MINISTRY OF SUPPLY - R.R.E. (South)

VALVE ELECTRONIC CV1759

Specification MOS(A)/CV1759 incorporating MIL-E-1/630

Issue 2

~~Issue 1~~ Dated 28th May 1956

To be read in conjuction with K1006

SECURITY	
Specification	Valve
Restricted	Unclassified

TYPE OF VALVE - Transmitting triode

CATHODE - Indirectly heated

ENVELOPE - Glass - Unmetallised

PROTOTYPE - 2C26A

MARKING

K 1001/4

Additional Marking

2C26A

RATING (See note D)			Note
Heater Voltage	(V)	6.3	A
Heater Current	(A)	1.1	
Max. Anode Voltage	(KV)	3.5	B
Max. Grid Voltage	(V)	-700	
Max. Anode Dissipation	(W)	10	
Max. Grid Dissipation	(W)	2.5	
Max. Grid Circuit Resistance	(MΩ)	0.05	
Max. Heater - Cathode Voltage	(V)	100	
Max. Pulse Length	(μsec)	10	
Max. Duty Cycle	(%)	1.0	
Mutual Conductance	(mA/V)	2.2	C
Amplification Factor		16.25	C

CAPACITANCES (pF)

Cag	2.75
Cae	1.1
Cge	2.6

See K1001/A1/D2

M Dimension **BASE**

(iv) applies 1.0

CONNECTIONS

Pin	Electrode
1	No connection
2	Heater
3	No connection
4	No connection
5	No connection
6	No connection
7	Heater
8	Cathode
TC1	Grid
TC2	Anode

PLUG TOP CAPS and DIMENSIONS

See drawing on Page 3

MOUNTING POSITION

Any

NOTES

A. The valve may be operated with Vh between 5.7 and 6.0 volts when Ia(peak) does not exceed 6.0 amps. With Vh less than 6.0 volts, full power output may not be obtained with Ia (peak) greater than 6.0 amps.

B. The anode voltage source shall not have a regulation characteristic better than the equivalent of 0.1 μF capacitor charged by a source with an internal resistance of 10,000 ohms.

C. Measured at Vh = 6.3V., Va = 400V., Vg = (-15V).

D. These ratings apply when the valve is used under pulse conditions and with anode modulation. With grid modulation Va should not exceed 2.5KV at Wa = 10 watts max. or 2.8 KV with Wa = 5W max.

E. Before applying high potential, the cathode should be pre-heated for at least 30 secs. when Vh = 6V min., and for at least 45 secs, when Vh is less than 6.0 volts.

F. Under oscillation service, the valve should not be operated without load when Va exceeds 85% of its maximum rating.

SPECIFICATION CV.1759. ISSUE 1. dated 28-5-56

AMENDMENT NO. 1

PAGE A. - Top left-hand box

AMEND "Issue 1" to read "Issue 2".

(Specification MOS(A)/CV1759 incorporating MIL-E-1/630 Issue 2 (as amended) dated 28th May, 1956 supersedes specification MAP/CY1759 Issue 1 (Tentative) dated 14th March, 1947).

T.V.C. Office
for R.R.E.

April, 1957.

CV1759

MIL-E-1/630
4 March 1954

INDIVIDUAL MILITARY SPECIFICATION SHEET

ELECTRON TUBE, TRANSMITTING, TRIODE, TYPE

JAN-2C26A

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

Description: UHF Triode, Transmitting

Ratings:	Ef	Eb	Ec	Pg	Pp	Rg	Ehk	Pulse Lgth.	Duty Cycle	Cathode Pre-heating	Modulation	Alt
Absolute	V(Note 1)	Vdc	Vdc	W	W	Meg	V	us	%	t (min)		ft
Maximum:	6.3±10%-5%	3500	-700	2.5	10	.05	100	10	1.0	30	Plate-Note 2	10,000
	6.3±10%-5%	2500	-700	2.5	10	.05	100	10	1.0	30	Grid-Notes	10,000
	6.3±10%-5%	2800	-700	2.5	5	.05	100	10	1.0	30	2 and 3	10,000
Test Cond.:	6.3	400	-15	---	--	---	---	---	---	---	---	---

