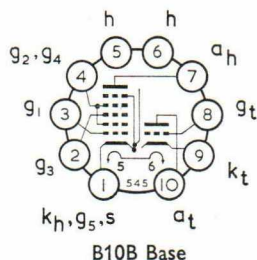


TRIODE HEPTODE



GENERAL

This triode heptode is intended for use with the triode as a pulse amplifier and the heptode as a noise gated sync. separator.

Heater Current	I_h	0.3	A
Heater Voltage	V_h	8.5	V

DESIGN CENTRE RATINGS

		Triode	Heptode	
Maximum Anode Dissipation	$P_a(\max)$	1.5	0.5	W
Maximum Screen Grids Dissipation	$P_{g_2+g_4}(\max)$	—	0.5	W
Maximum Anode Supply Voltage	$V_{a(b)\max}$	550	550	V
Maximum Anode Voltage	$V_a(\max)$	250	100	V
Maximum Screen Grids Supply Voltage	$V_{g_2+g_4(b)\max}$	—	550	V
Maximum Screen Grids Voltage	$V_{g_2+g_4}(\max)$	—	50	V
Minimum Screen Grids Voltage	$V_{g_2+g_4}(\min)$	—	6.0*	V
Maximum Peak Negative Control Grid Voltage	$-V_{g_1(pk)\max}$	200	100	V
Maximum Peak Negative Grid 3 Voltage	$-V_{g_3(pk)\max}$	—	150	V
Maximum Heater to Cathode Voltage	$V_{h-k}(\max)$	170†	100	V
Maximum Cathode Current	$I_k(\max)$	20	8.0	mA
Maximum Control Grid to Cathode Resistance	$R_{g_1-k}(\max)$	—	—	MΩ
Fixed Bias		2.0	3.0	MΩ
Cathode Bias		3.0	—	MΩ
Maximum Grid 3 to Cathode Resistance	$R_{g_3-k}(\max)$	—	3.0	MΩ

* Under design maximum conditions.

† Heater negative. Comprises d.c. maximum of 70V and 100V_{r.m.s.}

INTER-ELECTRODE CAPACITANCES

		Triode	Heptode	
Input	C_{in}	3.3	4.4	pF
Output	C_{out}	1.7	5.4	pF
Anode to Grid 1	C_{a-g_1}	1.8	<0.1	pF
Anode to Grid 3	C_{a-g_3}	—	<0.25	pF
Grid 1 to Grid 3	$C_{g_1-g_3}$	—	0.3	pF
Heptode Anode to Triode Anode	C_{ah-at}	<0.15	—	pF
Grid 1 to Triode Anode	C_{g_1-at}	<0.01	—	pF
Grid 1 to Triode Grid	$C_{g_1-g_t}$	<0.005	—	pF
Grid 3 to Triode Grid	$C_{g_3-g_t}$	<0.02	—	pF

CHARACTERISTICS

Triode Section

Anode Voltage	V_a	100	200	V
Grid Voltage	V_g	-1.0	-7.0 (<11)	V
Anode Current	I_a	9.0	0.1	mA
Mutual Conductance	gm	8.8	—	mA/V
Amplification Factor	μ	50	—	

