

BRIMAR

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

TYPE 7495

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TYPE 7495: R.F. POWER TETRODE

The 7495 is a nine pin all glass construction beam tetrode for use in V.H.F. amplifier and driver 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.n.s: applied voltages cycled 1 minute on, 3 minutes off for 100 hours.

MECHANICAL DATA

Coated unipotential cathode.

Outline drawing	6-3	Bulb	T-6 $\frac{1}{2}$
Base	E9-1	Snail button	9 pin
Maximum diameter			$\frac{7}{8}$ "
Maximum overall length			2 $\frac{5}{8}$ "
Maximum seated height			2 $\frac{3}{8}$ "
Pin connections		Basing	9K

Pin 1 - Anode	Pin 6 - Grid No. 2
Pin 2 - Internal connection	Pin 7 - Cathode
Pin 3 - Grid No. 3	Pin 8 - Grid No. 1
Pin 4 - Heater	Pin 9 - Grid No. 1
Pin 5 - Heater	

Mounting position any
Maximum shock (intermittent service) 500g.

ELECTRICAL DATAInterelectrode capacitances. (Measured without external shield)

C_{ag1} 0.3 pF (Max)
 C_{in} 9.5 pF
 C_{out} 4.5 pF

Heater:

Voltage (ac or dc) 6.0 volts
 Current 0.75 amps

Ratings - Absolute maximum values.

Maximum heater voltage variation $\pm 5\%$ of nominal value.
 Maximum heater-cathode voltage:
 Heater negative with respect to cathode 100 volts
 Heater positive with respect to cathode 100 volts
 Maximum anode voltage ($I_a=0$) 500 volts
 Maximum anode voltage 300 volts
 Maximum anode dissipation 12 watts
 Maximum screen voltage ($I_{g2}=0$) 500 volts
 Maximum screen voltage 250 volts
 Maximum screen dissipation 2 watts
 Maximum bulb temperature (at hottest spot on bulb surface) 250°C

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

Test conditions $V_a = 250\text{V}$, $V_{g3}=0$, $V_{g2} = 250\text{V}$, $V_{g1} = -7.5\text{V}$.

	<u>Min.</u>	<u>Bogey.</u>	<u>Max.</u>	
Anode current	33	45	57	mA
Screen current	-	-	7.0	mA
Mutual conductance	5.6	7.0	9.0	mA/V
Anode current at $V_{g1} = -15\text{V}$			15	mA
Amplification factor	13	16	20	

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