*Height: 3-7/16 in. min.; 3-11/16 in. max. *Diameter: 1-5/16 in. max.
**Base: Intermediate Shell Octal 8-Pin, B8-6, Low-Loss Phenolic **Cap: As Per Outline

**Pin No.:	1	2	3	4	5	6	7	8	Cap	Cap
Element:	nc	h	nc	nc	nc	nc	h	k	g	p

**Cathode: Coated Unipotential
**Envelope: T-9 As Per Outline

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				
4.9.18.1.7	Carton Drop:	(d) Package Group 1; Carton Size E				
4.9.19.1	*Vibration:	Eb=250Vdc; Ec=-7Vdc; Rp=2000	Ep:	---	150	mVac
---	Arc Discharge:	Eb=3000Vdc; Ec=-275Vdc; Rg=5000; Note 4				
---	*Altitude Test:	Ec=-300Vdc; Eb=3000Vdc; Pressure=70mm Hg Abs.; TA=18°C min.; t=180; Note 5				
4.10.8	*Heater Current:		Ib:	1.0	1.2	A
4.10.15	*Heater-Cathode Leakage:		Ihk:	0	100	uAdc
4.10.6.1	†Grid Current:		Ic:	0	-2.0	uAdc
4.10.4.1	Plate Current (1):		Ib:	10	22	mAdc
4.10.4.1	*Plate Current (2):	Ec=-35Vdc	Ib:	---	100	uAdc
4.10.9	*Transconductance:		Sm:	1700	2700	umhos
4.10.11.1	*Amplification Factor:		Mu:	15.0	17.5	
4.10.7.1	†Oscillator Grid Current:	Eb=325Vdc; F=100Mc; Ib=26-34 mAdc; Rg=50,000±5%; Circuit as per diagram	Ic:	1.3	---	mAdc
4.10.1.1	Emission:	Eb=Ec=50Vdc	Is:	125	---	mAdc
---	Peak Emission:	eb=eg=2500v; Note 6	is:	15	---	a

CV1759

Ref.	Test	Conditions		Min.	Max.
4.10.14	*Capacitance:	Without Shield	Cgp:	2.3	3.2 uuf
		Without Shield	Cin:	2.2	3.0 uuf
		Without Shield	Cout:	0.6	1.6 uuf
4.11	Life Test:	Group A; Ec=-12Vdc	t:	500	— hrs
4.11.4	Life Test End Point:	Peak Emission	is:	11	— a

Note 1: The tube may be operated with a filament potential between 6.0 and 5.7 when the peak plate current does not exceed 6.0 amperes. At a filament potential below 6.0 volts with peak plate currents greater than 6.0 amperes, the full power output capabilities of the tube may not be realized.

Note 2: For both grid and plate pulse service, cathode must be hot before applying high potential. The cathode should be preheated a minimum of 30 seconds with a minimum heater potential of 6 volts. Otherwise a 45 seconds preheat time should be allowed. Under oscillation service the tube should not be operated without load when the plate voltage exceeds 85% of its maximum rating.

