ADMIRALTY SIGNAL ESTABLISHMENT

# VALVE ELECTRONIC CV173

Specification AD/CV173/Issue 4.
Dated 11.6.47.
To be read in conjunction with K1001.

| SECURITY | |
|---|---|
| Specification | Valve |
| Restricted | Unclassified |

TYPE OF VALVE:- Video Amplifier Pentode.
CATHODE:- Indirectly heated.
ENVELOPE:- Glass with metal shield can.
PROTOTYPE:- DDR2.

| MARKING | PACKING |
|---|---|
| See K1001/4 | See K1001/7 |

BASE
B9G
See K1001/AIV/D1.

| Pin | Electrode |
|---|---|
| 1 | H |
| 2 | G2 |
| 3 | A |
| 4 | G3 |
| 5 | Int. shield |
| 6 | C |
| 7 | G1 |
| 8 | Int. shield |
| 9 | H |

DIMENSIONS
See K1001/AI/D2, except

| Dimension | Min. | Max. |
|---|---|---|
| E mm | - | 83 |

See Note E below

## RATING

| | | | Note |
|---|---|---|---|
| Vh | (V) | 6.3 | |
| Ih | (A) | 0.95 | |
| Max. Va | (V) | 300 | A |
| Max. Va | (V) | 500 | B |
| Max. Vg2 | (V) | 250 | A |
| Max. Vg2 | (V) | 300 | B |
| Max. Wa | (W) | 10 | |
| Max. Wg2 | (W) | 2 | |
| Max. grid series R | (MΩ) | 0.7 | |
| Max. Vh - c | (V) | 150 | |
| Max. Peak Ic | (A) | 1.5 | C |
| Max. Ic | (mA) | 70 | |

## CAPACITANCES (pF. approx).

| | | |
|---|---|---|
| Cae | 12.5 | D |
| Cge | 15 | D |
| Cag | 0.15 | |

## TYPICAL OPERATING CONDITIONS

| | | | | |
|---|---|---|---|---|
| Va | (V) | 250 | 250 | 250 |
| Ia | (mA) | 40 | 10 | 10 |
| Vg2 | (V) | 250 | 250 | 150 |
| gm | (mA/V) | 12 | 6.0 | 7.0 |
| Ig2 | (mA) | 5.5 | 1.0 | 1.0 |
| Vg1 | (V) | -4.5 | -7.0 | -4.0 |
| Ra | (KΩ) | 55 | 100 | 100 |
| μ | (G1/G2) | 28 | 27 | - |
| Cath. R | (Ω) | 100 | 360 | |

## NOTES

A. DC continuous rating.
B. For pulsed grid application, during "no current" state.
C. For pulse of 50 μS at 500 p/S.
D. Including capacity to can.
E. The skirt of the valve i.e. the dimension "M" in K1001/AI/D2, shall be free from paint, to allow good electrical contact to be made.

TESTS

To be performed in addition to those applicable in K1001.

| | Test Conditions | | | | | Test | Limits | | No. Tested |
|---|---|---|---|---|---|---|---|---|---|
| | Vh (V) | Va (V) | Vg2 (V) | Vg3 (V) | Vg1 (V) | | Min. | Max. | |
| a | 6.3 | | | | | Ih (A) | 0.85 | 1.05 | 100% or S |
| b | 6.3 | Electrode strapped V = 30 V. RMS. AC. | | | | Ia (mA) | 140 | | 100% |
| c | 6.3 | 250 | 250 | 0 | -2 | Ia (mA) | 50 | 100 | 100% |
| d | 6.3 | 250 | 250 | 0 | -6 | Ia (mA) | 15 | 31 | 100% |
| e | 6.3 | 250 | 250 | 0 | -10 | Ia (mA) | - | 5 | 100% |
| f | 6.3 | 250 | 250 | 0 | -4.5 | Reverse Ig1 (μA) | - | 1.5 | 100% |
| | R = 0.1 Megohm in grid lead | | | | | | | | |
| g | 6.3 | 250 | 250 | 0 | 0 | Ia (mA) | 80 | - | Type Approval |