

A.F. OUTPUT PENTODE

Beam pentode intended for use as A.F. power amplifier.

QUICK REFERENCE DATA

Anode current	I_a	110 mA
Transconductance	S	23 mA/V
Amplification factor	$\mu_{g_2g_1}$	13
Output power (class AB)	W_o	40 W

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

Heater voltage

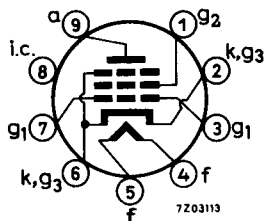
$$\frac{V_f}{I_f} \quad \frac{6.3 \text{ V}}{1.05 \text{ A}}$$

Heater current

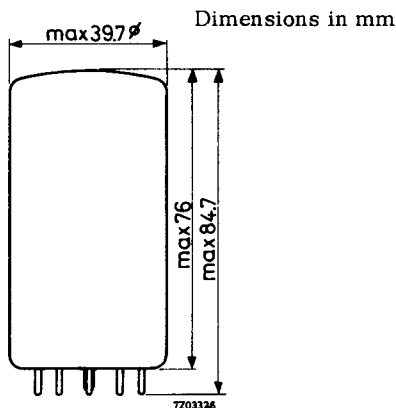
$$\frac{V_f}{I_f} \quad \frac{6.3 \text{ V}}{1.05 \text{ A}}$$

DIMENSIONS AND CONNECTIONS

Base: Magnoval



7203113



CAPACITANCES

Anode to all except grid No. 1

$$C_{a(g_1)} \quad 13.5 \text{ pF}$$

Grid No. 1 to all except anode

$$C_{g_1(a)} \quad 22.5 \text{ pF}$$

Anode to grid No. 1

$$C_{ag_1} \quad 1.7 \text{ pF}$$

Grid No. 1 to heater

$$C_{g_1f} \quad 0.325 \text{ pF}$$

TYPICAL CHARACTERISTICS

Anode voltage	V_a	250	V
Grid No.2 voltage	V_{g2}	250	V
Grid No.1 voltage	V_{g1}	14.0	V
Anode current	I_a	110	mA
Grid No.2 current	I_{g2}	7.0	mA
Transconductance	S	23	mA/V
Amplification factor	μ_{g2g1}	13	
Internal resistance	R_i	5.4	k Ω