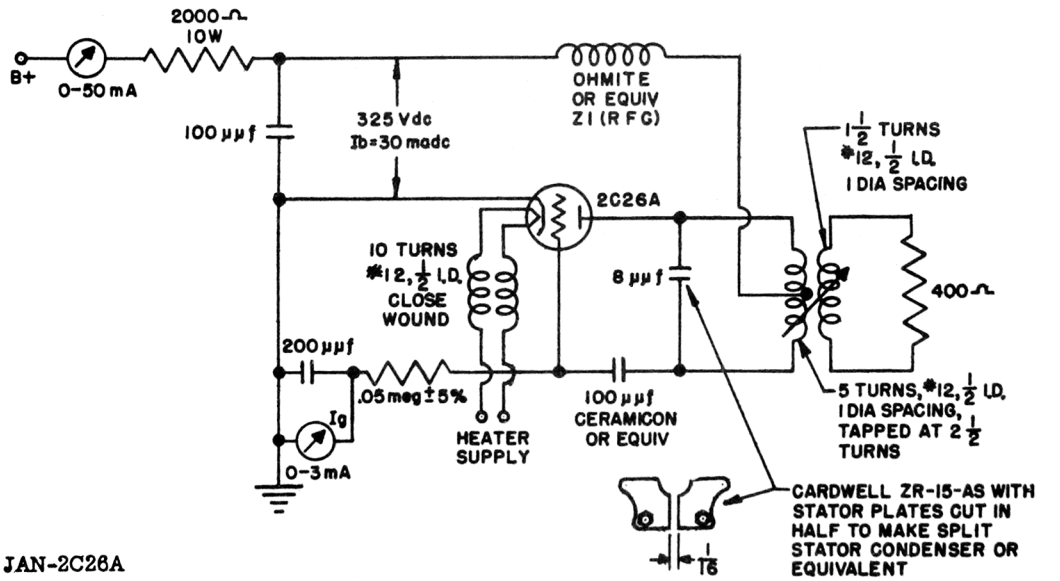
Note 3: The plate voltage source should not have a regulation characteristic better than the equivalent of a 0.1 uf capacitor charged by a source with an internal resistor of 10,000 ohms.

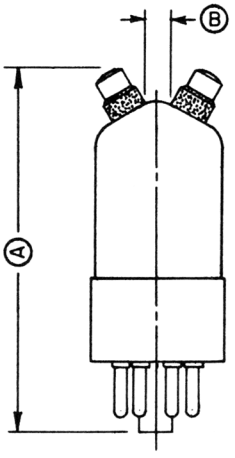
Note 4: After a minimum preheat of one minute using Ef=6.3V only, the tube shall be gently tapped while being tested with a plate supply having a regulation characteristic simulating a charged capacitor of 0.1 uf. The tube shall not exhibit sustained internal arcing when a 0.5 uf capacitor charged to 4350Vdc is discharged across the grid to cathode. Initial arcing may be tolerated but the tube shall be free of such arcing during the last 15 seconds of this test.

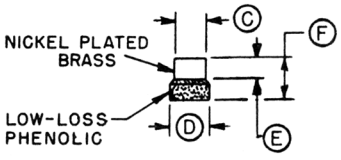
Note 5: Tubes showing evidence of sustained external arcing between any two terminals of the tube shall be rejected. The tubes may be dried before the test and corona is not considered cause for rejection. On evidence of satisfactory quality the test may be limited to 5 tubes per month when the type is in continuous production.

Note 6: After a minimum preheating of 30 sec. using Ef=6.3V only, a suitable pulse having the specified potential may be applied to the tube. Initial arcing may be tolerated, but tubes shall be free from such arcing at the completion of the test.

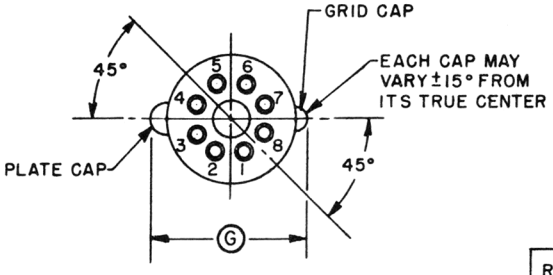
Note 7: Reference specification shall be of the issue in effect on the date of invitation for bid.







TOP CAP
SPECIAL INSULATED
MINIATURE



DESIGN TEST MEASUREMENTS: ABG

QUALIFICATION APPROVAL TEST MEASUREMENTS: CDEF

CROSS-SECTION VIEW
OF UNASSEMBLED CAP

REF	DIMENSIONS
A	3-7/16 MIN 3-11/16 MAX
B	$\frac{11}{32}$ MIN
C	.250±.005
D	.360±.010
E	.210±.015
F	.350±.015
G	$1\frac{5}{16}$ MAX