

SPECIFICATION M.O.A./CV.2799 ISSUE 4. DATED 1.8.62. To be read in conjunction with BS.448, BS.1409 and K1001	<u>SECURITY</u> <u>Specification</u> <u>Valve</u> UNCLASSIFIED UNCLASSIFIED
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—————→ Indicates a change

TYPE OF VALVE - Double R.F. Beam Tetrode			
CATHODE - Indirectly Heated		<u>MARKING</u>	
ENVELOPE - Glass, unmetallised		See K.1001/4	
PROTOTYPE - QQV03-20			
<u>RATINGS</u> (All limiting values are absolute)		Notes	
Heater Voltage (V)		2 x 6.3	
Heater Current (A)		2 x 0.65	
Max. Anode Voltage (V)		600	
Max. Neg. Grid Voltage (V)		200	
Max. Grid Dissipation (W)		2 x 0.5	
Max. Screen Voltage (V)		250	
Max. Screen Dissipation (W)		2 x 1.5	
Max. Anode Dissipation (W)		2 x 10	
Max. Cathode Current (mA)		2 x 55	
Max. Peak Cathode Current (mA)		2 x 275	
Max. Intermittent Peak Cathode Current for A.M. (mA)		2 x 400	
Max. Grid (Circuit) Resistance (k.Ω)		100	
Max. Temperature of Pins (°C)		180	
		A	
<u>CAPACITANCES</u> (pF)			
C in (nom. per section)		6.2	
C out (nom. per section)		2.2	
Cgl' - gl" (nom.)		0.75	
Ca' - a" (nom.)		0.085	

To be performed in addition to those applicable in K1001

Test Conditions:- Unless otherwise stated								
Vh (V) 6.3 Va (V) 300 Vg2 (V) 250 Note 1								
K1001 Ref.	Test	Test Conditions	AQL %	Insp. Level	Symbol	Limits		Units
						MIN	MAX	
	<u>Group A</u>							
	Reverse Grid Current	Adjust Vg1 for Ia = 40mA each section. Note 6	-	100%	-Igl	-	1	µA
	Anode Current (1)	Vg1 = -12V Note 5	-	100%	Ia(1)	40	92	mA
	Screen Current	Adjust Vg1 for Ia = 40mA Note 5	-	100%	Ig2	-	8	mA
	Anode Current (2)	Vg1 = -35V Note 5	-	100%	Ia(2)	-	2.5	mA
	<u>Group B</u>							
	Heater Current		0.65	II	Ih	1.2	1.5	A
	Heater Cathode Leakage Current	Vhk = 100V	0.65	II	Ihk	-	40	µA
	<u>Group C</u> Omitted							
AIII	<u>Group D</u>							
	Power Output (600 Mc/s)	Va = 400V. Vg1 = -50V Ia = 2 x 50mA Note 3	-	T.A.	P.out	16	-	W
	Power Output (400 Mc/s)	Va = 400V. Vg1 = -50V Ia = 2 x 50mA Notes 8 and 9	-	T.A.	P.out	18	-	W
	Power Output (200 Mc/s)	Va = 600V. Vg1 = -60V Ia = 2 x 50mA Notes 2 and 7.	2.5	IC	P.out	33	-	W
	Power Output (200 Mc/s)	Vh = 5.5V Va = 600V Vg1 = -60V Ia = 2x50mA Notes 4 and 7	2.5	I	P.out	30	-	W
	Capacitances	To be performed on a 1 Mc/s R.F. bridge in a fully shielded socket. Top cap connections to be screened.						
		Note 10	-	TA	C'in	5.7	6.7	pF
				TA	C" in	5.7	6.7	pF
				TA	C'out	1.7	2.7	pF
				TA	C"out	1.7	2.7	pF
				TA	Ca'a"	0.07	0.10	pF
				TA	Cgl'gl	0.70	0.80	pF

0.11
AmA1

TESTS (Contd.)

CV2799

K1001 Ref.	Test	Test Conditions	AQL %	Insp. Level	Symbol	Limits		Units
						MIN	MAX	
			2.5	IC	Ca'gl'	-	0.065	p ² ←
			2.5	IC	Ca"gl' (neutralizing)	-	0.065	p ² ←
			2.5	IC	Difference (Ca'gl' - Ca"gl')	-	0.015	p ² ←
			2.5	IC	Ca"gl"	-	0.065	p ² ←
			2.5	IC	Ca'gl" (neutralizing)	-	0.065	p ² ←
			2.5	IC	Difference (Ca"gl" - Ca'gl")	-	0.015	p ² ←
	Gold Plating Adhesion Test	The sample shall be sub- mitted to the climatic test specified in K1001 Clauses 10.1 and 10.2 Notes 11 , 12.	-	3% Sunk "	-	-	-	- ← Ambr