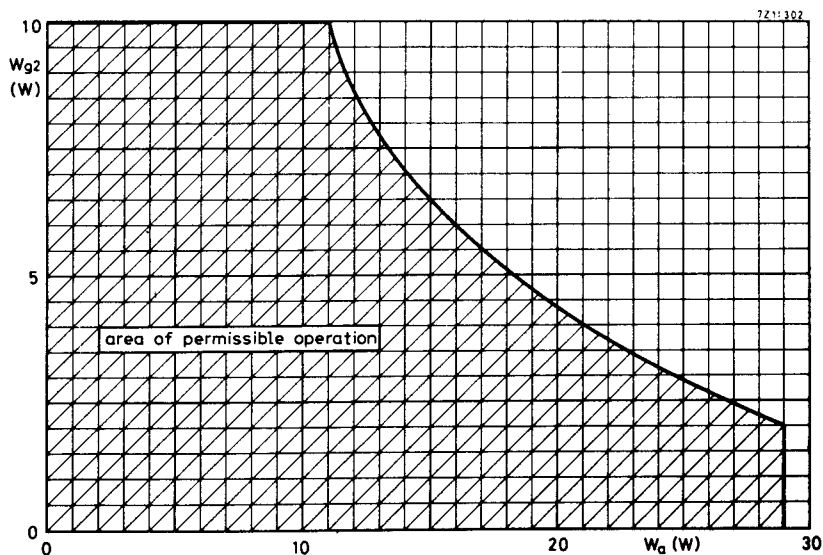
OPERATING CHARACTERISTICS

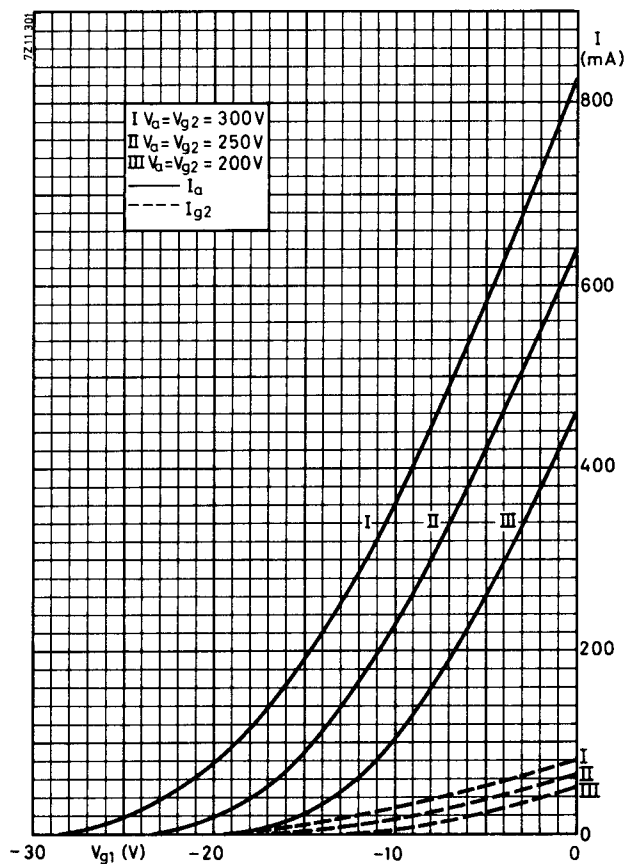
Class AB, two tubes in push-pull

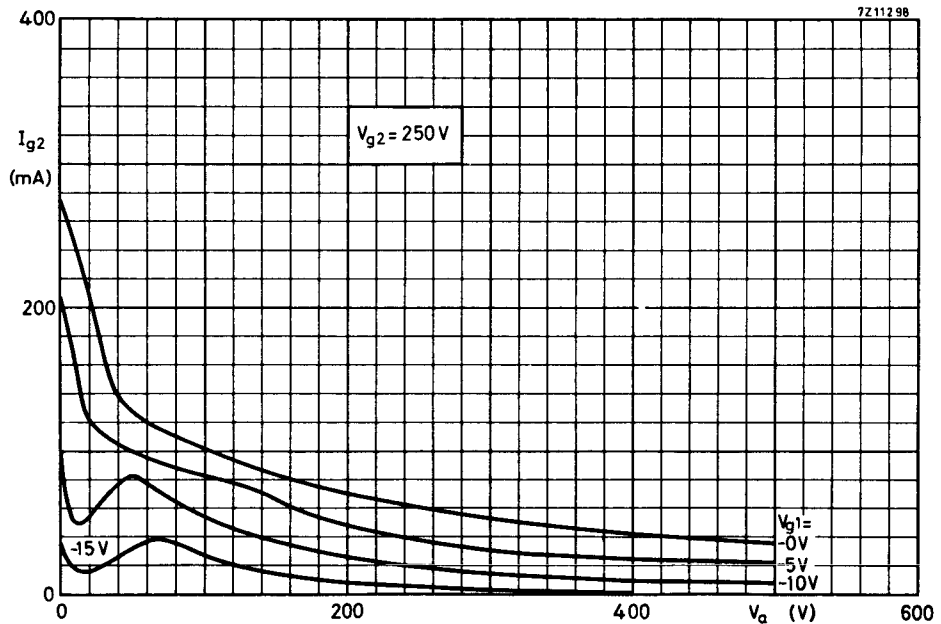
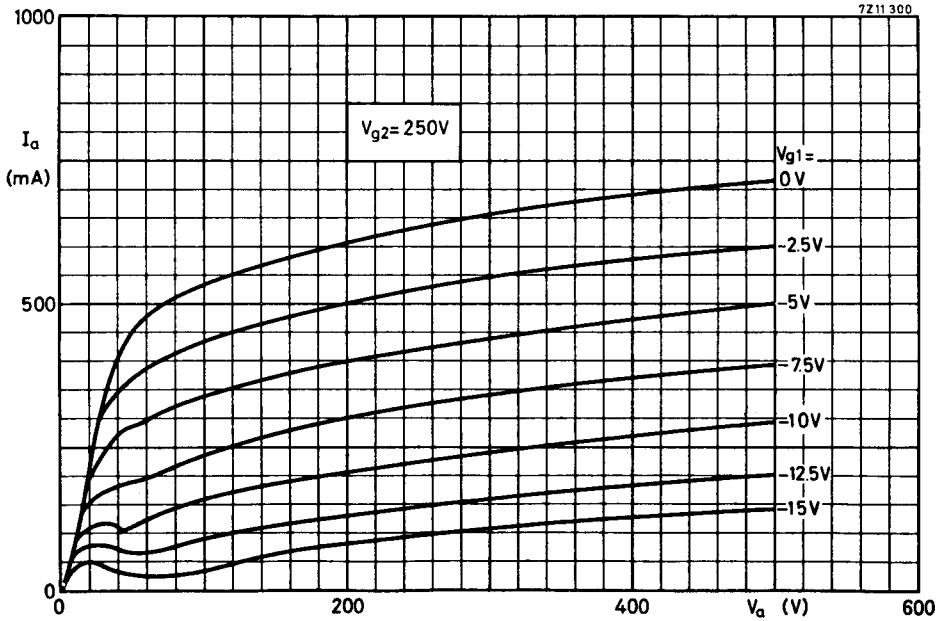
Anode supply voltage	V_{ba}	265	V
Grid No.2 supply voltage	V_{bg2}	265	V
Common cathode resistor	R_k	56	Ω
Load resistance	$R_{aa\sim}$	2.4	k Ω
Grid No.1 driving voltage	V_i	0 12.2	V _{RMS}
Anode current	I_a	2x115 2x125	mA
Grid No.2 current	I_{g2}	2x7.5 2x35.0	mA
Output power	W_o	0 40	W
Distortion	d_{tot}	- 5	%

