

FRAME OUTPUT PENTODE

Pentode intended for use as frame output amplifier in colour television receivers.

QUICK REFERENCE DATA	
Cathode current, average	I_k max. 100 mA
Anode dissipation	W_a max. 12 W

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

Heater current

I_f 300 mA

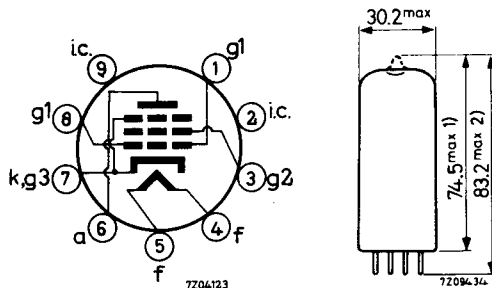
Heater voltage

V_f 17 V

DIMENSIONS AND CONNECTIONS

Dimensions in mm

Base: Magnoval



CAPACITANCES

Anode to grid No. 1

C_{ag1} max. 1.6 pF

Grid No. 1 to heater

C_{g1f} max. 0.2 pF

1) Max. 71.4
 2) Max. 80.1 for execution with pumping stem on base side.

TYPICAL CHARACTERISTICS

(Measured under pulse conditions)

Anode voltage	V_a	50	V_a	190 V
Grid No.2 voltage	V_{g2}	190	V_{g2}	190 V
Grid No.1 voltage	V_{g1}	-1	V_{g1}	-17 V
Anode current	I_{ap}	320	I_a	60 mA
Grid No.2 current	I_{g2}	approx. 60	I_{g2}	5 mA
Transconductance			S	9 mA/V
Amplification factor			μ_{g2g1}	8 -

Remarks.

The minimum I_a to be expected as a result of spread of the tube characteristics tube deterioration during life and decrease of the mains voltage to 10 % below the nominal value can be derived from the curves on page B by decreasing by 40 % the I_a values situated on the curve A-B at V_{g2} occurring at the decreased mains voltage.

In order not to exceed the maximum permissible value of W_{g2} , the circuit should be designed in such a way that the anode voltage should never be lower than the value determined by curve A-B at the relevant V_{g2} value.

OPERATING CHARACTERISTICS (end of scan values)

Anode voltage	V_a	70 V
Grid No.2 voltage	V_{g2}	200 V
Grid No.1 voltage	V_{g1}	-5 V
Anode peak current	I_{ap}	230 mA

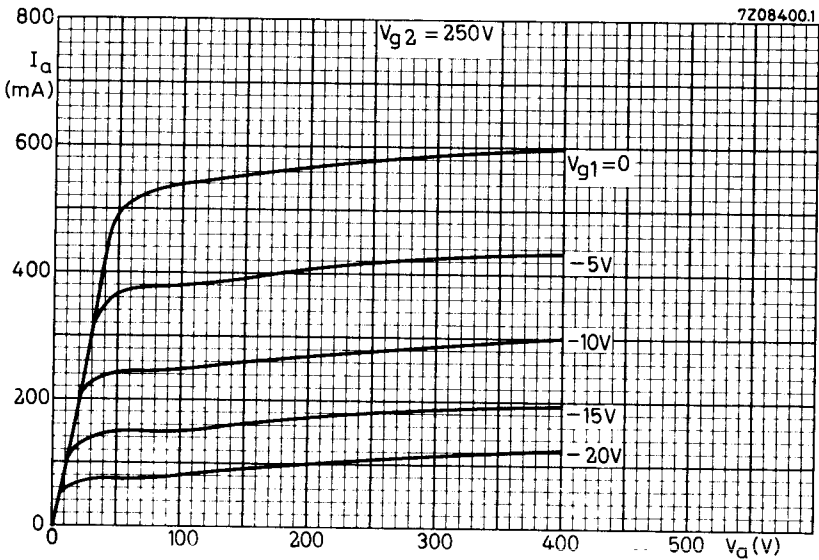
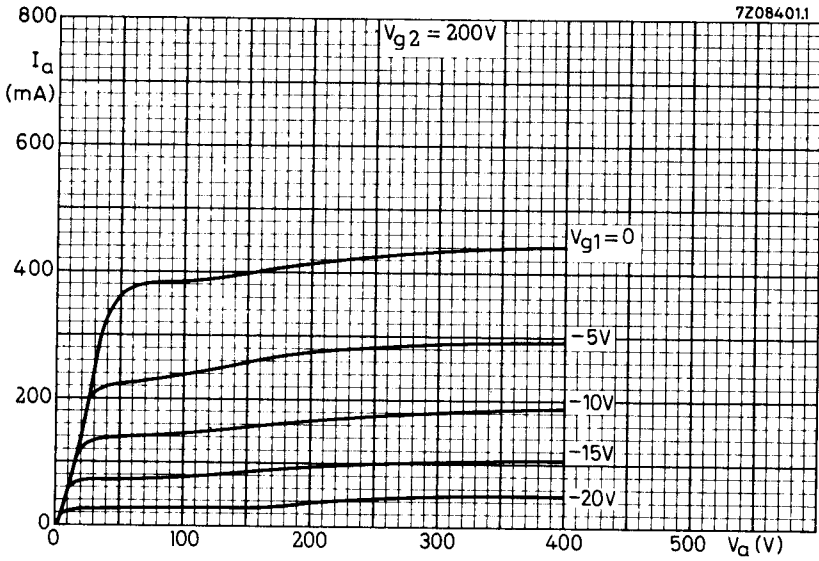
LIMITING VALUES (design centre rating system) unless otherwise stated

