

I.F. PENTODE

Pentode intended for use as I.F. amplifier in television receivers.

QUICK REFERENCE DATA

Anode current	I_a	10 mA
Transconductance	S	15 mA/V
Amplification factor	$\mu_{g_2g_1}$	60 -
Internal resistance	R_i	380 k Ω

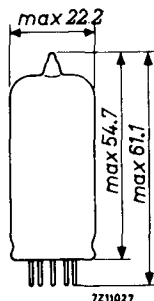
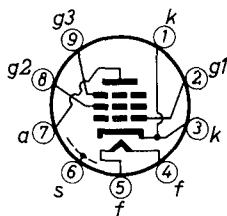
HEATING: Indirect by A.C. or D.C.; parallel or series supply

Heater voltage	V_f	6.3 V
Heater current	I_f	300 mA

DIMENSIONS AND CONNECTIONS

Dimensions in mm

Base: Noval



CAPACITANCES

Anode to all except grid No.1	$C_{a(g_1)}$	3 pF
Grid No.1 to all except anode	$C_{g_1(a)}$	10 pF
Anode to grid No.1	C_{ag_1}	max. 0.0055 pF
Grid No.1 to grid No.2	$C_{g_1g_2}$	2.8 pF

TYPICAL CHARACTERISTICS

Anode voltage	V_a	200	V
Grid No.3 voltage	V_{g3}	0	V
Grid No.2 voltage	V_{g2}	200	V
Grid No.1 voltage	V_{g1}	-2.5	V
Anode current	I_a	10	mA
Grid No.2 current	I_{g2}	4.1	mA
Transconductance	S	15	mA/V
Internal resistance	R_i	380	k Ω
Amplification factor	μ_{g2g1}	60	-
Input resistance grid No.1 (f = 40 MHz)	r_{g1}	11	k Ω
Equivalent noise resistance (f = 40 MHz)	R_{eq}	330	Ω

OPERATING CHARACTERISTICS

Anode supply coltage	V_{ba}	170	200	230	V
Grid No.3 voltage	V_{g3}	0	0	0	V
Grid No.2 supply voltage	V_{bg2}	170	200	230	V
Grid No.2 resistor	R_{g2}	0	7.5	15	k Ω
Cathode resistor	R_k	140	140	140	Ω
Anode current	I_a	10	10	10	mA
Grid No.2 current	I_{g2}	4.1	4.1	4.1	mA
Transconductance	S	15.6	15.6	15.6	mA/V
Internal resistance	R_i	330	510	680	k Ω
Input resistance grid No.1 f = 40 MHz	r_{g1}	10	10	10	k Ω
Equivalent noise resistance f = 40 MHz	R_{eq}	300	300	300	Ω

