

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

Specification MOS/CV 2370 incorporating MIL-E-1/326 Issue 2 dated 27.10.55 To be read in conjunction with K1006			<u>SECURITY</u> Specification Valve Unclassified Unclassified																		
—————> indicates a change																					
<u>TYPE OF VALVE</u> :- Power amplifier pentode			<u>MARKING</u> See K1001/4 Add:- 3S4																		
<u>CATHODE</u> :- Directly heated			<u>BASE</u> BS 448/B7G (miniature button 7 pin)																		
<u>ENVELOPE</u> :- Glass-unmetallised																					
<u>PROTOTYPE</u> :- 3S4			<u>CONNECTIONS</u> <table border="1"> <thead> <tr> <th>Pin</th> <th>Electrode</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-f</td> </tr> <tr> <td>2</td> <td>P</td> </tr> <tr> <td>3</td> <td>g1</td> </tr> <tr> <td>4</td> <td>g2</td> </tr> <tr> <td>5</td> <td>g3, fct</td> </tr> <tr> <td>6</td> <td>P</td> </tr> <tr> <td>7</td> <td>+f</td> </tr> </tbody> </table>			Pin	Electrode	1	-f	2	P	3	g1	4	g2	5	g3, fct	6	P	7	+f
Pin	Electrode																				
1	-f																				
2	P																				
3	g1																				
4	g2																				
5	g3, fct																				
6	P																				
7	+f																				
<u>RATING</u>						<u>NOTES</u> A. Absolute maximum or minimum values. B. Measured at $V_a = 90$, $V_{g2} = 67.5$, $V_{g1} = -7$ C. Pin 1 is -f for $V_f = 2.8V$. Pin 5 is -f for $V_f = 1.4V$. when Pins 1 and 7 are +f.															
Filament voltage (series) (V)	2.8	Note																			
Filament current (series) (mA)	50																				
Filament voltage (parallel) (V)	1.4																				
Filament current (parallel) (mA)	100																				
Max. anode voltage (V)	100	A																			
Max. screen voltage (V)	75	A																			
Mutual conductance (mA/V)	1.5	B																			
Anode impedance (approx.) (m Ω)	0.1	B																			
Anode current (mA)	7.4	B																			
Screen current (mA)	1.4	B																			
Max. cathode current (mA)	13.0	A																			
<u>NOTES</u>			<u>DIMENSIONS (Inches)</u> See B.S. 448/B7G/2.1 size ref. No. 2																		
			<table border="1"> <thead> <tr> <th>Dimension</th> <th>Min.</th> <th>Max.</th> </tr> </thead> <tbody> <tr> <td>seated height</td> <td>-</td> <td>17/8</td> </tr> <tr> <td>diameter</td> <td>5/8</td> <td>3/4</td> </tr> <tr> <td>overall length</td> <td>-</td> <td>25/32</td> </tr> </tbody> </table>						Dimension	Min.	Max.	seated height	-	17/8	diameter	5/8	3/4	overall length	-	25/32	
			Dimension	Min.	Max.																
			seated height	-	17/8																
diameter	5/8	3/4																			
overall length	-	25/32																			
			<u>MOUNTING POSITION</u> ANY																		

NOTE

- 1. Test code "b" shall apply.

CV 2370

Generic Types:
Test Code:
(General Note)

JAN-1S4, 3S4
a b

Rating:	Test Code	Ef Vdc	Eb Vdc	Ec1 Vdc	Ec2 Vdc	Ik mAdc	Alt Ft
Absolute Maximum:	a	1.4 or 1.5	100	---	75	11	10,000
	b	1.4 or 1.5	100	---	75	13 Note, 110,000	---
Test Cond.:	a,b	1.4	90	-7	67.5	---	---

a,b **Height: 2-1/8 in. max. **Diameter: 3/4 in. max. **Envelope: T-71/2 (6-2)

a,b **Base: Miniature Button 7-Pin, E7-1

Pin No.:	1	2	3	4	5	6	7	**Cathode:
a Element:	-f	p	g1	g2	-f	p	fz	Coated Filament
b Element:	-f	p	g1	g2	g3	g3	p fz	

(Apara) (-para)

Ref.	Test	Test Code	Conditions	Min.	Max.
3.1	Qualification Approval:	a,b	Required for JAN Marking		
4.9.18.1.1	Carton Drop:	a,b	(d) Package Group 1; Carton Size B		
4.9.19.1	*Vibration:	a,b	Rp=2000	Ep: ---	300 mVac
4.10.8	*Filament Current:	a,b		If: 88	112 mAdc
4.10.6.1	† Grid Current:	a,b		Ic1: 0	-1.0 uAdc
4.10.4.1	Plate Current:	a,b		Id: 5.1	9.7 mAdc
4.10.4.3	*Screen Grid Current:	a,b		Ia2: 0.85	2.1 mAdc
4.10.9	*Transconductance:	a,b		Sm: 1300	1850 umhos
4.10.16.1	*Power Output (1):	a,b	Esig=5.0Vac;Rp=8000	Po: 210	--- mW
4.10.16.1	† Power Output (2):	a	Ef=1.1Vdc;Esig=5.0Vac Rp=8000	Po: 140	--- mW
4.10.16.1	† Power Output (2):	b	Ef=1.1Vdc;Esig=5.0Vac; Rp=8000;Note 2	Po: 55	--- mW
4.10.3.3	AF Noise & Microphonics:	a,b	Note 3	EB: ---	18 mV
4.11	Life Test:	a,b	Group A;Ef=1.4Vac or Vdc with equivalent Ec1	t: 500	--- hrs
4.11.4	Life Test End Point:	a,b	Power Output (1) or Transconductance	Po: 135 Sm: 1020	--- mW --- umhos

APPROVED 14 AUG 1953 REVISED

CUSTODIANS:
Army-Signal Corps
Navy-Bureau of Ships
Air Force
PROCUREMENT SPECIFICATION
MIL-E-1

SPECIFICATION SHEET

POWER AMPLIFIER PENTODE, RECEIVING
1S4 (3S4)

MIL-E-1/326

sheet 1 of 2

Other interest: Army - GMDT Navy - AMCMIOrS

