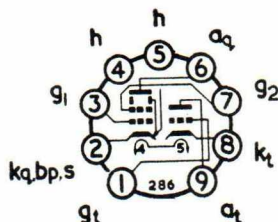


TRIODE OUTPUT BEAM TETRODE



GENERAL

B9A Base

This triode output beam tetrode valve is intended principally for use in field deflection circuits of AC/DC television receivers using 110° cathode ray tubes. Each section has its own cathode.

The triode section is a general purpose one with identical characteristics to the 6/30L2.

Heater Current	I_h	0.3	A
Heater Voltage	V_h	16	V

RATINGS

		Triode	Tetrode	
Maximum Anode Dissipation	$P_a(\text{max})$	1	7	W
Maximum Screen Dissipation	$P_{g2}(\text{max})$	—	2.4	W
Maximum Anode Voltage	$V_a(\text{max})$	250	250	V
Maximum Peak Anode Voltage (Pulse positive)		—	2*	kV
Maximum Peak Anode Voltage (Pulse negative)		—	500*	V
Maximum Screen Grid Voltage	$V_{g2}(\text{max})$	—	250	V
Maximum Heater to Cathode Voltage (R.M.S.)	$V_{h-k(\text{r.m.s.})\text{max}}$	150†	150†	V
Maximum Mean Cathode Current	$I_{k(\text{av})\text{max}}$	—	75	mA
Maximum Resistance Grid 1 to Cathode (Self bias)		—	2	MΩ
Maximum Resistance Grid 1 to Cathode (Fixed bias)		—	1	MΩ

* Maximum pulse duration 4% of one cycle with a maximum of 800 μs .

† Measured with respect to the higher potential heater pin.

INTER-ELECTRODE CAPACITANCES

	$\pm$	$\S$	$\parallel$	
Grid 1 to Earth	C_{g1-E}	10.0	10.4	11.5 pF
Anode Tetrode to Earth	C_{aq-E}	9.5	10.3	11.4 pF
Grid 1 to Anode Tetrode	C_{g1-aq}	0.36	0.36	0.37 pF
Grid Triode to Earth	C_{gt-E}	2.1	2.4	3.3 pF
Anode Triode to Earth	C_{at-E}	1.9	2.3	3.3 pF
Grid Triode to Anode Triode	C_{gt-at}	2.3	2.3	2.4 pF
Grid 1 to Anode Triode	C_{g1-at}	0.007	0.014	0.019 pF
Grid Triode to Anode Tetrode	C_{gt-aq}	0.017	0.022	0.024 pF
Anode Tetrode to Anode Triode	C_{aq-at}	0.075	0.085	0.095 pF

‡ In fully shielded socket without can.

§ With holder capacity balanced out (Holder as below).

|| Total capacity including B9A nylon phenolic holder without skirt or radial shield (AEI "Clix" holder type VH19/902).

"Earth" denotes the electrodes of any second valve section and the remaining earthy potential electrodes of the section under measurement, heater and shields joined to cathode.

Indicates a change

CHARACTERISTICS

		Triode	Tetrode	
Anode Voltage	V_a	100	170	V
Screen Grid Voltage	V_{g2}	—	170	V
Anode Current	I_a	10	45	mA
Screen Current	I_{g2}	—	8.7	mA
Mutual Conductance	g_m	4.3	7.5	mAV
Amplification Factor (Tetrode g_1 to g_2)	μ	18	8.3	

FIELD TIME BASE TYPICAL OPERATION

The output stage should be designed to allow for valve spread and deterioration during life in addition to component variation. Values of total peak anode current available for a new average valve and at assumed end of life point for any valve are as follows:

	V_a (V)	V_{g2} (V)	V_{g1} (V)	I_a (mA)
Average New Valve	55	170	—1	175
Assumed End of Life Condition	50	170	—1	110

MOUNTING POSITION—Unrestricted