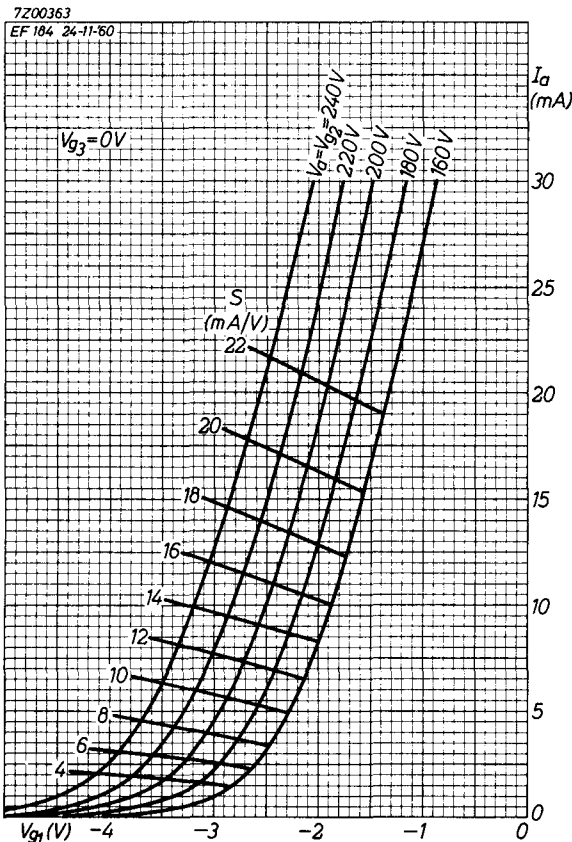
REMARKS

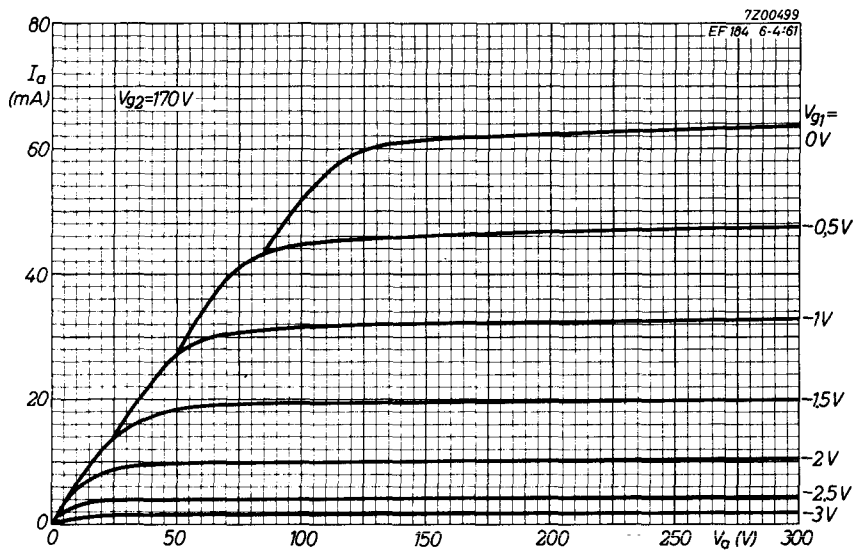
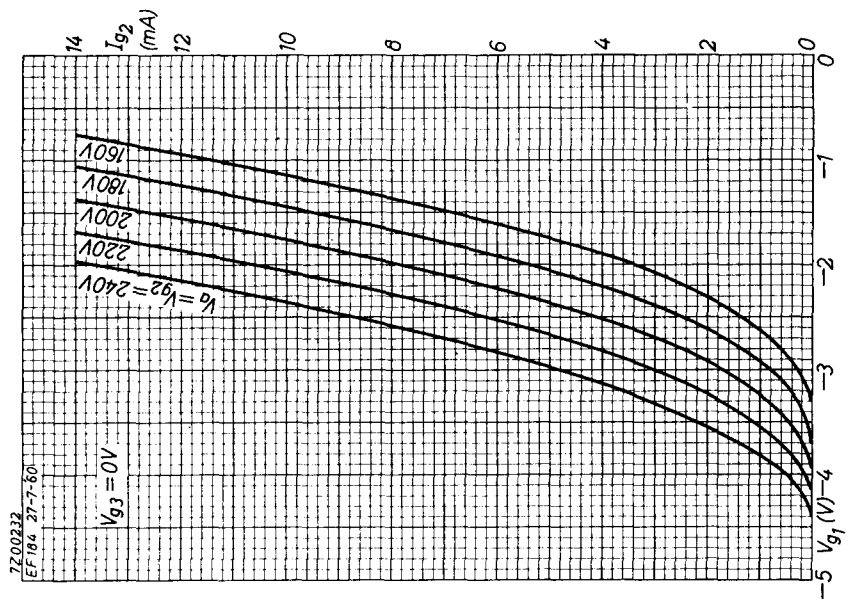
1. Operation with cathode bias resistor is recommended.
2. In order to ensure a good performance with respect to cross-modulation and microphony this tube should not be used in circuits with automatic gain control. For such applications a tube with variable transconductance is recommended.

