

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	μ_{g2g1}	8
Output power	W_o	5.3 W

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

Heater current

I_f 100 mA

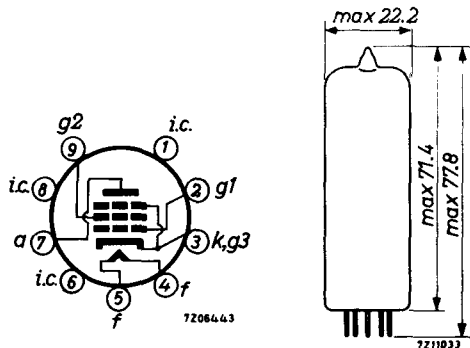
Heater voltage

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

$C_{g1}(a)$ 13 pF

Anode to grid No. 1

C_{ag1} max. 0.6 pF

Grid No. 1 to heater

C_{g1f} 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_{g_2}	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	$V_{g_{2o}}$	max. 550	V
	V_{g_2}	max. 200	V
Anode dissipation	W_a	max. 12	W
Grid No.2 dissipation, average	W_{g_2}	max. 1.75	W
peak	$W_{g_{2p}}$	max. 6	W
Cathode resistor	I_k	max. 100	mA
Grid No.1 resistor, automatic bias	R_{g_1}	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