

OUTPUT PENTODE

PL82

Output pentode with a maximum anode dissipation of 9W suitable for use as frame timebase or audio output valve.

HEATER

Suitable for series operation, a.c. or d.c.

I_h	300	mA
V_h	16.5	V

CAPACITANCES

C_{in}	11	pF
C_{out}	6.2	pF ←
C_{a-g1}	<1.0	pF
C_{g1-h}	<0.15	pF

CHARACTERISTICS

V_a	170	200	V
V_{g2}	170	200	V
I_a	53	45	mA
I_{g2}	10	8.5	mA
V_{g1}	-10.4	-14.2	V
g_m	9	7.6	mA/V ←
r_a	20	24	k Ω
μ_{g1-g2}	10	10	

OPERATING CONDITIONS AS AUDIO OUTPUT VALVE

V_a	170	200	V
V_{g2}	170	200	V
V_{g1}	-10.4	-13.9	V
R_a	3	4	k Ω
$I_{a(0)}$	53	45	mA
$I_{g2(0)}$	10	8.5	mA
V_{in} (r.m.s.) ($P_{out}=50$ mW)	0.5	0.55	V
V_{in} (r.m.s.) ($D_{tot}=10\%$)	6.0	7.0	V
P_{out} ($D_{tot}=10\%$)	4.0	4.2	W

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OPERATION AS FRAME OUTPUT VALVE

To allow for valve spread and for deterioration during life, the frame output stage should be designed around the following values:—

V_a	50	60	V
V_{g2}	170	200	V
I_a	90	120	mA

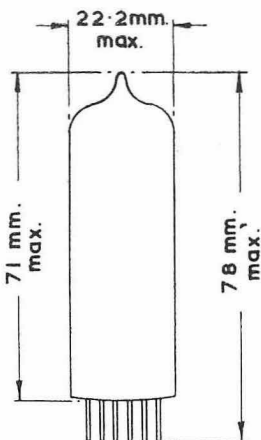
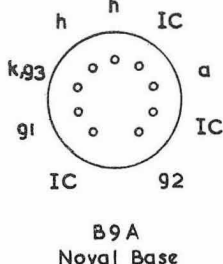
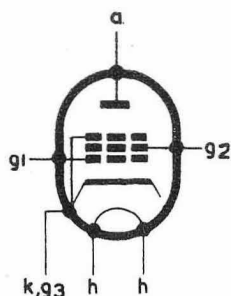
For an average new valve the following figures will apply:—

V_a	50	60	V
V_{g2}	170	200	V
V_{g1}	-1	-1	V
I_a	140	175	mA

LIMITING VALUES

$V_{a(b)}$ max.	550	V
V_a max.	250	V
* $+V_a$ (pk) max.	2.5	kV
$-V_a$ (pk) max.	500	V
p_a max.	9	W
$V_{g2(b)}$ max.	550	V
V_{g2} max.	250	V
p_{g2} max.	2.5	W
I_k max.	75	mA
V_{g1} max. ($I_{g1} = +0.3 \mu A$)	-1.3	V
R_{g1-k} max. (audio output valve)	1.0	M Ω
R_{g1-k} max. (frame output valve)	2.2	M Ω
V_{h-k} max.	200	V $\leftarrow$
R_{h-k} max.	20	k Ω

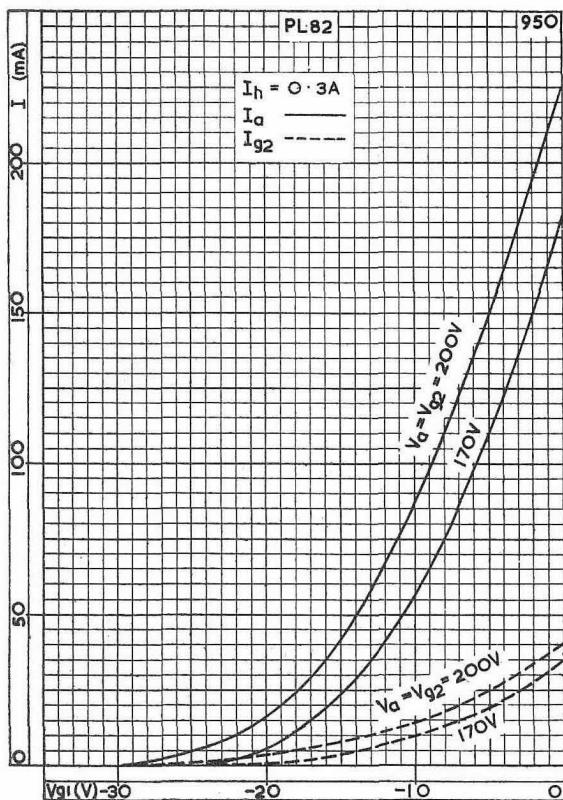
*Max. pulse duration 10% of one cycle, with a maximum of 2 msec.



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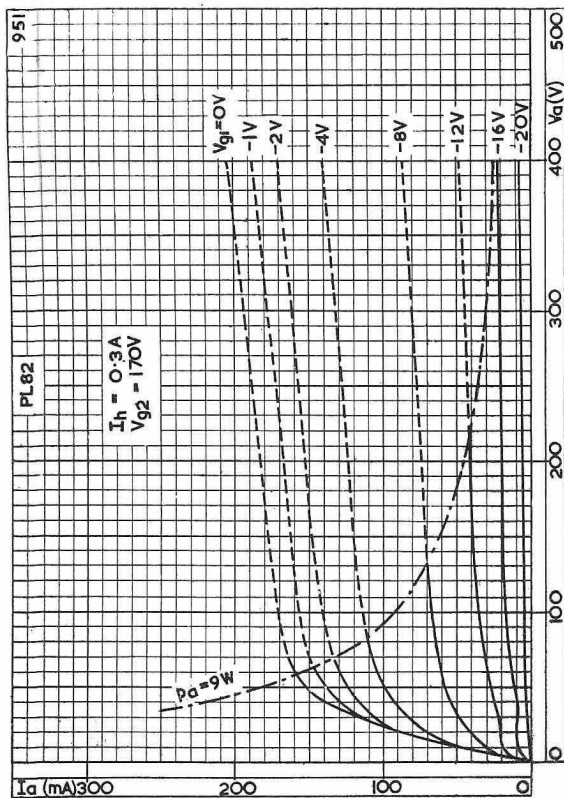


ANODE CURRENT AND SCREEN-GRID CURRENT PLOTTED AGAINST CONTROL GRID VOLTAGE

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ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE
WITH SCREEN-GRID VOLTAGE AT 170V

