

VIDEO OUTPUT PENTODE

Luminance output tube in colour TV receivers.

QUICK REFERENCE DATA			
Anode current	I_a	30	mA
Transconductance	S	40	mA/V
Anode dissipation	W_a	max. 6	W

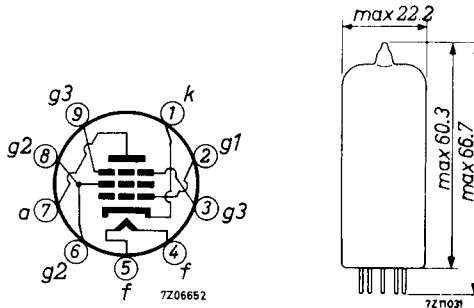
HEATING: Indirect by A.C. or D.C.; series supply

Heater current	I_f	300	mA
Heater voltage	V_f	16	V

DIMENSIONS AND CONNECTIONS

Dimensions in mm

Base: Noval



CAPACITANCES

Anode to all except grid No. 1	$C_{a(g_1)}$	4	pF
Grid No. 1 to all except anode	$C_{g_1(a)}$	20	pF
Anode to grid No. 1	C_{ag_1}	0.075	pF
Anode to grid No. 1	C_{ag_1}	max. 0.1	pF

TYPICAL CHARACTERISTICS

Anode voltage	V_a	170 V
Grid No.2 voltage	V_{g2}	170 V
Grid No.3 voltage	V_{g3}	0 V
Grid No.1 supply voltage	V_{bg1}	0 V
Cathode resistor (decoupled)	R_k	36 Ω
Anode current	I_a	30 mA
Grid No.2 current	I_{g2}	6.5 mA
Transconductance	S	40 mA/V
Amplification factor	μ_{g2g1}	70 -

LIMITING VALUES (Design centre rating system unless otherwise stated)

Anode supply voltage	V_{ba}	max. 400 V
Anode voltage,	V_{a0}	max. 550 V
long term average	V_a	max. 300 V
Grid No.2 voltage	V_{g20}	max. 550 V
	V_{g2}	max. 300 V
Anode dissipation	W_a	max. 6 W
Grid No.2 dissipation	W_{g2}	max. 2.5 W
	W_{g2}	max. 3.0 W 1)
Cathode current	I_k	max. 100 mA
Grid No.1 resistor	R_{g1}	max. 0.1 M Ω
at $R_k \geq 39 \Omega$	R_{g1}	max. 0.5 M Ω
Cathode to heater voltage	V_{kf}	max. 200 V

¹⁾ Design maximum rating system including no signal condition.

OPERATING CONDITIONS (negative modulation)

- $V_b = 250 \text{ V}$
- $R_b = 330 \ \Omega$
- $R_{av} = 560 \ \Omega$
- $R_a = 2.7 \text{ k}\Omega$
- $R_{g2} = 5.6 \text{ k}\Omega$
- $R_k \text{ }^1) = 39 \ \Omega$
- $+V_{bg1} = 4 \text{ V}$

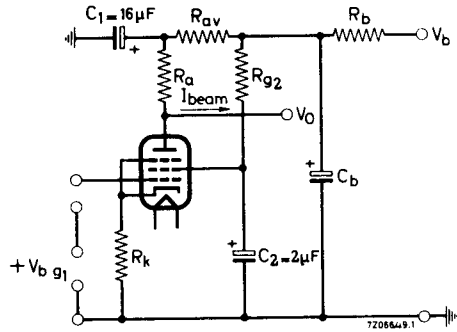


fig. 1

- $V_{o1} = 100 \text{ V}$
- $V_{opp} \cong 140 \text{ V}$
- Video-linearity $\cong 0.8 -$
- $V_{ipp} \text{ ca. } 5 \text{ V}$
- $I_{beam} \text{ max. } 7 \text{ mA}$