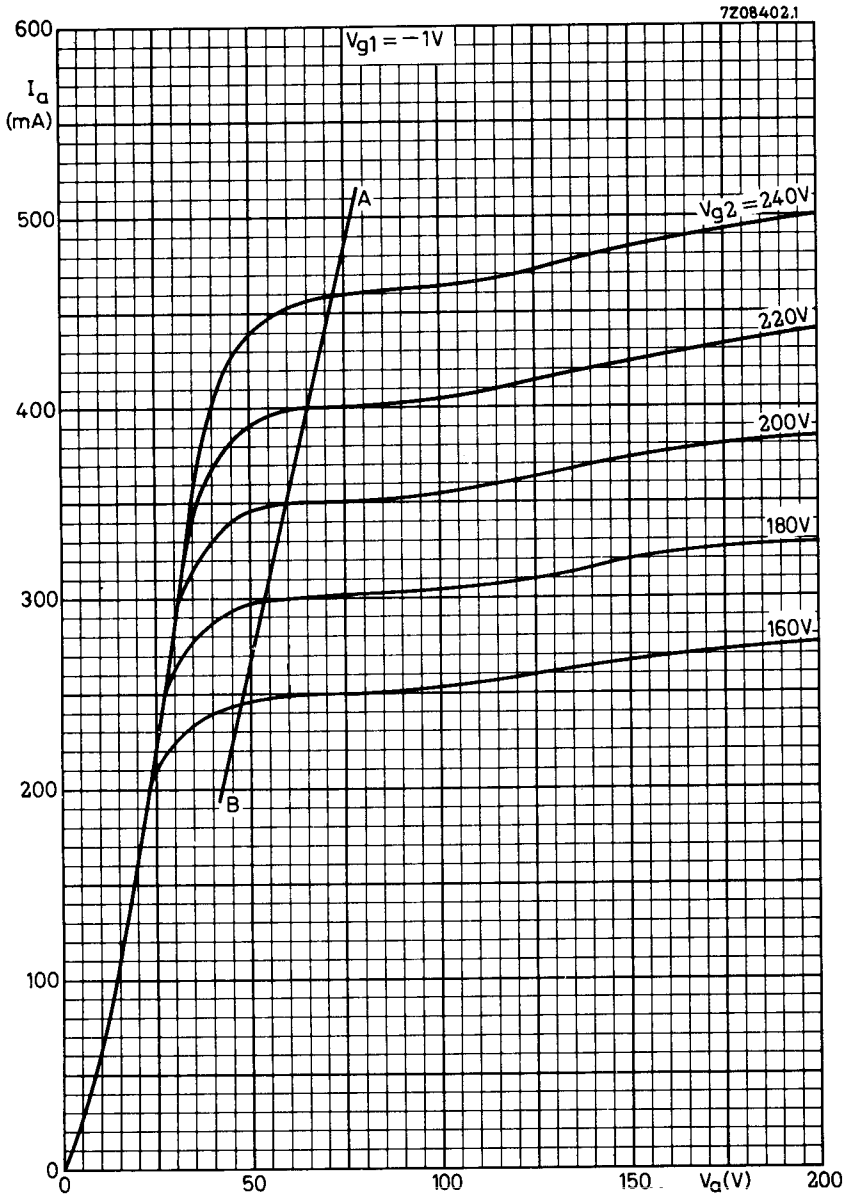
Anode voltage	V_{a_0}	max.	700 V
	V_a	max.	400 V
Anode peak voltage	V_{ap}	max.	2.5 kV 1)
Grid No.2 voltage	V_{g2_0}	max.	700 V
	V_{g2}	max.	275 V
Anode dissipation	W_a	max.	12 W
Grid No.2 dissipation	W_{g2}	max.	3 W
design max.	W_{g2}	max.	4 W
Cathode current	I_k	max.	100 mA
Grid No.1 resistor, fixed bias	R_{g1}	max.	1 M Ω
automatic bias	R_{g1}	max.	2.2 M Ω
Cathode to heater voltage	V_{kf}	max.	220 V

MICROPHONY

The maximum peak acceleration to which the tube may be subjected under the most unfavourable conditions is 1.5 g at frequencies < 600 Hz. and 0.2 g at frequencies > 600 Hz. The equivalent interference voltage at grid No.1 will than be < 25 mV.

1) Max. pulse duration 5% of a cycle and max. 1 ms.





PHILIPS

Data handbook



Electronic
components
and materials

PL508

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