

A.F. OUTPUT PENTODE

Pentode intended for use as A. F. power amplifier.

QUICK REFERENCE DATA		
Anode current	I_a	70 mA
Transconductance	S	11 mA/V
Amplification factor	$\mu_{g_2g_1}$	8
Output power	W_o	5.3 W

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

Heater current

I_f 100 mA

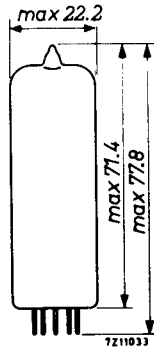
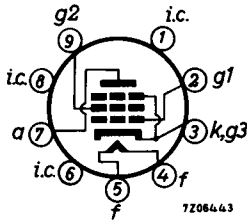
Heater voltage

V_f 45 V

DIMENSIONS AND CONNECTIONS

Dimensions in mm

Base: Noval



CAPACITANCES

Anode to all except grid No. 1

$C_a(g_1)$ 6.8 pF

Grid No. 1 to all except anode

$C_{g_1(a)}$ 13 pF

Anode to grid No. 1

C_{ag_1} max. 0.6 pF

Grid No. 1 to heater

C_{g_1f} max. 0.25 pF

TYPICAL CHARACTERISTICS

Anode voltage	V_a	170 V
Grid No.2 voltage	V_{g2}	170 V
Grid No.1 voltage	V_{g1}	-12.5 V
Anode current	I_a	70 mA
Grid No.2 current	I_{g2}	3.5 mA
Transconductance	S	11 mA/V
Amplification factor	μ_{g2g1}	8
Internal resistance	R_i	26 k Ω

OPERATING CHARACTERISTICS

Class A 1)

Supply voltage	V_b	100	170	V
Cathode resistor	R_k	130	130	Ω
Load resistance	$R_{a\sim}$	2.1	2.0	k Ω
Grid No.1 driving voltage	V_i	0 0.55 3.8	0 0.47 6.1	V_{RMS}
Anode current	I_a	41 - 42	75 - 76	mA
Grid No.2 current	I_{g2}	2.6 - 8.6	4.0 - 16.5	mA
Output power	W_o	0 0.05 1.55	0 0.05 5.1	W
Distortion	d_{tot}	- - 10	- - 10	%
Supply voltage	V_b		200	V
Grid No.2 series resistor (non decoupled)	R_{g2}		470	Ω
Cathode resistor	R_k		215	Ω
Load resistance	$R_{a\sim}$		2.5	k Ω
Grid No.1 driving voltage	V_i		0 0.52 7.0	V_{RMS}
Anode current	I_a		65 - 64	mA
Grid No.2 current	I_{g2}		3.2 - 11.4	mA
Output power	W_o		0 0.05 5.3	W
Distortion	d_{tot}		- - 10	%

1) Measured with V_k kept constant.

OPERATING CHARACTERISTICS (continued)

Class AB, two tubes in push-pull

Supply voltage	V_b	200	V
Common cathode resistor	R_k	120	Ω
Load resistance	$R_{aa\sim}$	3	k Ω
Grid No.1 driving voltage	V_i	0 0.47 14.3	V _{RMS}
Anode current	I_a	2x60 - 2x64.5	mA
Grid No.2 current	I_{g2}	2x3.0 - 2x18.5	mA
Output power	W_o	0 0.05 14.3	W
Distortion	d_{tot}	- - 3.8	%

LIMITING VALUES (Design centre rating system)

Anode voltage	V_{a_o}	max. 550	V
	V_a	max. 250	V
Grid No.2 voltage	V_{g2o}	max. 550	V
	V_{g2}	max. 200	V
Anode dissipation	W_a	max. 12	W
Grid No.2 dissipation, average peak	W_{g2}	max. 1.75	W
	W_{g2p}	max. 6	W
Cathode resistor	I_k	max. 100	mA
Grid No.1 resistor, automatic bias	R_{g1}	max. 1	M Ω
Cathode to heater voltage	V_{kf}	max. 200	V

PHILIPS

Data handbook



Electronic
components
and materials

UL84

page	sheet	date
1	1	1969.12
2	2	1969.01
3	3	1969.01
4	FP	1999.07.29