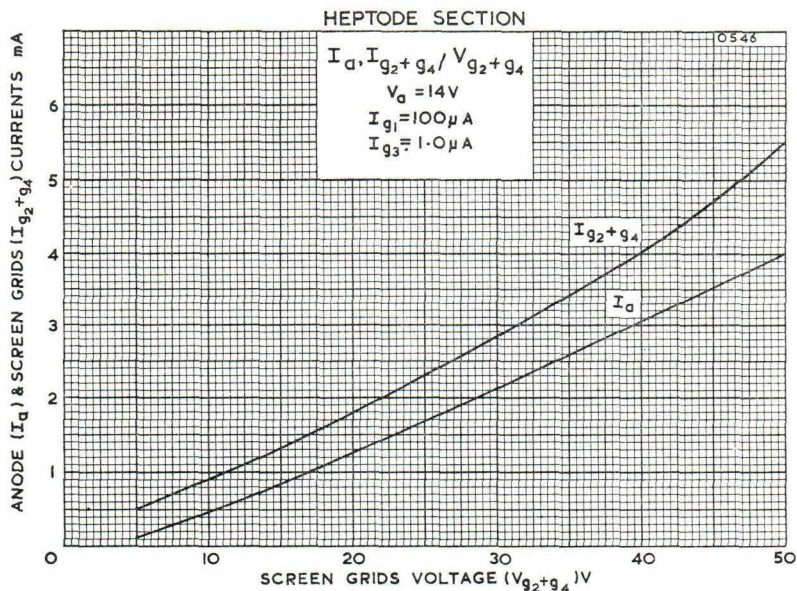
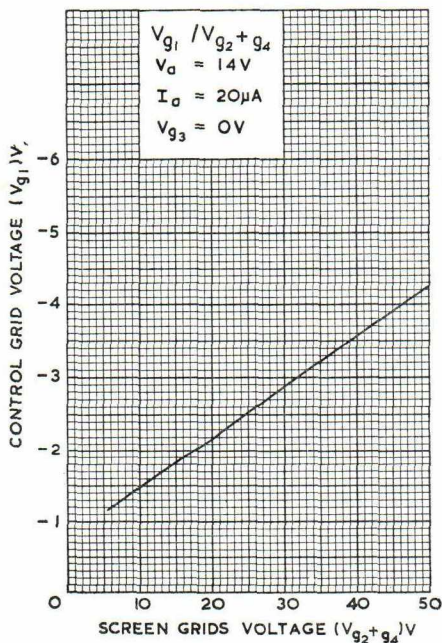
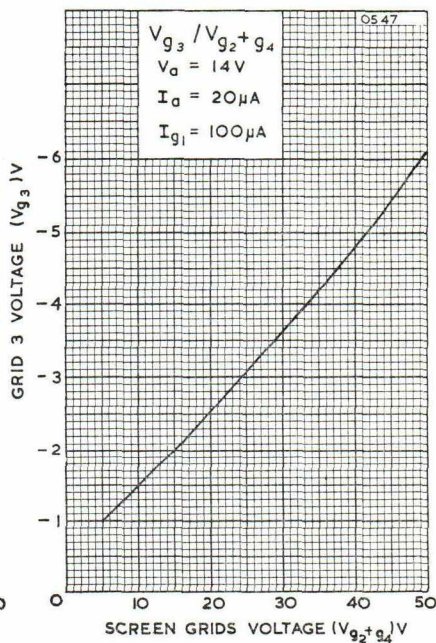
Heptode Section

Anode Voltage	V_a	14	14	14	V
Screen Grids Voltage	V_{g2+g4}	14	14	14	V
Grid 3 Voltage	V_{g3}	0	0	-1.8 (<2.2)	V
Control Grid Voltage	V_{g1}	0	-1.8	0	V
Anode Current	I_a	1500	20	20	μA
Screen Grids Current	I_{g2+g4}	1300	—	—	μA

TYPICAL OPERATION

Heptode as Sync. Separator

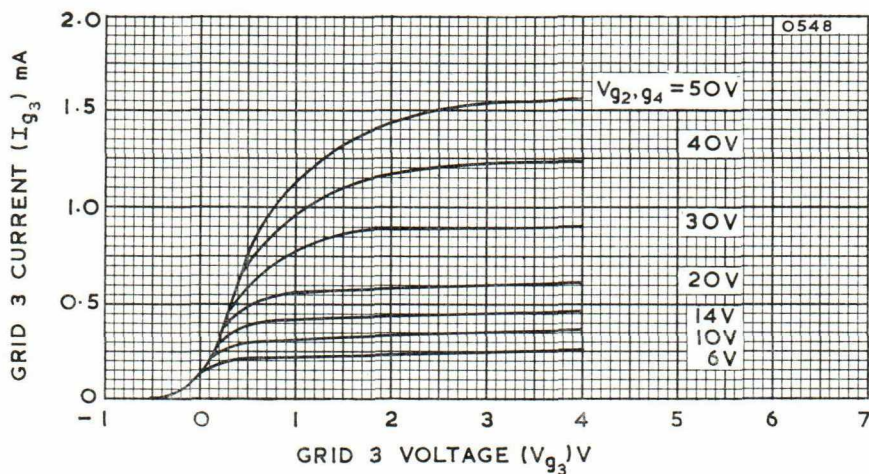
Anode Voltage	V_a	14	1.0	14	14	V
Screen Grids Voltage	V_{g2+g4}	14	14	14	14	V
Grid 3 Voltage	V_{g3}	—	—	+25	-1.9 (<2.3)	V
Control Grid Voltage	V_{g1}	—	—	-2.0	—	V
Anode Current	I_a	750	>300	20	20	μA
Grid 3 Current	I_{g3}	1.0	1.0	—	—	μA
Control Grid Current	I_{g1}	100	100	—	100	μA



HEPTODE SECTION

$$I_{g_3} / V_{g_3}$$

$$V_a = 14V \quad I_{g_1} = 100\mu A$$



TRIODE SECTION

$$I_a / V_a$$

