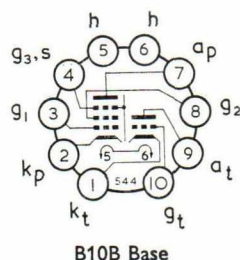


TRIODE PENTODE



GENERAL

This triode pentode is intended for use in television receivers with the triode as a limiter, noise detector, a.g.c. amplifier, sync. separator or pulse amplifier and the pentode as a sound or video i.f. amplifier.

Heater Current	I_h	0.3	A
Heater Voltage	V_h	8.5	V

DESIGN CENTRE RATINGS

		Triode	Pentode	
Maximum Anode Dissipation	$P_{a(max)}$	1.5	2.1	W
Maximum Screen Grid Dissipation	$P_{g_2(max)}$	—	0.75	W
Maximum Anode Supply Voltage	$V_{a(b)max}$	550	550	V
Maximum Anode Voltage	$V_a(max)$	250	250	V
Maximum Peak Anode Voltage ($I_a < 0.1$ mA)	$V_{a(pk)max}$	600*	—	V
Maximum Screen Grid Supply Voltage	$V_{g_2(b)max}$	—	550	V
Maximum Screen Grid Voltage	$V_{g_2(max)}$	—	250	V
Maximum Heater to Cathode Voltage	$V_{h-k(max)}$	150	150	V
Heater positive		350†	150	V
Heater negative			20	mA
Maximum Cathode Current	$I_{k(max)}$	18	20	mA
Maximum Control Grid Resistance	$R_{g_1(max)}$	1.0	1.0	MΩ

* Maximum pulse duration 18% of one cycle with a maximum of 18 μ s.

† Comprising d.c. maximum of 200V and 150V r.m.s.

INTER-ELECTRODE CAPACITANCES

Triode Input	$C_{in(t)}$	2.1	pF
Triode Output	$C_{out(t)}$	3.0	pF
Triode Anode to Triode Grid	C_{at-gt}	2.2	pF
Pentode Input	$C_{in(p)}$	6.0	pF
Pentode Output	$C_{out(p)}$	3.3	pF
Pentode Anode to Grid 1	C_{ap-g_1}	0.0056	pF
Pentode Anode to Grid 2	C_{ap-g_2}	<0.008	pF
Pentode Grid 1 to Grid 2	$C_{g_1-g_2}$	1.7	pF
Pentode Grid 1 to Cathode	C_{g_1-kp}	3.7	pF
Pentode Anode to Triode Anode	C_{ap-at}	<0.015	pF
Pentode Grid 1 to Triode Anode	C_{g_1-at}	<0.0012	pF
Pentode Grid 1 to Triode Grid	C_{g_1-gt}	<0.0015	pF

CHARACTERISTICS

		Triode	Pentode	
Anode Voltage	V_a	170	160	V
Suppressor Grid Voltage	V_{g3}	—	0	V
Screen Grid Voltage	V_{g2}	—	135	V
Control Grid Voltage	V_{g1}	-1.0	-1.7	V
Anode Current	I_a	8.5	13	mA
Screen Grid Current	I_{g2}	—	5.3	mA
Mutual Conductance	g_m	5.2	14	mA/V
Inner Amplification Factor	μ_{g1-g2}	—	53	
Amplification Factor	μ	57	—	

TYPICAL OPERATION

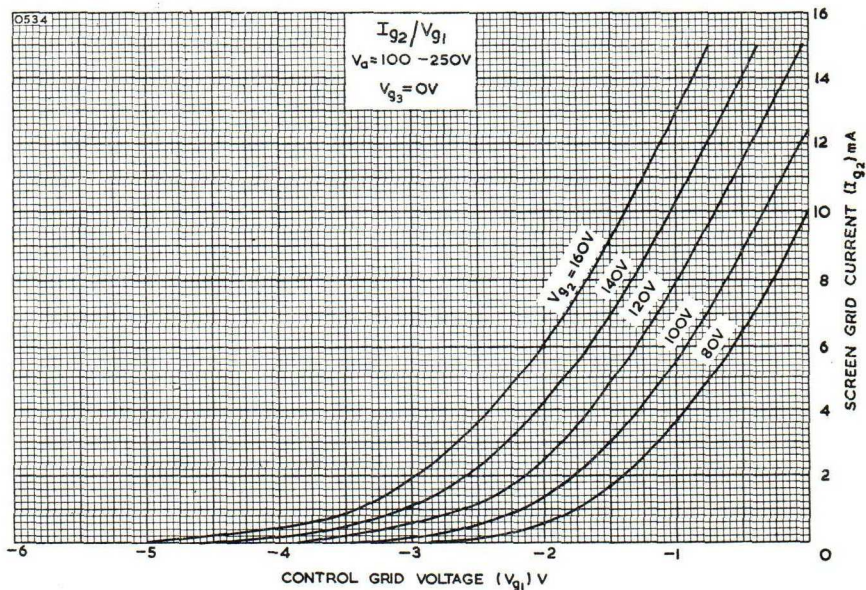
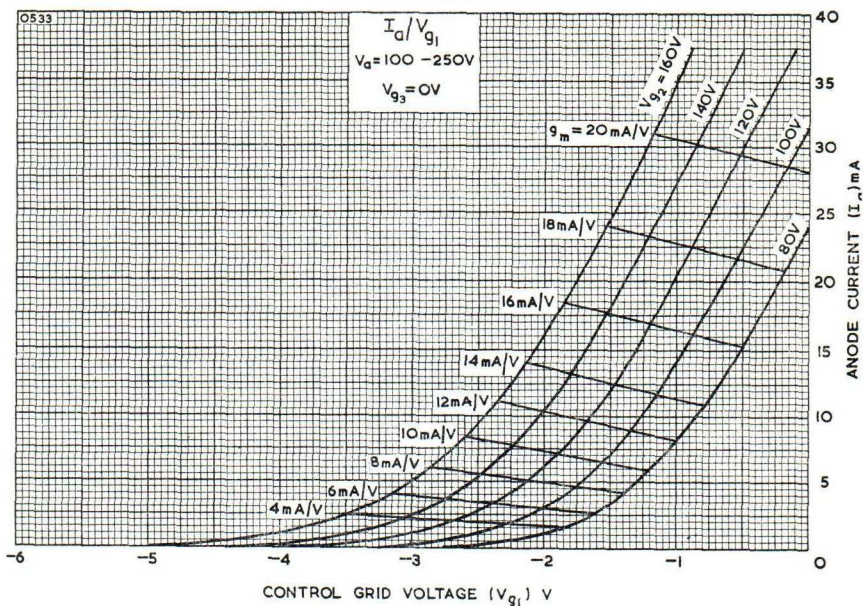
Pentode as Sound or Video I.F. Amplifier (g_3 earthed)

Supply Voltage	V_b	210	230	V
Anode Load Resistance	R_a	3.9	5.6	$k\Omega$
Screen Grid Resistance	R_{g2}	15	22	$k\Omega$
Cathode Bias Resistance	R_k	91	83	Ω
Anode Current	I_a	13	12.5	mA
Screen Grid Current	I_{g2}	5.3	5.1	mA
Mutual Conductance	g_m	14	14	mA/V
Input Resistance at 40 MHz	R_{in}	6.6	6.6	$k\Omega$

Triode as Sync. Separator

Anode Supply Voltage	$V_{a(b)}$	130 to 150	V
Anode Load Resistance	R_a	33	$k\Omega$
Anode Current	I_a	>2.0	mA
Grid Current	I_g	1.0	μA

PENTODE SECTION



TRIODE SECTION