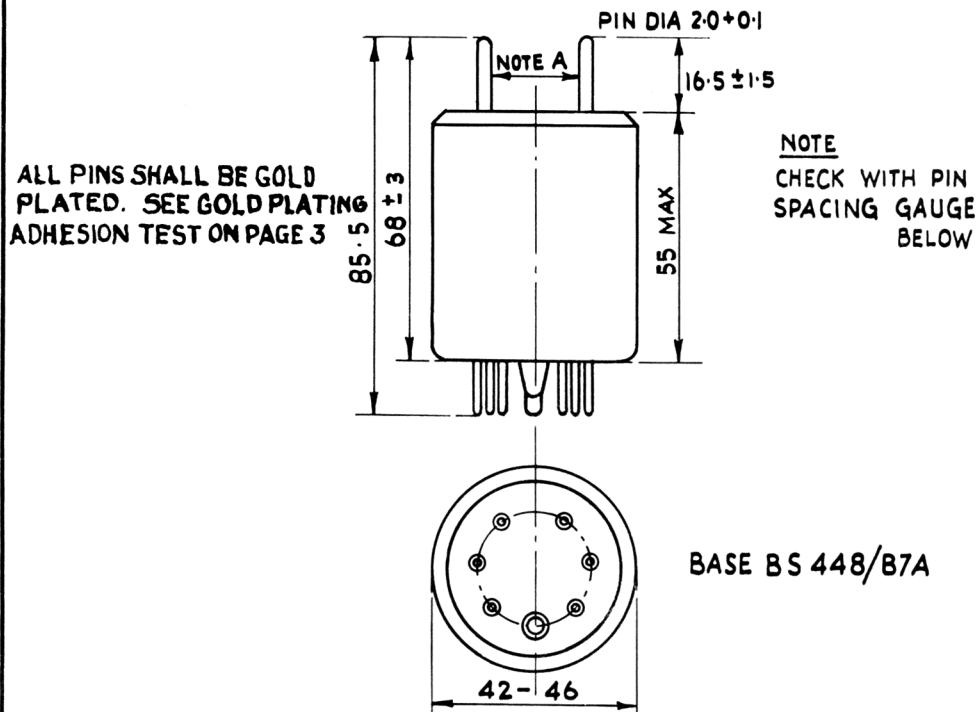
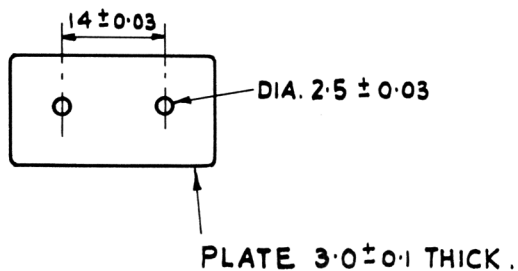
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Notes

- 1) Readings to be made after a minimum of 3 minutes operation.
- 2) This limit assumes a circuit transfer efficiency of 80%.
- 3) At a circuit transfer efficiency of 80% i.e. Power Output = 20 W.min.
- 4) Underheat for a minimum period of 3 minutes before checking output.
- 5) Test each section separately, the remaining section to be biased to -100V.
- 6) Read -Igl immediately after 3 minutes heating.
- 7) Ig2 must be between 5 and 15mA.
- 8) Igl = 4mA max. Ig2 = 9mA max.
- 9) At a circuit transfer efficiency of 78% i.e. Power Output = 23 W.min.
- 10) The Capacitance connections to be:-

Test	HP	LP	E
C'in	6	1,3,4,5,7,C	TC1, TC2, 2
C" in	2	1,3,4,5,7,C	TC1, TC2, 6
C'out	TC1	1,3,4,5,7,C	2,6, TC2
C"out	TC2	1,3,4,5,7,C	2,6, TC1
Ca'a"	TC1	TC2	1,2,3,4,5,6,7,C
Cgl'gl"	6	2	1,3,4,5,7,TC1,TC2,C
Ca'gl'	TC1	6	1,2,3,4,5,6,7,TC2,C
Ca"gl'	TC2	6	1,2,3,4,5,7,TC1,C
Ca"gl"	TC2	2	1,3,4,5,6,7,TC1,C
Ca'gl"	TC1	2	1,3,4,5,6,7,TC2,C

- 11) ~~Electrical rejects may be used for this test.~~
- 12) On completion of the climatic test the samples shall be inspected for corrosion and discolouration as specified in K1001.10.3.1. The batch shall be acceptable provided not more than two pins are rejectable.
- 13) Three valves from each 100 valves produced shall be tested, electrical rejects ~~may~~ ^{may} be used. The batch shall be acceptable provided not more than two pins from the sample of three valves are rejectable.

OUTLINE DRAWINGPIN SPACING GAUGE

ALL DIMENSIONS IN m.m.s.

ELECTRONIC VALVE SPECIFICATIONS
SPECIFICATION MOA/CV.2799 ISSUE 4 DATED 1.8.62
AMENDMENT NO.1

(i) Page 2 Group D. Capacitances

In the column headed "Limits Max.", against Ca'a",
Delete "0.10" and substitute "0.11".

(ii) Page 3 Gold Plating Adhesion Test

(a) In the column headed "TEST CONDITIONS" delete
"Notes 11, 12".

(b) In the column headed "Insp. Level" delete "3%"
and substitute "See Note 11".

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