MINISTRY OF SUPPLY (S.R.D.E.)

VALVE ELECTRONIC CV2254

Specification MOS/CV2254 incorporating MIL-E-1/281A
Issue 2 Dated: 23.3.56.
To be read in conjunction with K1006

SECURITY
Specification Unclassified | Valve Unclassified

→ Indicates a change

TYPE OF VALVE: H.F. Pentode, Sharp cut-off
CATHODE: Directly heated
ENVELOPE: Glass, Metallised
PROTOTYPE: 5678

MARKING
See K1001/4, except that the valve shall only be marked with the CV No., Factory and date code, and "5678".

RATING			Note
Filament Voltage	(V)	1.25	
Filament Current	(mA)	50	
Max. Anode Voltage	(V)	100	A
Max. Screen Voltage	(V)	75	A
Anode Current	(mA)	1.8	B
Screen Current	(mA)	0.5	B
Mutual Conductance	(mA/V)	1.1	B
Anode Impedance	(MΩ)	1.0	B

BASE ~~See App.I to CV2237~~
BS448/B5G/F
(In line - lead sub-miniature)

CONNECTIONS

Pin	Electrode
1	p red dot
2	g_2
3	-f, $1g_3$, Sd
4	g_1
5	+f, $2g_3$
	See Note C

CAPACITANCE (pF)	
C_{g1p} (max.)	0.01
C_{out} (nom.)	4.6
C_{in} (nom.)	3.7

DIMENSIONS ~~See App.I~~ to CV2237
See BS448/B5G/F
Size reference No. 1

DIMENSIONS (Inches)	MIN.	MAX.
A. Overall length	-	1.502
Diameter		
B minor	-	0.286
C major	-	0.386
Lead length	1.5	-

MOUNTING POSITION
Any

NOTES

A. Absolute maximum or minimum values.
B. Measured at Va = Vg2 = 67.5 Vg1 = 0.
C. Grid 3 consists of two separate deflector plates, one of which is connected to Pin 3 and the other to Pin 5.

CV2254

MIL-E-1/281A
4 March 1954
superseding
MIL-E-1/281
9 July 1953

INDIVIDUAL MILITARY SPECIFICATION SHEET

ELECTRON TUBE, RECEIVING, PENTODE, TYPE

JAN-5678

This specification sheet forms a part of the latest issue of Military Specification MIL-E-1.

Description: Pentode, Sharp Cutoff, Receiving

Ratings:	Ef	Eb	Ec1	Ec2	Rg1	Alt
Absolute Maximum:	Vdc 1.25±20%	Vdc 100	Vdc —	Vdc 75	Meg —	ft 10,000
Test Cond.:	1.25	67.5	0	67.5	5	—

*Height: 1.50 in. max.
**Base: Pinch Press, 5 leads in line

*Diameter: Major 0.385 in. max.
Minor 0.285 in. max.

**Lead No.:	1	2	3	4	5	
Element:	p	g2	-f	g1	+f	Note 1
	Red		sd		2g3	
	Dot		lg3			

**Cathode: Coated Filament
**Envelope: T-2x3 (8-8) with Metallic Shield Coating

For miscellaneous requirements, see Paragraph 3.3, Inspection Instructions for Electron Tubes.

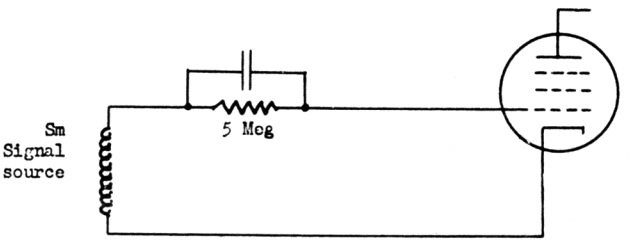
Ref.	Test	Conditions		Min.	Max.	
3.1	Qualification Approval:	Required for JAN Marking				
4.9.18.1.1	Carton Drop:	(d) Package Group 1; Carton Size D				
4.9.5.3	#Subminiature Lead Fatigue:			3	—	arcs
—	**Filament-Plate Short:	Note 2				
4.9.19.1	*Vibration:	Rp=10,000	Ep:	—	400	mVac
4.10.8	*Filament Current:		If:	44	56	mA
4.10.6.1	†Grid Current:	Ec1=-0.5Vdc;Rg1= 0.1Meg max.	Ic1:	0	-0.5	uAdc
4.10.4.1	Plate Current:		Ib:	1.2	2.4	mAdc
4.10.4.3	*Screen Grid Current:		Ic2:	0.35	0.7	mAdc
4.10.9	*Transconductance(1):	Note 3	Sm:	750	1450	umhos
4.10.9	†Transconductance(2):	Ef=1.0V;Note 3	Sm:	600	1450	umhos
4.10.9	#Transconductance(3):	Ef=1.0Vdc;Note 3 Take reading after 15 minutes	Sm:	600	1450	umhos
4.10.14	*Capacitance:		Cgp:	—	.01	uuf
			Cin:	3.0	4.4	uuf
			Cout:	3.7	5.5	uuf
4.11	Life Test:	Group A	t:	500	—	hrs
4.11.4	Life Test End Point:	Transconductance(1)	Sm:	550	—	umhos

CV2254

Note 1: Grid 3 is composed of two separate deflector plates, one of which is connected to Pin 3 and the other to Pin 5.

Note 2: Raise Ef until filament opens. Test for filament to plate short only. After performance of the filament burn-out test, if the short circuit shall pass in excess of five times the rated filament current without burning out the short circuit, the tube shall be deemed a failure. This test shall be performed by a Service Laboratory on three tubes, which shall be in addition to the required number of qualification approval samples. Manufacturer's data are not required for this test.

Note 3: Test in circuit:



Bypass capacity shall have a reactance of less than 20,000 ohms at the test frequency.

Note 4: Reference specification shall be of the issue in effect on the date of invitation for bid.

ELECTRONIC VALVE SPECIFICATION

CV2254 Issue 2 Dated 23.3.56

AMENDMENT No.1

Page A Base

Delete:- See Appendix I to CV2237

Dimensions

Delete:- See Appendix I to CV2237

Signals Radio Development Establishment

27.2.62

December 1961

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