

FRAME AND A.F. OUTPUT PENTODE

Pentode intended for use as frame output tube in television receivers and as A.F. power amplifier.

QUICK REFERENCE DATA			
Anode peak voltage	V_{a_p}	max.	2 kV
Cathode current	I_k	max.	100 mA
Output power	W_o		5.3 W

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

Heater voltage

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

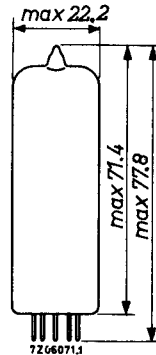
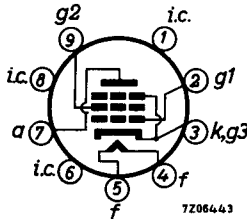
Heater current

760 mA

DIMENSIONS AND CONNECTIONS

Base: Noval

Dimensions in mm



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

$C_{a g_1}$ max. 0.6 pF

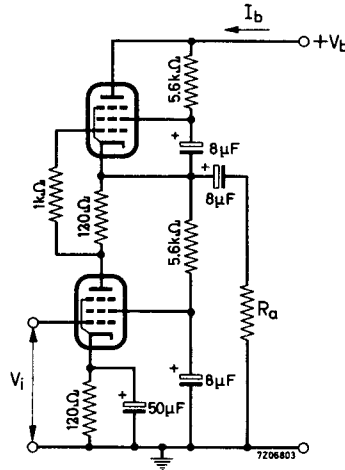
Grid No. 1 to heater

$C_{g_1 f}$ max. 0.25 pF



OPERATING CHARACTERISTICS (continued)

A.F. power amplifier, single ended push-pull



a) Single tone input signal

Supply voltage	V_b	300	V
Load resistance	$R_{a\sim}$	1	k Ω
Grid No.1 driving voltage	V_i	0 0.41 5.4	V_{RMS}
Supply current	I_b	66 - 64	mA
Output power	W_o	0 0.05 4.5	W
Distortion	d_{tot}	- - 9.3	%

b) Double tone input signal

Supply voltage	V_b	300	V
Load resistance	$R_{a\sim}$	1	k Ω
Grid No.1 driving voltage	V_i	0 2.7	$V_{RMS}^1)$
Supply current	I_b	66 64	mA
Output power	W_o	0 5.5	W
Distortion	d_{tot}	- 8.5	%

1) Value of each tone separately.

REMARK

Single tone data are obtained with a pure sinusoidal input voltage. However such an input voltage is in general not representative for the reproduction of music and speech, since a purely sinusoidal tone seldom occurs.

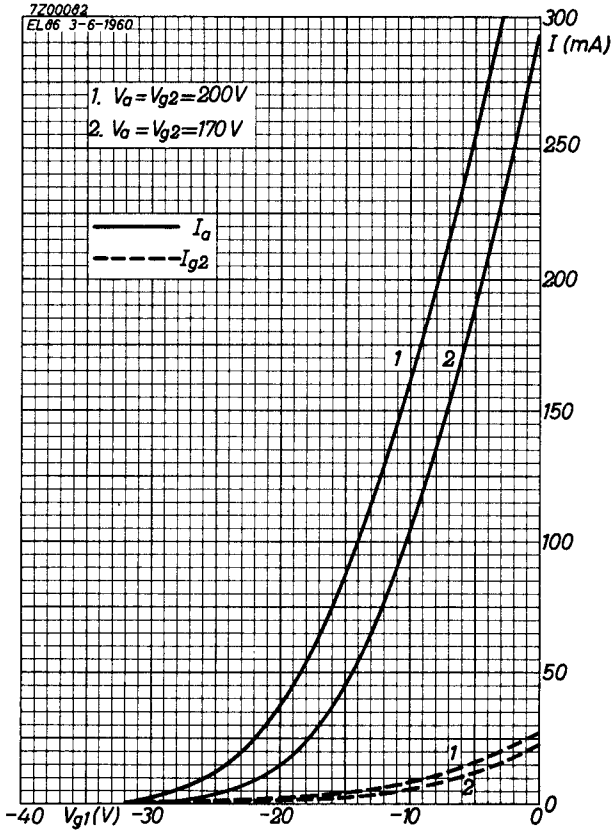
The double tone data are obtained with two sinusoidal signals of different frequencies but of the same amplitude. This appears to be far better in agreement with practice. In the case of full drive with two sinusoidal signals different in frequency but having the same amplitude, the output power is half the value obtained at full drive with a single sinusoidal input voltage of twice this amplitude. To make comparison possible the obtained output power with double tone has therefore been multiplied by 2.

