

## 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

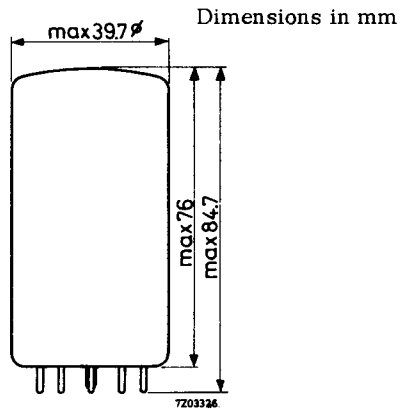
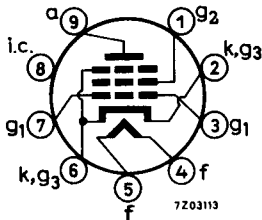
$$\frac{V_f}{I_f} \quad 6.3 \text{ V}$$

Heater current

$$I_f \quad 1.05 \text{ A}$$

### DIMENSIONS AND CONNECTIONS

Base: Magnoval



### 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	$\mu_{g2g1}$	13	
Internal resistance	$R_i$	5.4	k $\Omega$

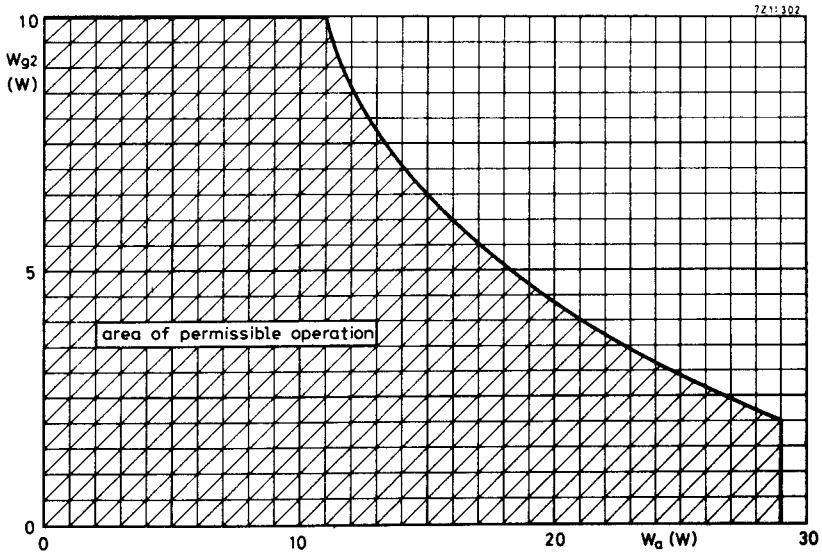
**OPERATING CHARACTERISTICS**

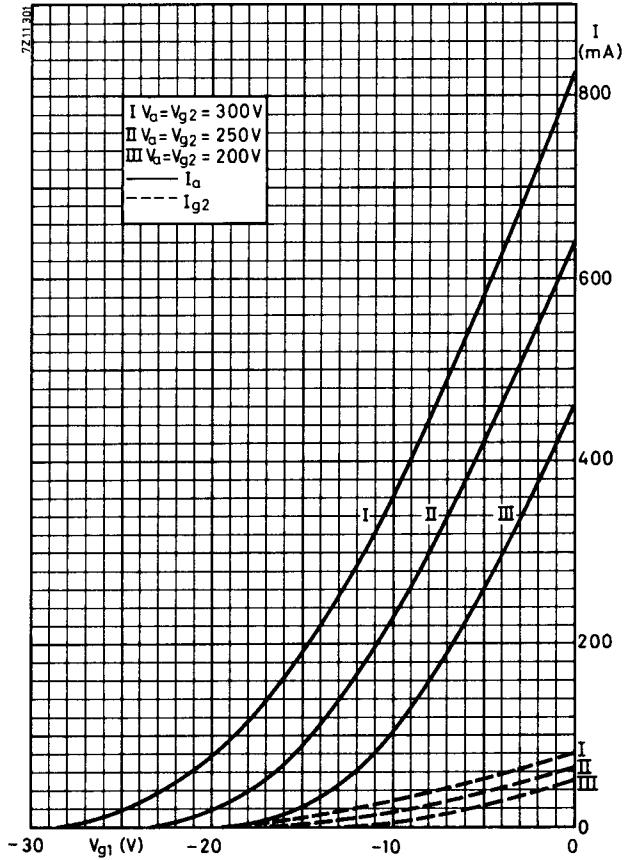
Class AB, two tubes in push-pull

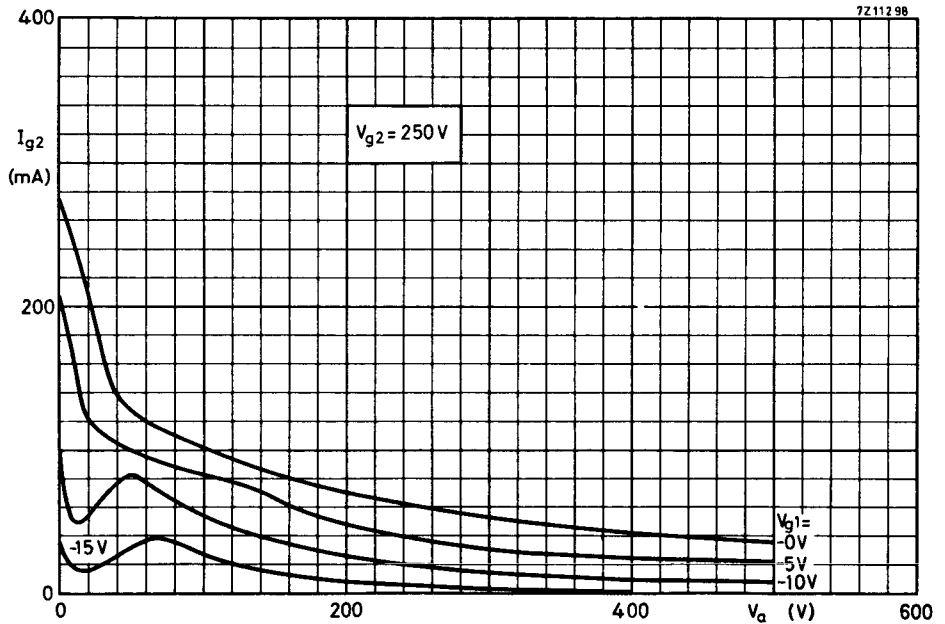
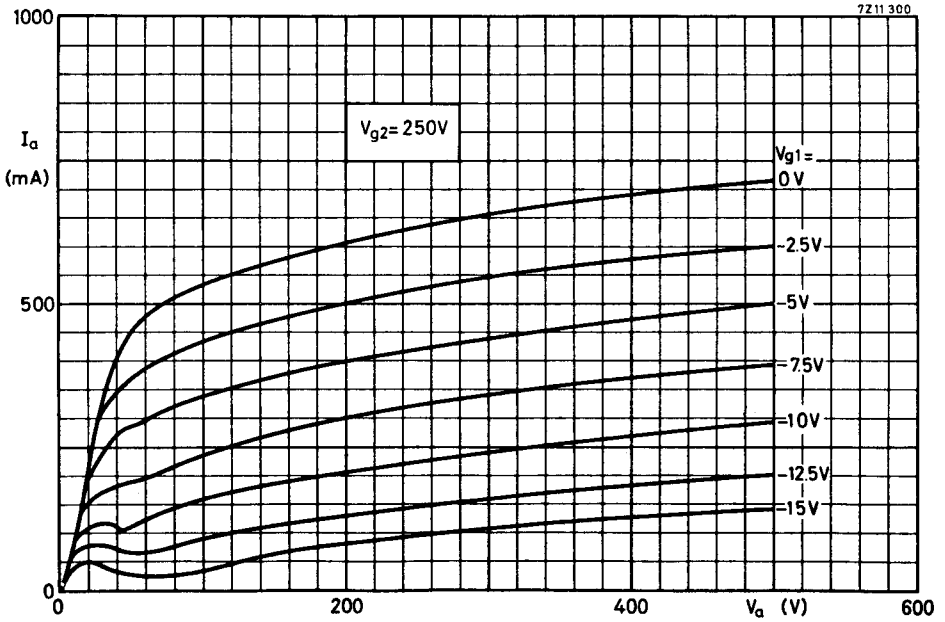
Anode supply voltage	$V_{ba}$	265	V
Grid No.2 supply voltage	$V_{bg2}$	265	V
