

BRIMAR

**E. I. A.
REGISTRATION DATA**

TYPE 7496
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TYPE 7496: VARI-MU R.F. PENTODE.

The 7496 is a seven pin all glass construction vari-mu pentode for use in R.F. and I.F. applications.

The use of a special rugged electrode construction manufactured by means of semi-automatic assembly techniques contributes to a low catastrophic failure rate.

The cathode sleeve is made of a special alloy to inhibit the growth of cathode interface resistance during long periods of operation under cut-off conditions and the pure tungsten heater has been designed to withstand frequent heater switching (see note). In addition, the heater-cathode construction and materials ensure very low levels of leakage throughout life.

The glass base and envelope strain patterns are tightly controlled during manufacture to prevent glass failures during life. Special attention is also given to the control of materials and processes to minimise variation of characteristics during life. A particular feature is the very low change in inter-electrode capacitances during life.

Note: A sample from each production lot is tested under the following elevated conditions to assess heater quality:- heater voltage 120% of nominal value: heater-cathode voltage 240V r.m.s; applied voltages cycled 1 minute on, 3 minutes off for 100 hours.

MECHANICAL DATA

Coated unipotential cathode.

Outline drawing	5-2	Bulb	T-5 $\frac{1}{2}$
Base	E7-1	Small button	7 pin
Maximum diameter			$\frac{3}{4}$ "
Maximum overall length			1 $\frac{1}{8}$ "
Maximum seated height			2 $\frac{1}{8}$ "
Pin connections		Basing	7BK

Pin 1 - Grid No. 1	Pin 5 - Anode
Pin 2 - Grid No. 3	Pin 6 - Grid No. 2
Pin 3 - Heater	Pin 7 - Cathode
Pin 4 - Heater	

Mounting position any
Maximum shock (intermittent service) 500g

ELECTRICAL DATAInterelectrode capacitances. (Without external shield)

Ca-gl 0035 pF (max)
 C in 5.5 pF
 C out 5.0 pF

Heater:

Voltage (ac or dc) 6.3 volts
 Current 0.3 amps

Ratings - Absolute maximum values.

Maximum heater voltage variation $\pm 5\%$ of nominal value.
 Maximum heater-cathode voltage.
 Heater negative with respect to cathode 150 volts
 Heater positive with respect to cathode 150 volts
 Maximum anode voltage ($I_a = 0$) 500 volts
 Maximum anode voltage 330 volts
 Maximum anode dissipation 3.3 watts
 Maximum screen voltage ($I_{g2} = 0$) 330 volts
 Maximum screen voltage 135 volts
 Maximum screen dissipation 0.7 watts
 Maximum bulb temperature (at hottest spot on bulb surface)..... 165°C.

RANGE OF CHARACTERISTIC VALUES FOR EQUIPMENT DESIGN (At Zero hours)

Test conditions :- $V_a = 250V$, $V_{g3} = 0$, $V_{g2} = 100V$.
 $V_{g1} = 0$, $R_k = 68\Omega$

	<u>Min.</u>	<u>Bogey.</u>	<u>Max.</u>	
Anode current	8.5	11.0	13.5	mA
Screen current	2.8	4.2	5.6	mA
Mutual conductance	3.6	4.4	5.2	mA/V
Inner amplification factor	16	24	32	-
Anode impedance		1.0		M Ω

Maximum value of cathode interface resistance throughout life under cut-off conditions 10 Ω .