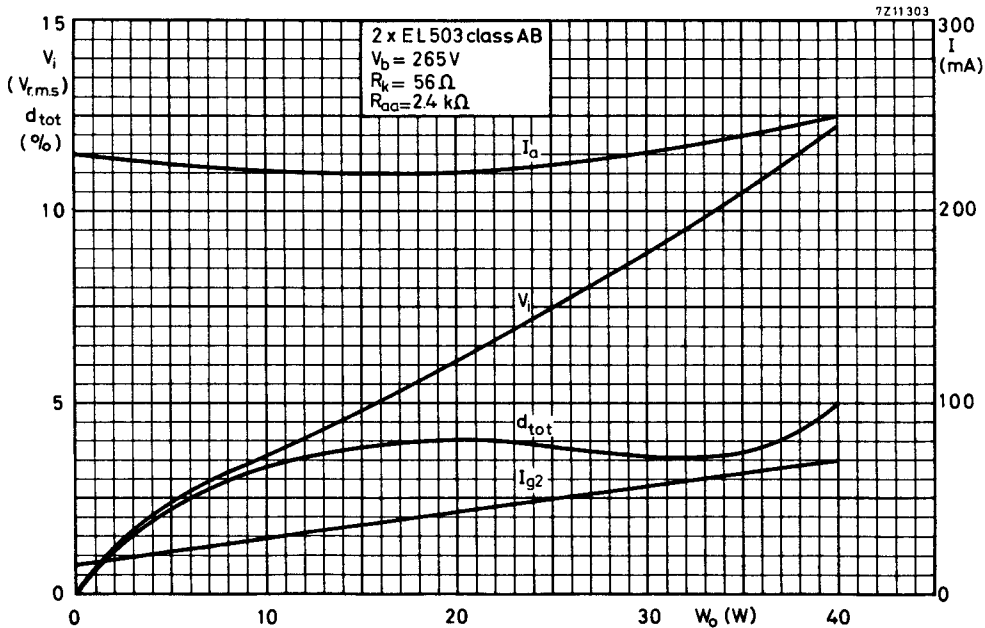
LIMITING VALUES (Design centre rating system)

Anode voltage	V_{a0}	max. 550 V
	V_a	max. 300 V
Grid No.2 voltage	V_{g20}	max. 550 V
	V_{g2}	max. 300 V
Anode dissipation	W_a	see below
Grid No.2 dissipation		
average	W_{g2}	see below
peak	W_{g2p}	see below
Cathode current	I_k	max. 200 mA
Grid No.1 resistor, automatic bias	R_{g1}	max. 0.5 M Ω
Cathode to heater voltage	V_{kf}	max. 100 V









PHILIPS

Data handbook



**Electronic
components
and materials**

EL503

page	sheet	date
1	1	1970.08
2	2	1970.08
3	3	1970.08
4	4	1970.08
5	5	1972.01
6	6	1972.01
7	FP	1999.02.20