

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

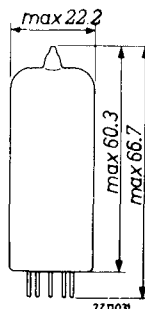
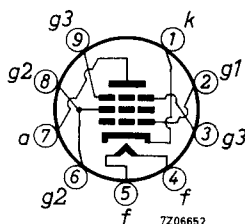
HEATING: Indirect by A.C. or D.C.; series supply

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 V
R_b	=	330 Ω
R_{av}	=	560 Ω
R_a	=	2.7 k Ω
R_{g2}	=	5.6 k Ω
R_k ¹⁾	=	39 Ω
$+V_{bg1}$	=	4 V

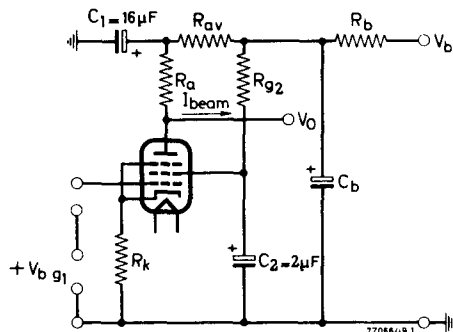


fig.1

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

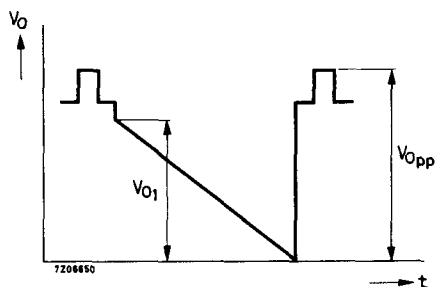
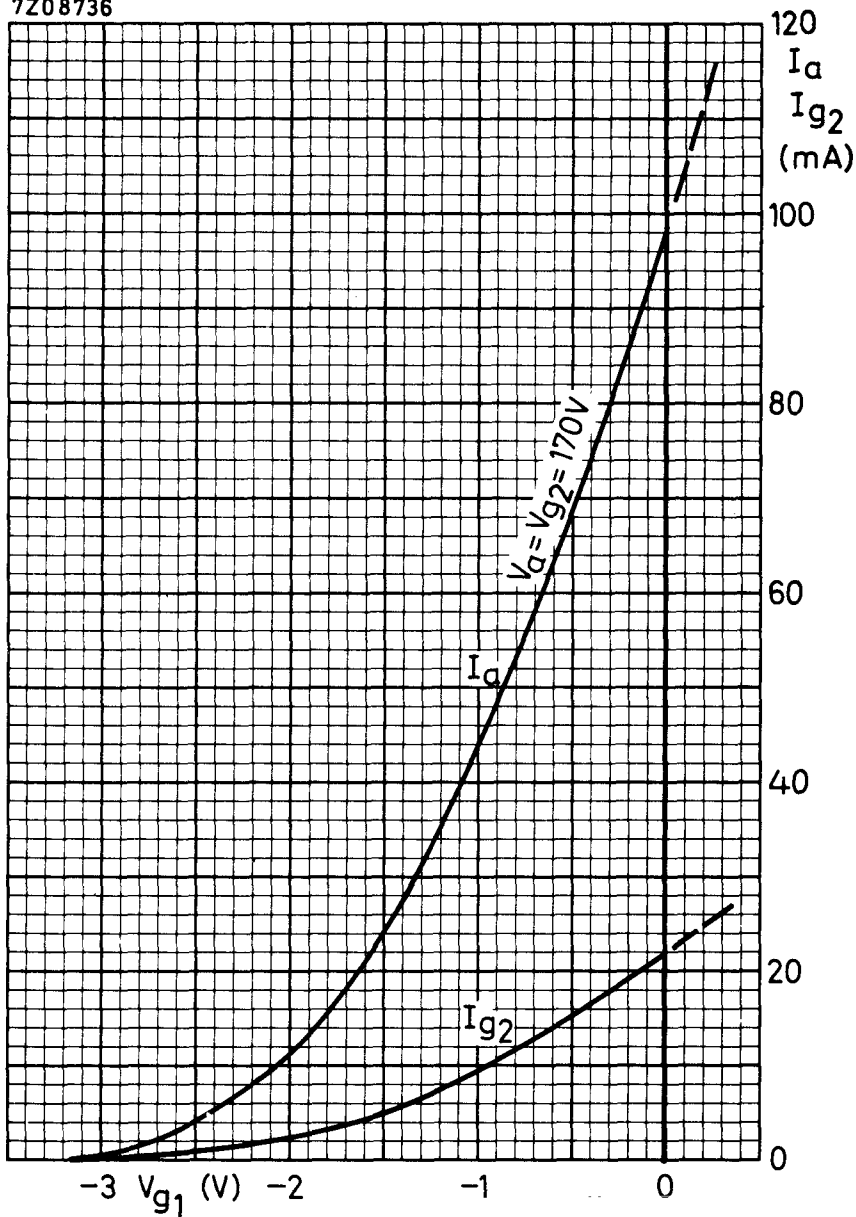
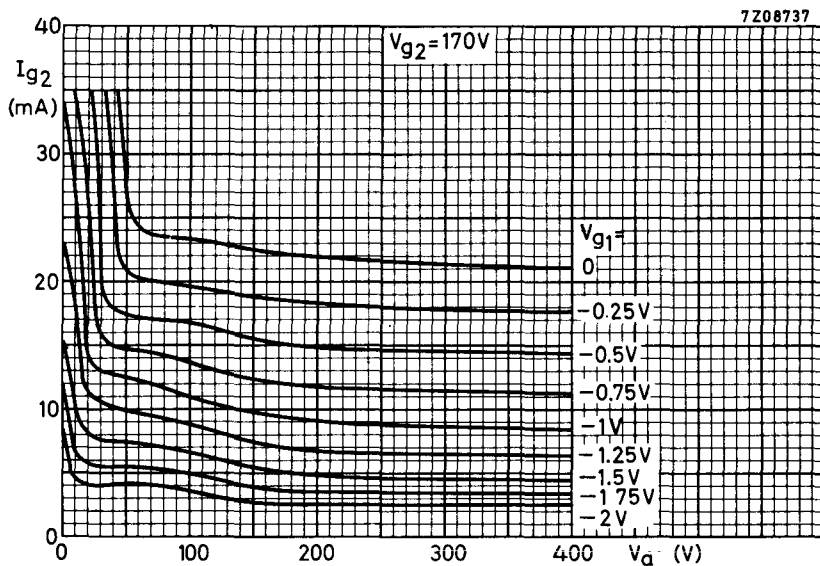
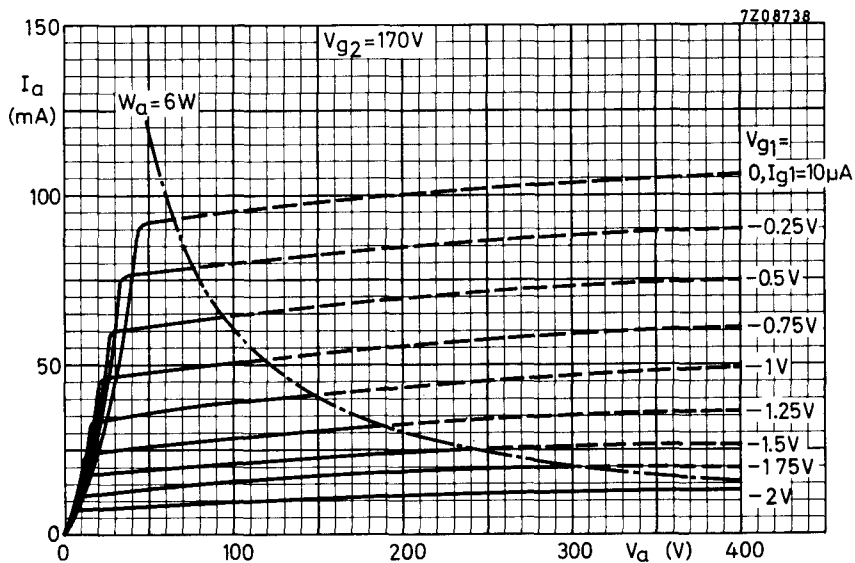


fig.2

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