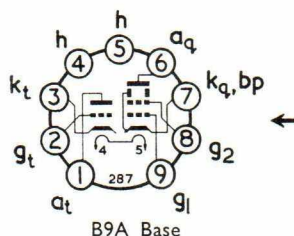


TRIODE OUTPUT BEAM TETRODE



GENERAL

This triode output beam tetrode valve is intended principally for use in the audio amplifier or field deflection stages of AC/DC television receivers.

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	13	V

RATINGS

		Triode	Tetrode
Maximum Anode Dissipation	$p_a(\max)$	2*	5.5* W
Maximum Screen Dissipation—Continuous	—	—	1.5 W
Maximum Screen Dissipation—Speech and Music	—	—	2.2 W
Maximum Anode Voltage	$V_a(\max)$	250	250 V
Maximum Screen Grid Voltage	$V_{g2}(\max)$	—	250 V
Maximum Heater to Cathode Voltage (RMS)	$V_{h-k(rms)\max}$	—	150† V

The grid to cathode circuit resistance of the tetrode must not exceed 0.5 MΩ with cathode self bias when used at maximum dissipation ratings.

* The total anode dissipation of the two sections should not exceed 6W.

† Measured with respect to the higher potential heater pin.

INTER-ELECTRODE CAPACITANCES

		‡	§
Grid 1 to Earth	C_{g1-E}	9.8	11.0 pF
Anode Tetrode to Earth	C_{aq-E}	7.3	8.6 pF
Grid 1 to Anode Tetrode	C_{g1-aq}	0.21	0.21 pF
Grid Triode to Earth	C_{gt-E}	2.6	3.7 pF
Anode Triode to Earth	C_{at-E}	2.0	3.0 pF
Grid Triode to Anode Triode	C_{gt-at}	2.4	2.7 pF
Grid 1 to Anode Triode	C_{g1-at}	0.1	0.18 pF
Grid Triode to Anode Tetrode	C_{gt-aq}	0.093	0.093 pF
Anode Tetrode to Anode Triode	C_{aq-at}	1.0	1.0 pF
Grid Triode to Grid 1	C_{gt-g1}	0.014	0.016 pF

‡ With holder capacity balanced out (holder as below).

§ Total capacity including ceramic B9A unskirted holder without radial shield (Carr Fastener holder type 77/076).

"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	200	170	V
Screen Grid Voltage	V_{g2}	—	180	V
Anode Current	I_a	10	32	mA
Mutual Conductance	g_m	3.4	7.2	mA/V ←
Amplification Factor	μ	18	—	

CLASS A AUDIO OUTPUT TYPICAL OPERATION (Tetrode Section) ←

		Fixed Bias	Self Bias	
Anode Voltage (Anode to Earth)	V_a	170	180	V
Screen Voltage (Screen to Earth)	V_{g2}	180	190	V
Anode Current (Quiescent)	$I_{a(o)}$	28	28	mA
Screen Current (Quiescent)	$I_{g2(o)}$	6.5	6.5	mA
Grid Bias Applied	V_{g1}	—9.6	—	V
Cathode Bias Resistance	R_k	—	270	Ω
Anode Load	R_a	6000 $\S$	5300 $\dagger$	7000 $\S$
Power Output	P_{out}	2.0 $\S$	2.35 $\dagger$	1.85 $\S$
Input Swing	$V_{in(rms)}$	3.3 $\S$	3.9 $\dagger$	3.1 $\S$

The above operating conditions are taken with constant anode and screen supply voltages.

$\S$ For 5 per cent Third Harmonic and Second Harmonic not exceeding 5 per cent.

$\dagger$ For 7 per cent Third Harmonic and Second Harmonic not exceeding 7 per cent.

FIELD TIME BASE TYPICAL OPERATION (Tetrode Section)

The output stage should be designed to allow for valve spread and deterioration during life in addition to component variation. Values of tetrode 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	50	170	—1	95	←
Assumed End of Life Condition	50	170	—1	62	←
Average New Valve	50	180	—1	105	←
Assumed End of Life Condition	50	180	—1	68	←
Average New Valve	60	190	—1	115	←
Assumed End of Life Condition	60	190	—1	75	←

MOUNTING POSITION—Unrestricted

Indicates a change ←