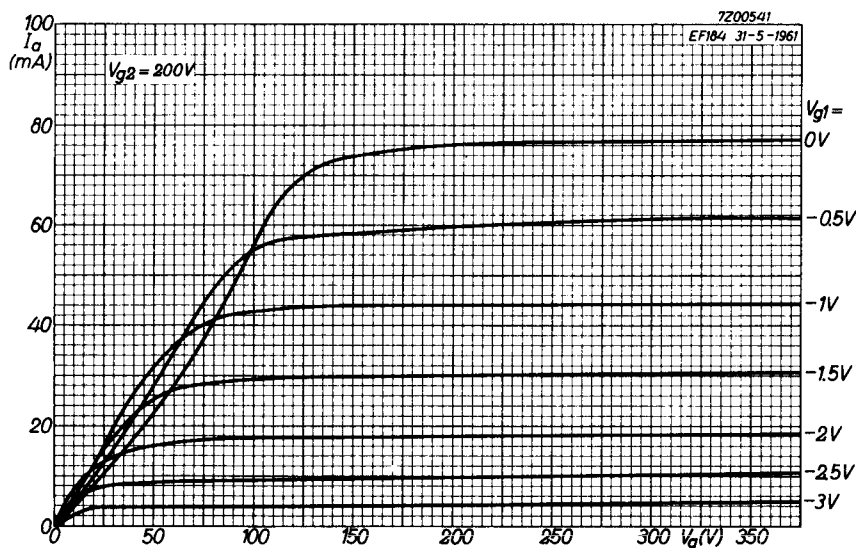
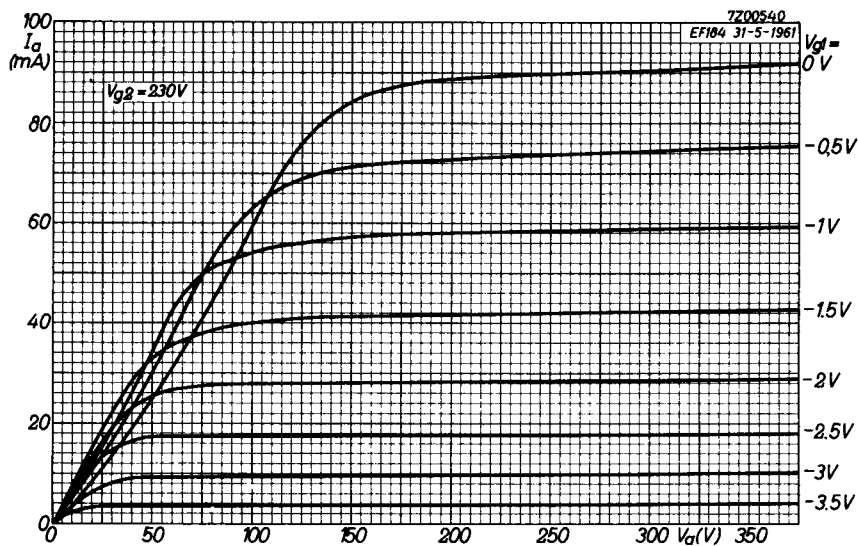
LIMITING VALUES (Design centre rating system)

Anode voltage	V_{a0}	max. 550 V
	V_a	max. 250 V
Anode dissipation	W_a	max. 2.5 W
Grid No.2 voltage	V_{g20}	max. 550 V
	V_{g2}	max. 250 V
Grid No.2 dissipation	W_{g2}	max. 0.9 W ¹⁾
Grid No.1 voltage, negative peak	$-V_{g1p}$	max. 50 V
Cathode current	I_k	max. 25 mA
Cathode to heater voltage	V_{kf}	max. 150 V
Grid No.1 resistor	R_{g1}	max. 1 M Ω

¹⁾ During a heating-up period not exceeding 15 seconds this value may be max. 1.5 W. At the values of R_{g2} specified under "Operating characteristics" there will be no risk of exceeding the maximum permissible value of W_{g2} .







PHILIPS

Data handbook



**Electronic
components
and materials**

EF184

page	sheet	date
1	1	1970.01
2	2	1970.01
3	3	1970.01
4	4	1970.01
5	5	1970.01
6	6	1970.01
7	FP	1999.08.16