

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	Small 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 $V_a = 250V$, $V_{g3}=0$, $V_{g2} = 250V$, $V_{g1} = -7.5V$.

	<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 $V_{g1} = -15V$			15	mA
Amplification factor	13	16	20	

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