ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATION GPO/CV7048
ISSUE 1 DATED MAY 1959

AMENDMENT NO. 1

Page 1

Under heading PROTOTYPE

Delete: "(double ended)"

Under heading MARKING

Delete: existing wording

Substitute: "see K1007/4"

Under heading NOTES

Add Note C as follows:-

"C. When CV7048 is produced from OA5 the CV7048 will be a single ended OA5 with the leads arranged for double-ended connection".

M/D.

Page 4. Dimensional Diagram

Amend lead length from "40 mm MIN"
to "35 mm MIN"

October 1960.

G.P.O.

VALVE ELECTRONIC

(SEMICONDUCTOR) **CV 7048**

GENERAL POST OFFICE: E-IN-C(S)

Specification: G.P.O./CV.7048

Issue 1. Dated May, 1959.

To be read in conjunction with K1007
Mandatory Sections. 1, 2, 3, 4, 5.1, 5.2, 5.3, 9, 15.
Other Sections and Appendices as called up by this Specification.

SECURITY	
Specification	Valve
Unclassified	Unclassified

→ Indicates a change

TYPE OF VALVE

Gold Bonded Germanium Diode, with double-ended Mechanical Structure.

PROTOTYPE

OA5 (double ended)

MARKING

CV Number
Manufacturers code and Red mark indicating cathode.

RATINGS

(Not for use of Inspectorate)
All limiting values are absolute

		Note
Max. Reverse Voltage at Max. dissipation (V)	50	
Max. Peak forward current at 55°C ambient air (mA)	350	
Max. forward d.c. current at 55°C ambient air (mA)	50	
Max. junction temperature (°C)	75	
Max. reverse current at 55°C ambient air (μA)	50	A
Min. storage temperature (°C)	-40	
Max. storage temperature (°C)	+75	
Max. ambient temperature (°C)	75	
Max. Total thermal resistance when mounted with leads each 25 m.m. long (°C/mW)	0.8	
Max. capacitance at -10V (pF)	5	

DIMENSIONS

See Dimensional Diagram on Page 4.

MOUNTING POSITION

Any

BODY

The body shall be insulated from all leads or alternatively shall be covered with an approved insulated sleeve.

NOTES

A. Applied voltage = -50V

B. The Joint Service Catalogue number is 5960-99-037-2077

PACKAGING

K1007/14

CV 7048

TESTS

K 1007	Test	Test Conditions	AQL %	Insp. Level	Symbol	Limits Min	Limits Max.	Units
	Group A							
5.B.4	Forward Voltage	Ia = 100 mA		100%	Va	-	0,85	V
5.B.2	Reverse Current	Va = -100V		100%	Ir	-	30	µA
	GROUP B	Omitted						
	GROUP C							
5.B.3	Reverse Current	Tamb = 55 ± 2°C Va = -50V	2.5	1A	Ir	-	50	µA
5.B.5.1	Capacitance	Va = -10 ± 1V	6.5	1C	Cac	-	5	pF
	GROUP D							
10.4	Photo-sensitivity (Change in reverse current due to illumination)	Va = -100V	2.5	1	ΔIr	-	5	µA
	GROUP E							
10.2	Temperature cycling	Three cycles -40°C to +75°C. No voltage Note 1		1C				
10.3	Climatic cycling	No voltages Note 1						
	Post Temperature and Climatic cycling tests	Combined AQL	10					
8	Inoperatives	No. voltages	6.5					
	Forward Voltage	As in Group A	6.5		Va		0.9	V
	Reverse Current	As in Group A	6.5		Ir	-	40	µA
	Photo-sensitivity	As in Group D	6.5		ΔIr	-	5	µA
11.3	Fatigue	No Voltages		1C				
11.4	Shock	No Voltages Hammer angle = 60°		TA				
	Post Fatigue and Shock tests	Combined AQL	10					
8	Inoperatives	No Voltages	6.5					
	Forward Voltage	As in Group A	6.5		Va		0.9	V
	Reverse Current	As in Group A	6.5		Ir	-	40	µA
10.1	Lead Fragility	No. Voltages Note 2	6.5	1C				
11.5	Soldering	No. Voltages	6.5	1C				

CV 7048

TESTS (Contd.)

K 1007	Test	Test Conditions	AQL %	Insp. Level	Symbol	Limits Min.	Limits Max.	Units
	GROUP F	Tamb = 55 ± 2°C		1A				
13	LIFE	Each lead length 25 ± 5 m.m. to Mounting terminals. 50 c/s half wave circuit with resistive load Ia = 16 mA d.c. P.I.V. = 50V						
13.3	Life Test End Point 1000 Hours	Combined AQL	10					
	Forward Voltage	As in Group A	6.5		Va	-	0.9	V
	Reverse Current	As in Group A	6.5		Ir	-	40	µA
8	Inoperatives	No Voltages	6.5					
13.3.3.	Life Test End Point 240 Hours							
	Forward Voltage	As in Group A	-		Va	-	0.9	V
	Reverse Current	As in Group A	-		Ir	-	40	µA
8	Inoperatives	No Voltages						
13.4	Storage Life (1)	t = 150 hours T = -40°C		1				
13.5	Storage Life (2)	t = 150 hours T = +75°C		1				
	Post Storage Life Test							
	Repeat Group A Tests	Combined AQL for Storage Life (1)	2.5					
		Combined AQL for Storage Life (2)	4.0					
	GROUP G							
	Re-test after 28 days holding period			100%				
8	Inoperatives	No Voltages	0.5					
	Forward Voltage	As in Group A	2.0		Va	-	0.85	V
	Reverse Current	As in Group A	2.0		Ir	-	30	µA

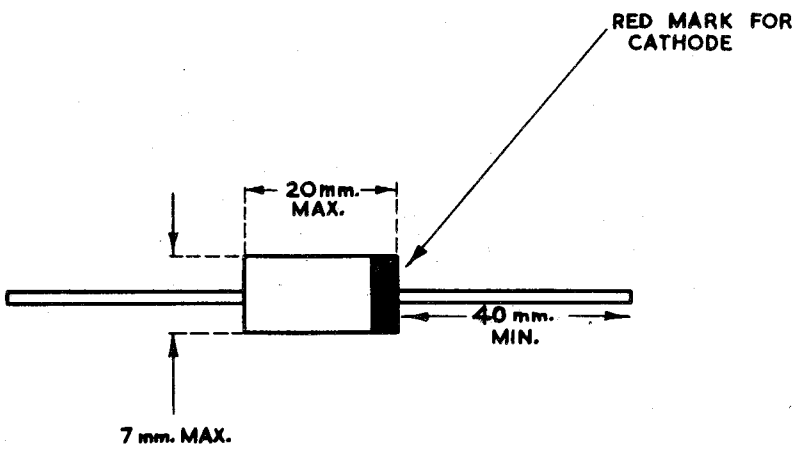
NOTES

1. The sample of diodes shall be subjected to conditioning in accordance with K1007, Section 10.1 and shall then be subjected to temperature cycling, and climatic cycling in sequence and shall then pass the post temperature and post climatic cycling tests.

2. Diodes used for this test must have undergone at least 28 cycles of the climatic test in accordance with K1007, Section 10.3.1. or 10.3.2 or 6 cycles in accordance with Section 10.3.3.

CV 7048

DIMENSIONAL DIAGRAM



LEADS 0·8 mm. MAX. DIA.