

MINISTRY OF SUPPLY - DLRD/RRE

Specification MOS/CV4075 Issue 1 Dated 17th July, 1957 To be read in conjunction with K1001, BS448 and BS1409	<u>SECURITY</u>	
	<u>Specification</u>	<u>Valve</u>
	UNCLASSIFIED	UNCLASSIFIED

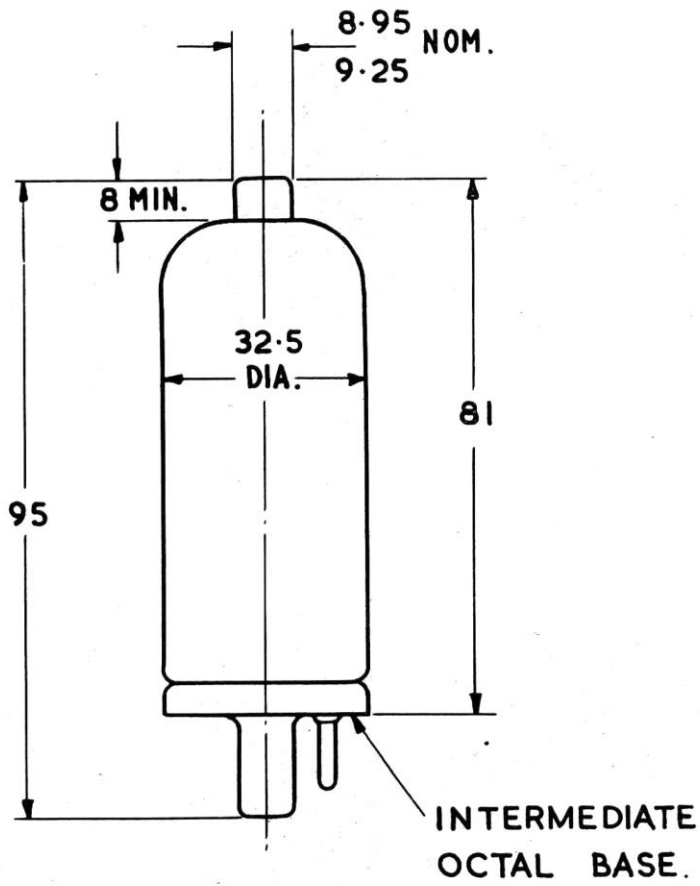
→ Indicates a change

TYPE OF VALVE - Reliable half wave EHT Rectifier CATHODE - Indirectly Heated ENVELOPE - Glass PROTOTYPE - VX3509	<u>MARKING</u>																																									
	See K1001/4																																									
<u>RATING</u> All limiting values are absolute	<u>BASE</u>																																									
	See BS448/B8-0/1.1																																									
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<u>CAPACITANCES (pF)</u> Ca-k (nom) 3.8	<u>MOUNTING POSITION</u>																																									
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A. Switching may be direct when the anode voltage rises at approximately the same rate as the heater voltage, e.g. flyback, RF oscillator or pulsed circuits.																																										

Test Conditions - unless otherwise specified								
		Vh (V)	Va(V)					
		6.3	190					
KLOC1 Ref.	Test	Test Conditions	AQL %	INSP. LEVEL	SYM- BOL	Limits		UNITS
						MIN	MAX	
	<u>GROUP A</u> Voltage Breakdown	Note 1 & 2						
	<u>GROUP B</u> Heater Current Anode Current (1) Output Current	Note 1	.65 .65 .65	II II II	Ih Ia I	.238 8 2	.292 13 -	A mA mA
	<u>GROUP C</u> Anode Current (2) Emission Change in Anode Current (1)	Va = 300V Vapk = 2.5KV Tp = 2 /u Secs prf = 50 pps. Vh = 5.7V	2.5 2.5 2.5	I I I	Ia Iapk Δ Ia	18 300 -	25 - 10	mA mA %
11.3	<u>GROUP D</u> <u>GROUP E</u> Fatigue <u>Post Fatigue Tests</u> Voltage Breakdown Output Current	Not applicable Vh = 6.9V switched 1 min ON, 3 mins OFF Va = 0 Frequency = 170 c/s Min pk accel = 5g Duration = 33 hrs in a vertical plane, 66 hrs in a hori- zontal plane Note 1 & 2 Note 1	 2.5 2.5	 IA	 I	 2	 -	 mA

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K1001	Test	Test Conditions	AQL %	Insp. Level	Sym- bol	Limits		Units
						Min.	Max.	
11.4	Shock	No voltages Hammer angle = 30°		IA				
	<u>Post Shock Tests</u>							
	Voltage breakdown	Note 1 and 2	2.5					
	Output Current	Note 1	2.5		I	2	—	mA
	<u>GROUP F</u>							
A VI/5	Life	Note 1		IA				
A VI/5.1	<u>Intermittent Life</u> <u>Test</u>							
	<u>Life Test End-point</u> <u>500 hours</u>							
	Output current	Note 1	2.5		I	1.6	—	mA
	<u>Life Test End-point</u> <u>1000 hours</u>							
	Output Current	Note 1	4.0		I	1.5	—	mA
	<u>GROUP G</u>							
A IX/2.5	Retest after 28 days holding period							
A VI/5.6	Inoperatives		0.5	100%				
<u>NOTES</u>								
<p>1. The valve shall be operated in a half-wave rectifier circuit at a frequency of not less than 75 kc/s. PIV = 33kV min; Cres = 450pF; Load resistance = 7 Megohms; Min. Peak D.C. Anode current = 18.7mA; Min. heating time = 90 secs. If the heater is supplied from an RF source it must be run at the same temperature as it would attain at 6.3V D.C.</p> <p>2. Filament and Anode supplies shall be applied simultaneously. Run for two minutes and reject for softness or persistent flashover.</p>								



DIMENSIONS ARE MAXIMUM UNLESS OTHERWISE STATED.

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