              | 36                                                         |
|                           |                       |                         | 100,000                    | 63                              | 32                                                         |
|                           |                       |                         | 150,000                    | 68                              | 31                                                         |
| 190                       | —2                    | 2·1                     | 40,000                     | 30                              | 33                                                         |
|                           |                       |                         | 80,000                     | 43                              | 31                                                         |
|                           |                       |                         | 120,000                    | 48                              | 32                                                         |

# —Standard Valves—



Tentative data

W.3A/102-B.2  
March, 1939

PRINTED IN  
ENGLAND