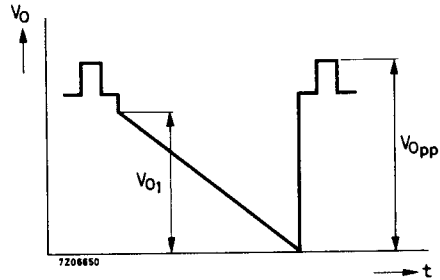
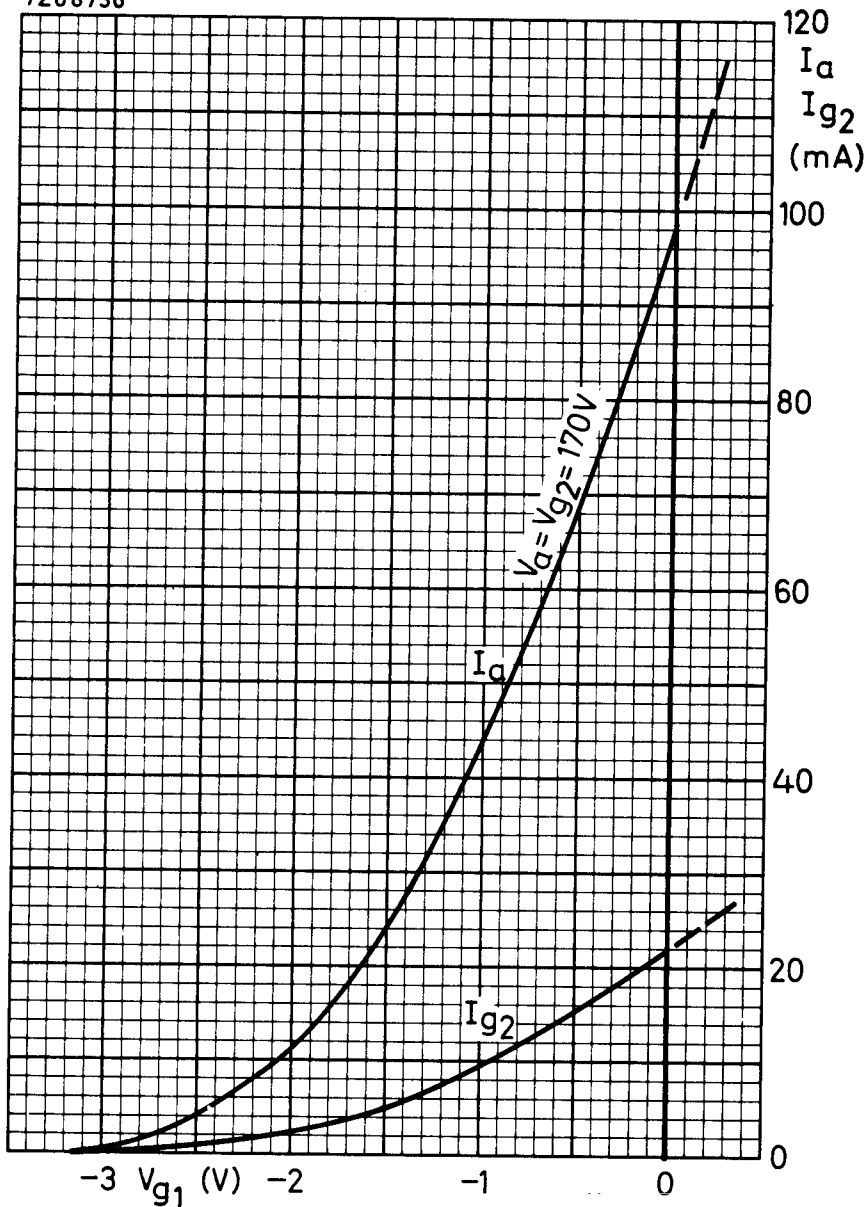
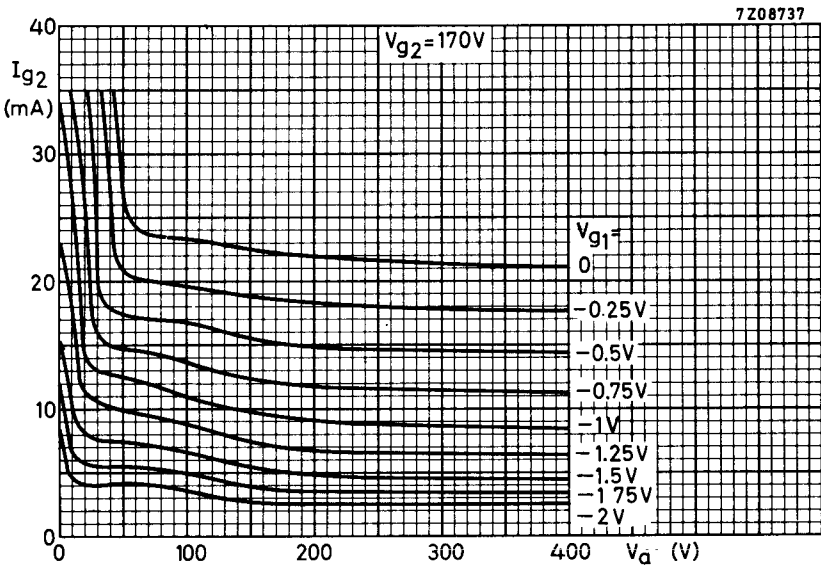
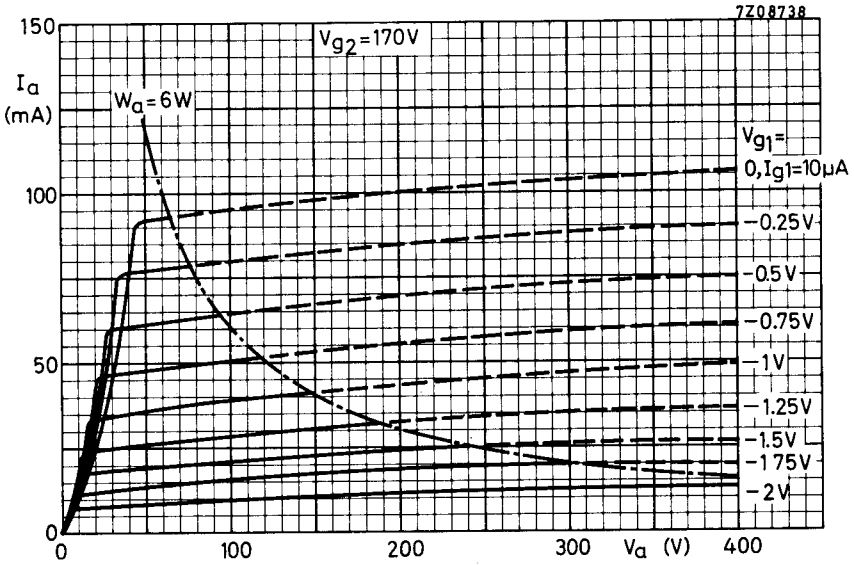


fig. 2

¹⁾ Without by-pass capacitor.

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PHILIPS

Data handbook



Electronic
components
and materials

PL802

page	sheet	date
1	1	1969.12
2	2	1969.12
3	3	1969.12
4	4	1969.12
5	5	1969.12
6	FP	1999.06.06