

ELECTRONIC VALVE SPECIFICATION

CV.2238 Issue 3 dated 23.3.56

AMENDMENT NO.1

Page A Base

Delete:- See Appendix I to CV.2237

Dimensions

Delete:- See Appendix I to CV.2237

Signals Radio Development
Establishment

December 1961

(7726)

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

Specification MOS/CV2238 incorporating MIL-E-1/280 Issue 3 Dated: 23.3.56. To be read in conjunction with K1006		<u>SECURITY</u> <u>Specification</u> Unclassified		<u>Valve</u> Unclassified	
→ Indicates a change					
<u>TYPE OF VALVE:</u> Audio Output Pentode <u>CATHODE:</u> Directly Heated <u>ENVELOPE:</u> Glass, unmetallised <u>PROTOTYPE:</u> 5672			<u>MARKING</u> See K1001/4, except that the valve shall only be marked with the CV No., Factory and date code, and "5672".		
<u>RATING</u>		Note		<u>BASE</u> See App. I BS448/B5G/F to CV2237 (In line - lead sub-miniature)	
Filament Voltage (V)	1.25	B	<u>CONNECTIONS</u>		
Filament Current (mA)	50		<u>Pin</u>	<u>Electrode</u>	
Max. Anode Voltage (V)	100	A	1	p red dot	
Max. Screen Voltage (V)	100	A	2	g2	
Anode Current (mA)	3.1	C	3	+f	
Screen Current (mA)	0.95	C	4	g1	
Mutual Conductance (mA/V)	0.65	C	5	-f, g3	
Max. Cathode Current (mA)	5.5	A	<u>DIMENSIONS</u> See App. I See BS448/B5G/F CV2237 Size reference No. 1		
			<u>DIMENSIONS</u> (Inches)	<u>MIN.</u>	<u>MAX.</u>
			A. Overall length	-	1.502
			Diameter		
			B minor	-	0.286
			C major	-	0.386
			Lead length	1.5	-
			<u>MOUNTING POSITION</u> Any		

NOTES

- A. Absolute maximum or minimum values.
 B. The filament cannot be run in series. Absolute Maximum $V_f = 1.55V$.
 C. Measured at $V_a = V_{g2} = 67.5$ $V_{g1} = -6.5$.

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Ratings:	Ef	Eb	Eo1	Ec2	Ik	Alt.
Absolute	Vdc	Vdc	Vdc	Vdc	mAdc	ft.
Maximum:	1.25-20%	100	---	100	5.5 (Note 1)	10,000
Test Cond.:	1.25	67.5	-6.5	67.5	---	

- *Height: Max. 1.5 in.
- **Base: Flat press (0.016 in. tinned flexible leads. Length=1.5 in. min., Spacing: 0.050 in. c/o) *Diameter: Major 0.385 in max. Minor 0.285 in max.
- **Lead No.: 1 2 3 4 5 **Cathode: Coated Filament
- Element: p g2 /f g1 -f, g3 **Envelope: T-2X3 (8-8)
- Red Dot

Ref.	Test	Conditions	Min.	Max.
3.1	Qualification Approval:	Required for JAN Marking		
4.9.16.1.1	Carton Drop:	(d) Package Group 1; Carton Size D		
4.9.5.3	#Submixture Lead Fatigue:		3	--- arcs
---	**Filament-Plate Short:	Note 2		
4.9.19.1	*Vibration:	Rp=2000	Ep: ---	200 mVac
4.8	#Insulation of Electrodes:	E=100V min.; Ef=1.25V	R: 100	--- Meg.
4.10.8	*Filament Current:		If: 44	56 mA
4.10.6.1	Grid Current:		Ic1: 0	-0.8 uAdc
4.10.4.1	Plate Current:		Ib: 2.1	4.1 mAdc
4.10.4.3	*Screen Grid Current:		Ic2: 0.5	1.4 mAdc
4.10.16.1	*Power Output(1):	Esig=4.55Vac; Rp=20,000	Po: 50	--- mW
4.10.16.1	Grid Power Output(2):	Ef=1.0Vdc	Po: 25	--- mW
4.10.16.1	#Power Output(3):	Ef=1.0Vdc Take readings after 15 minutes	Po: 25	--- mW
4.10.9	*Transconductance:		Sm: 475	825 umhos
4.10.3.2	AF Noise:	Esig=200mVac; Rp=2000		
4.11	Intermittent Life Test:	Ef=1.25Vdc or Vac with equivalent bias; Group A	t: 500	--- hrs.
4.11.4	Life Test End Points:	Power Output(1) Grid Current	Po: 35 Ic1: ---	--- mV -1.5 uAdc

Note 1: Do not use series filament circuits. Filament voltage must never exceed 1.55 V.

APPROVED 9 July 1953 REVISED

CUSTODIANS: Army-Signal Corps Navy-Bureau of Ships Air Force	<h2 style="margin: 0;">SPECIFICATION SHEET</h2> <p style="margin: 0;">POWER AMPLIFIER PENTODE, RECEIVING</p>	MIL-E-1/280
PROCUREMENT SPECIFICATION MIL-E-1	5672	SHEET 1 OF 2

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

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PROCUREMENT SPECIFICATION MIL-E-1	POWER AMPLIFIER PENTODE, RECEIVING	SHEET 2 OF 2
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Other interest: Army - CMT Navy - ANCMdRS