

## 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

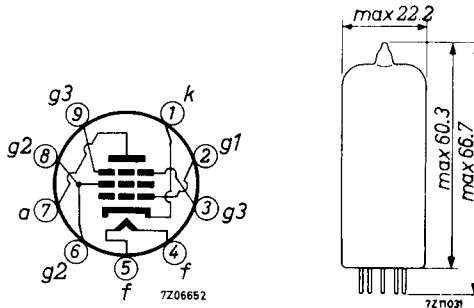
**HEATING:** Indirect by A.C. or D.C.; series supply

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 $\Omega$
Anode current	$I_a$	30 mA
Grid No.2 current	$I_{g2}$	6.5 mA
Transconductance	$S$	40 mA/V
Amplification factor	$\mu_{g2g1}$	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 $\Omega$
at $R_k \geq 39 \Omega$	$R_{g1}$	max. 0.5 M $\Omega$
Cathode to heater voltage	$V_{kf}$	max. 200 V

<sup>1)</sup> Design maximum rating system including no signal condition.

**OPERATING CONDITIONS (negative modulation)**

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

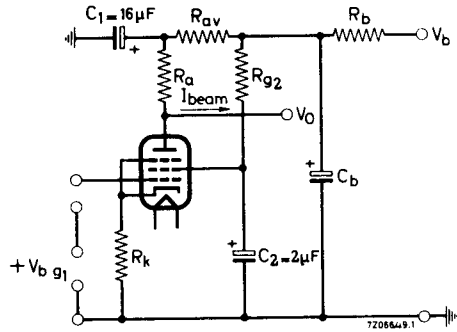


fig.1

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

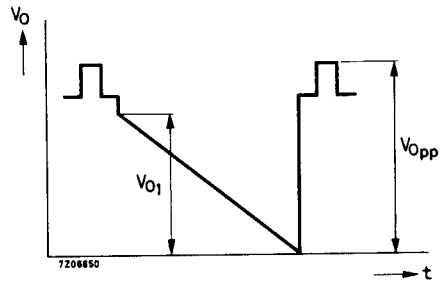
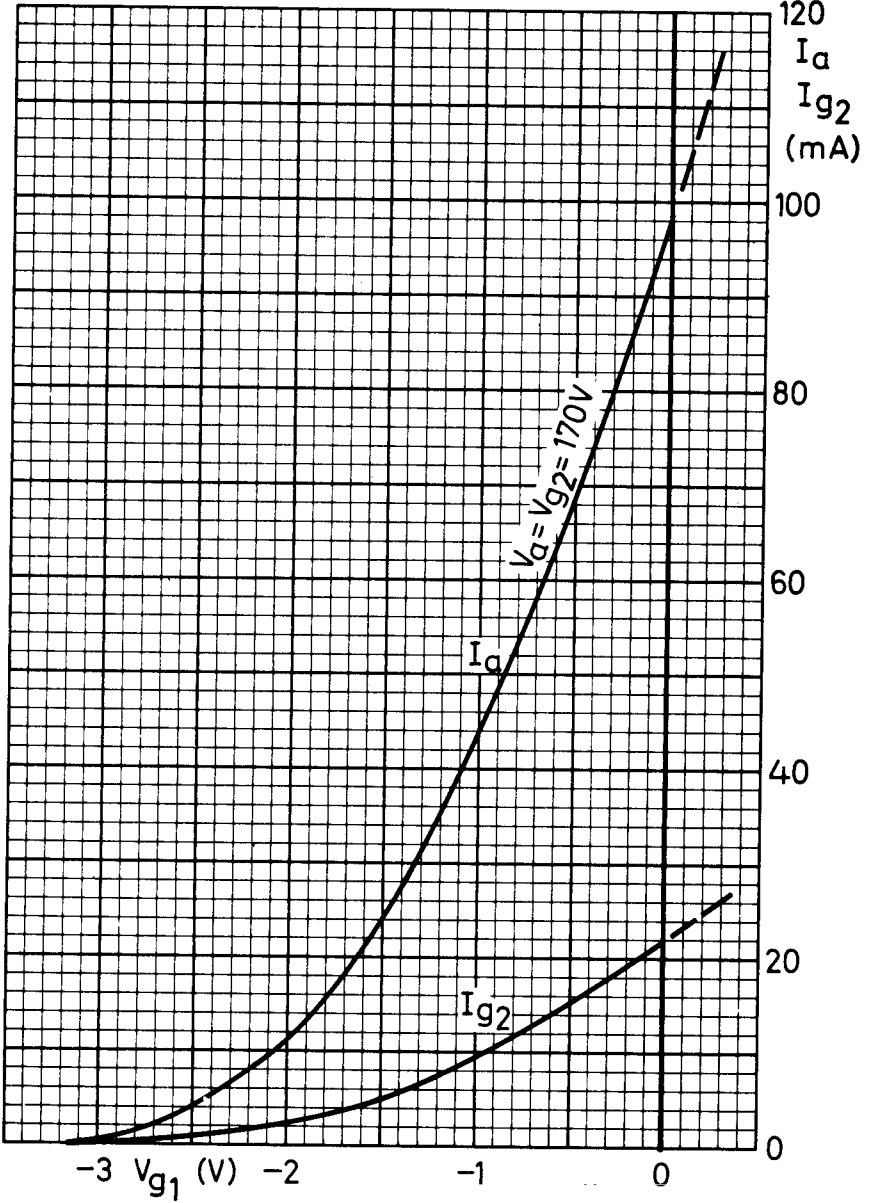
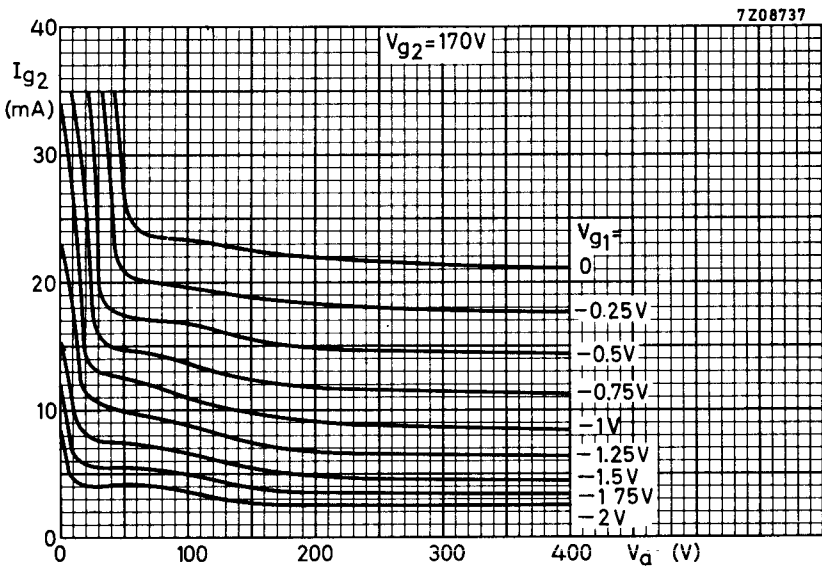
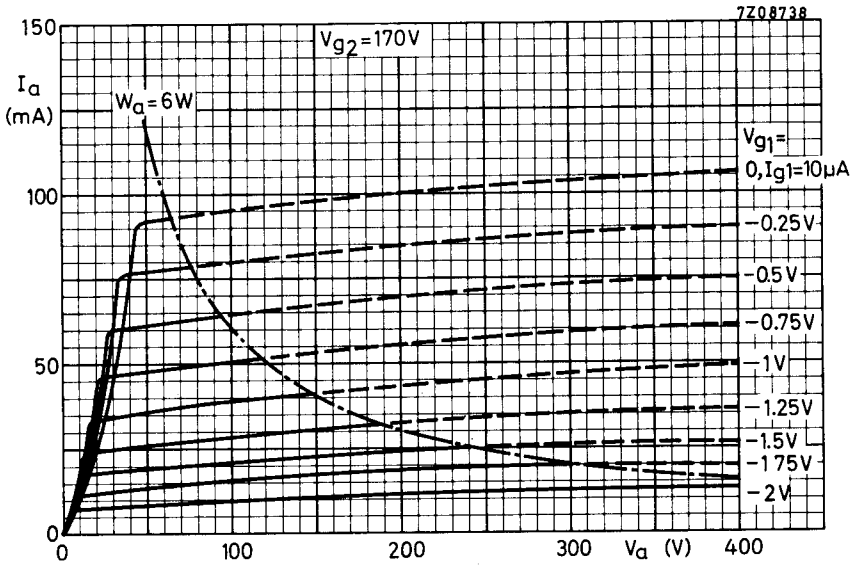


fig.2

<sup>1)</sup> Without by-pass capacitor.

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# PHILIPS

Data handbook



Electronic  
components  
and materials

PL802

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6	FP	1999.06.06