Common cathode resistor	$R_k$	56	$\Omega$
Load resistance	$R_{aa\sim}$	2.4	k $\Omega$
Grid No.1 driving voltage	$V_i$	0	12.2 V <sub>RMS</sub>
Anode current	$I_a$	2x115	2x125 mA
Grid No.2 current	$I_{g2}$	2x7.5	2x35.0 mA
Output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

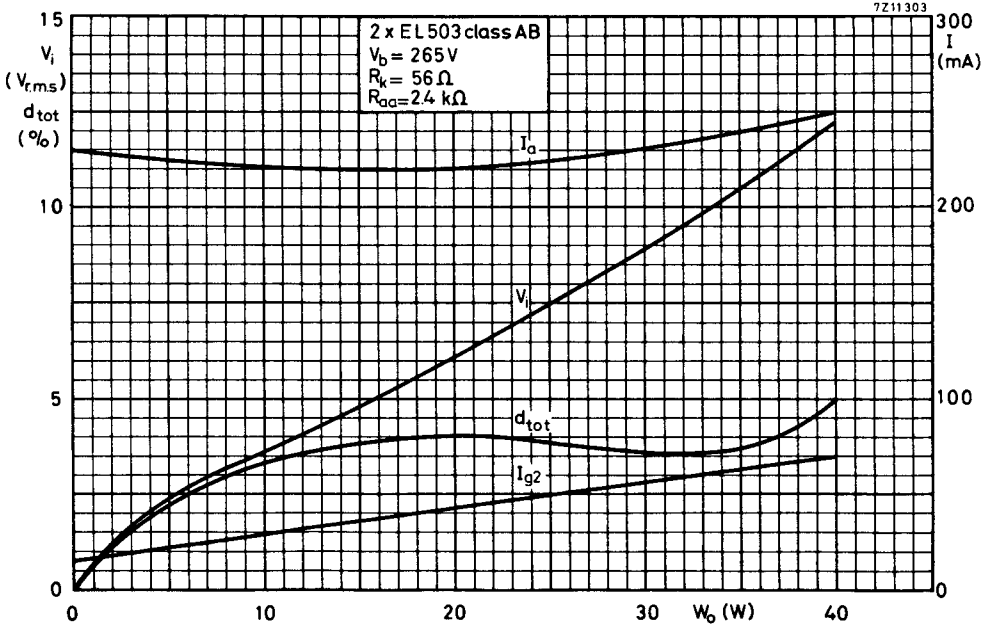
**LIMITING VALUES** (Design centre rating system)

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 MΩ
Cathode to heater voltage	$V_{kf}$	max. 100 V









# PHILIPS

Data handbook



Electronic  
components  
and materials

**EL503**

<b>page</b>	<b>sheet</b>	<b>date</b>
1	1	1970.08
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6	6	1972.01
7	FP	1999.02.20