

R.F. PENTODE

Pentode intended for use as R.F., I.F. or video amplifying tube or as mixing tube in television receivers.

QUICK REFERENCE DATA

Anode current	I_a	10 mA
Transconductance	S	7.4 mA/V
Amplification factor	$\mu_{g_2g_1}$	50 -
Internal resistance	R_i	500 k Ω

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

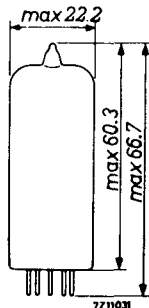
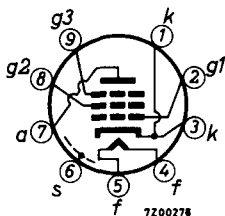
Heater voltage V_f 6.3 V

Heater current I_f 300 mA

DIMENSIONS AND CONNECTIONS

Dimensions in mm

Base: Noval



CAPACITANCES

Grid No.1 to all except anode	$C_{g1(a)}$	6.9 pF
Anode to all except grid No.1	$C_{a(g1)}$	3.1 pF
Anode to grid No.1	C_{ag1}	max. 0.007 pF
Anode to cathode	C_{ak}	max. 0.012 pF
Grid No.2 to all	C_{g2}	5.4 pF
Grid No.1 to grid No.2	C_{g1g2}	2.6 pF
Grid No.1 to heater	C_{g1f}	max. 0.15 pF
Cathode to heater	C_{kf}	5.0 pF

REMARK

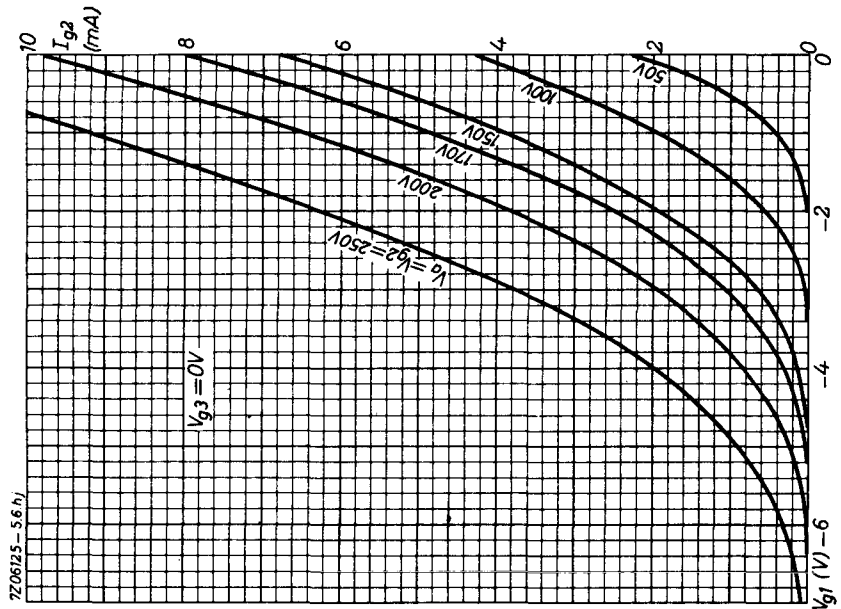
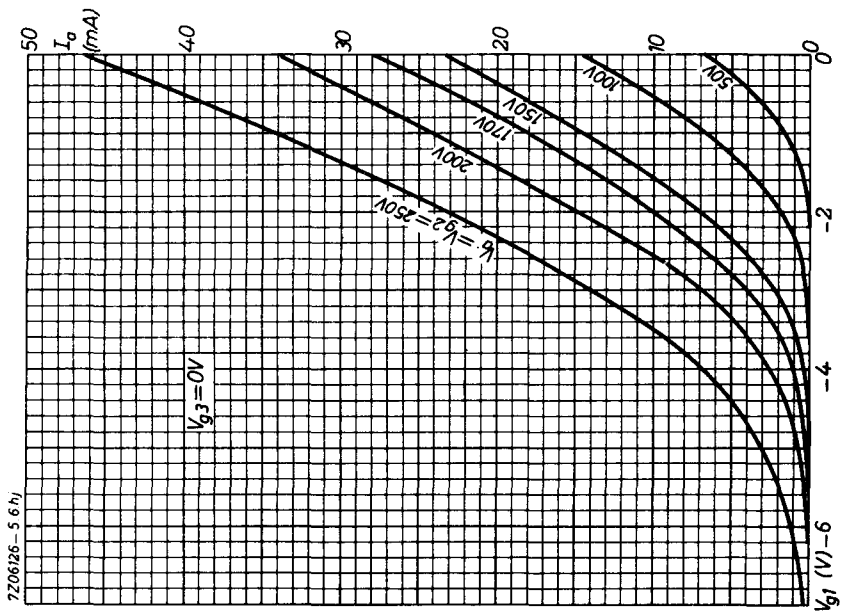
When using the EF80 as video amplifier the amplification between the input grid of the EF80 and the input of the cathode ray tube should not exceed a value of 25, in order to prevent microphonic effect.

TYPICAL CHARACTERISTICS AND OPERATING CHARACTERISTICS

Anode voltage	V_a	170	200	250	V
Grid No.3 voltage	V_{g3}	0	0	0	V
Grid No.2 voltage	V_{g2}	170	200	250	V
Grid No.1 voltage	V_{g1}	-2.0	-2.55	-3.5	V
Anode current	I_a	10	10	10	mA
Grid No.2 current	I_{g2}	2.5	2.6	2.8	mA
Transconductance	S	7.4	7.1	6.8	mA/V
Internal resistance	R_i	0.5	0.55	0.65	MΩ
Amplification factor	μ_{g2g1}	50	50	50	-
Equivalent noise resistance	R_{eq}	1000	1100	1200	Ω
Grid No.1 input resistance					
f = 50 MHz, pin 1 connected to pin 3	r_{g1}	10	12	15	kΩ

LIMITING VALUES (Design centre rating system)

Anode voltage	V_{a_0}	max. 550 V
	V_a	max. 300 V
Anode dissipation	W_a	max. 2.5 W
Grid No.2 voltage	$V_{g_{20}}$	max. 550 V
	V_{g_2}	max. 300 V
Grid No.2 dissipation	W_{g_2}	max. 0.7 W
Grid No.2 dissipation ($W_a < 1.8 \text{ W}$)	W_{g_2}	max. 0.9 W
Grid No.1 resistor	R_{g_1}	max. 1 $M\Omega$
Cathode current	I_k	max. 15 mA
Heater to cathode voltage	V_{kf}	max. 150 V



PHILIPS

Data handbook



**Electronic
components
and materials**

EF80

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