

VALVE ELECTRONIC **CV.249.**GENERAL POST OFFICE: E-IN-C (S )

(POVT 72)

|                                            |                                         |                                         |
|--------------------------------------------|-----------------------------------------|-----------------------------------------|
| Specification: <b>G.P.O./CV249/Issue 4</b> | <u>SECURITY</u>                         |                                         |
| Dated: <b>12.12.46</b>                     | <u>Specification</u>                    | <u>Valve</u>                            |
| To be read in conjunction with K 1001      | <del>Restricted</del><br><i>Unclass</i> | <del>Restricted</del><br><i>Unclass</i> |

—&gt; indicates a change

|                                     |  |  |  |                                      |  |                  |  |             |  |
|-------------------------------------|--|--|--|--------------------------------------|--|------------------|--|-------------|--|
| <u>TYPE OF VALVE:</u> Triode        |  |  |  | <u>MARKING</u>                       |  |                  |  |             |  |
| <u>CATHODE:</u> Directly heated     |  |  |  | See K1001/4                          |  |                  |  |             |  |
| <u>ENVELOPE:</u> Unmetallised glass |  |  |  |                                      |  |                  |  |             |  |
| <u>PROTOTYPE</u> 4019A              |  |  |  |                                      |  |                  |  |             |  |
| <u>RATING</u>                       |  |  |  | <u>BASE</u>                          |  |                  |  |             |  |
|                                     |  |  |  | Bayonet cap 4-pin (BC4)              |  |                  |  |             |  |
|                                     |  |  |  | See drawing on page 3<br>and Note B. |  |                  |  |             |  |
|                                     |  |  |  | <u>CONNEXIONS</u>                    |  |                  |  |             |  |
|                                     |  |  |  | <u>Pin</u>                           |  | <u>Electrode</u> |  |             |  |
| Filament current (A) 0.25           |  |  |  | 1                                    |  | Grid             |  |             |  |
| Nominal filament voltage (V) 4.0    |  |  |  | 2                                    |  | Filament -       |  |             |  |
| Max. anode voltage (V) 190          |  |  |  | 3                                    |  | Filament +       |  |             |  |
| Anode impedance (ohms) 5,500        |  |  |  | 4                                    |  | Anode            |  |             |  |
| Amplification factor 7.0            |  |  |  |                                      |  |                  |  |             |  |
| Mutual conductance (mA/V) 1.27      |  |  |  |                                      |  |                  |  |             |  |
|                                     |  |  |  |                                      |  |                  |  |             |  |
| <u>CAPACITANCES (pF)</u>            |  |  |  | <u>DIMENSIONS</u>                    |  |                  |  |             |  |
|                                     |  |  |  | See K1001/A1/D1                      |  |                  |  |             |  |
| Cag (max) 6.5                       |  |  |  | <u>Dimension</u>                     |  | <u>Min.</u>      |  | <u>Max.</u> |  |
| Cae (max) 6.0                       |  |  |  | A (mm)                               |  | -                |  | 121         |  |
| Cge (max) 8.0                       |  |  |  | B (mm)                               |  | -                |  | 61          |  |

NOTES

- A. Measured with  $V_a = 130$ , and  $V_g = -8$
- B. The axis of the bayonet locating pin shall lie within  $25^\circ$  of the plane of the filament.

TESTS

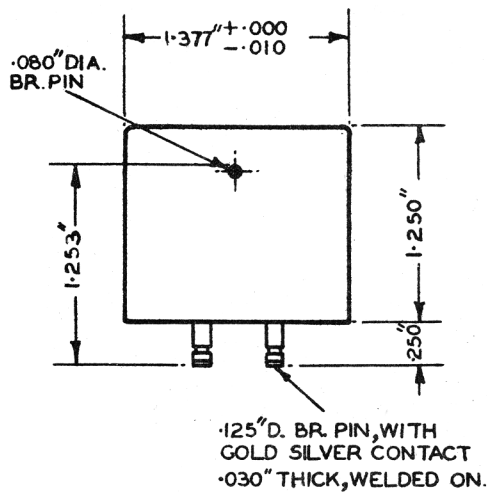
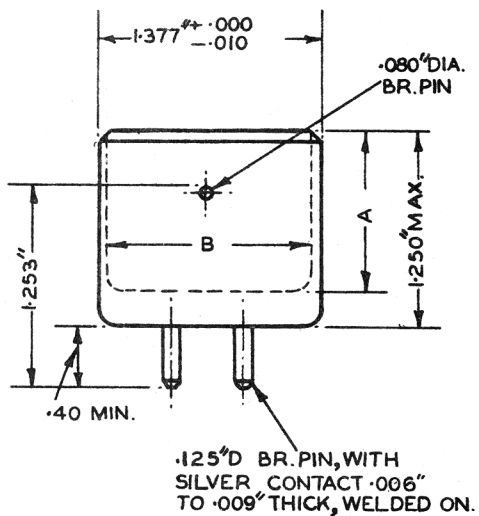
To be performed in addition to those applicable in K1001

|     | TEST CONDITIONS  |                  |                                  | TEST                     | LIMITS |        | No.<br>Tested    | Note |
|-----|------------------|------------------|----------------------------------|--------------------------|--------|--------|------------------|------|
|     |                  |                  |                                  |                          | Min.   | Max.   |                  |      |
| (a) | See K1001/AIII   |                  |                                  | <u>CAPACITANCES (pF)</u> |        |        |                  |      |
|     | Links<br>to H.P. | Links<br>to L.P. | Links<br>to E                    |                          |        |        |                  |      |
|     | 4                | 1                | 2,3,5,6,7,8,<br>9,10,TC1,<br>TC2 |                          | -      | 6.5    | 6<br>per<br>week |      |
|     | 4                | 2,3              | 1,5,6,7,8,9,<br>10,TC1,TC2       |                          | -      | 6.0    | 6<br>per<br>week |      |
|     | 1                | 2,3              | 4,5,6,7,8,9,<br>10,TC1,TC2.      |                          | -      | 8.0    | 6<br>per<br>week |      |
|     | If(A)            | Va               | Vg                               |                          |        |        |                  |      |
| (b) | 0.25             | -                | -                                | Vf (V)                   | 3.7    | 4.3    | 100%             |      |
| (c) | 0.25             | 130              | -20                              | Ia (μA)                  | -      | 200    | 100%             |      |
| (d) | 0.25             | 130              | -8                               | μ                        | 6.0    | 8.0    | 100%             |      |
| (e) | 0.25             | 130              | -8                               | Ra"x" (ohms)             | 4,500  | 6,500  | 100%             |      |
| (f) | 0.23             | 130              | -8                               | Ra"y" (ohms)             | -      | 1.2"x" | 100%             | 1    |
| (g) | 0.25             | 130              | -8                               | Reverse Ig (μA)          | -      | 0.5    | 100%             |      |

NOTE

1. Re-adjust If with Va = Vg = 0

## OUTLINE DRAWING



INTERNAL DIMENSIONS A & B  
TO SUIT MANUFACTURERS  
REQUIREMENTS.

**MATERIAL:** - NI. P. BRASS CYLINDER  
WITH MOULDED INTERIOR.

FIG. 1. MOULDED TYPE.

FIG. 2. METAL SHELL TYPE.

SPECIFICATION GPO/CV249/ISSUE 4

AMENDMENT No.1

Page 1.

DIMENSIONS

Amend the maximum limit dimension "A" to read 118mm.

Amend the maximum limit dimension "B" to read 46mm.

T.V.C. Office  
for G.P.O.)

November, 1949.

N 8101