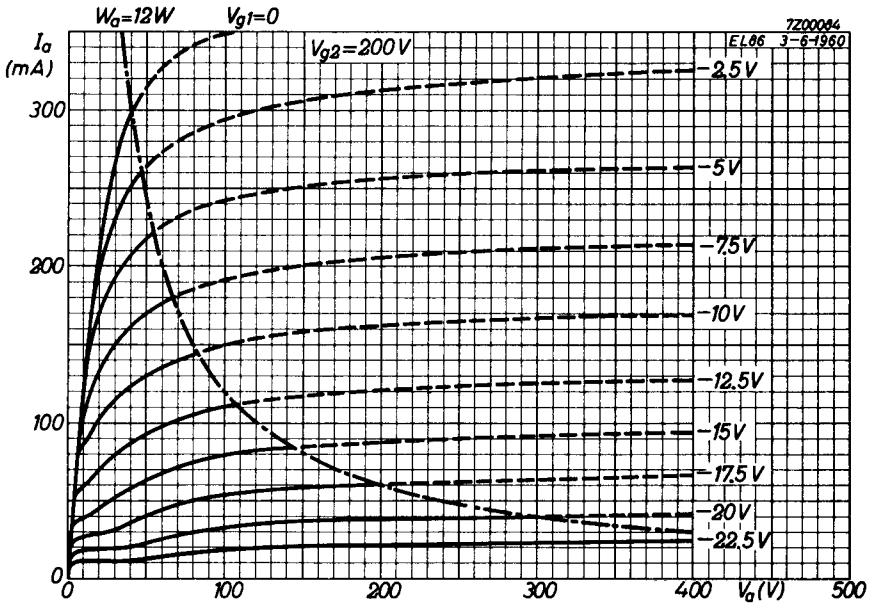
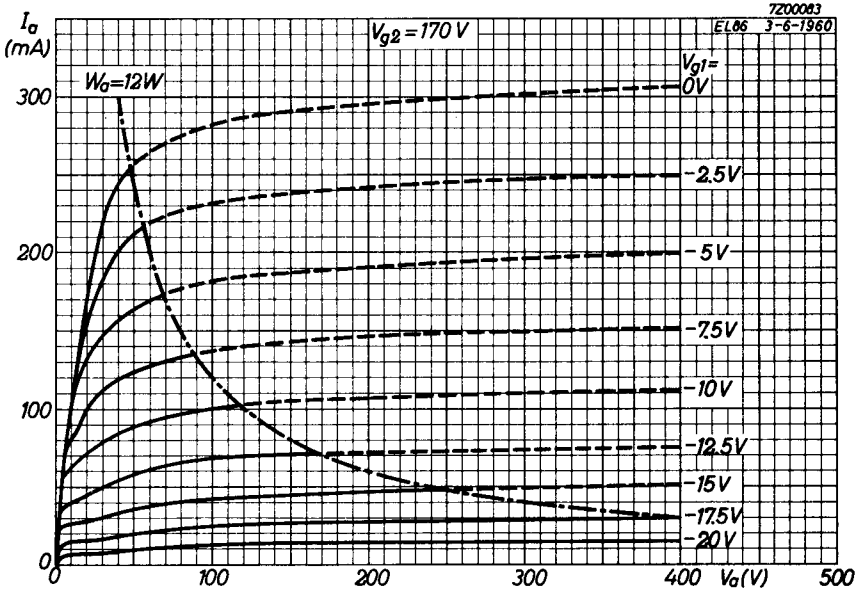
LIMITING VALUES (Design centre rating system)

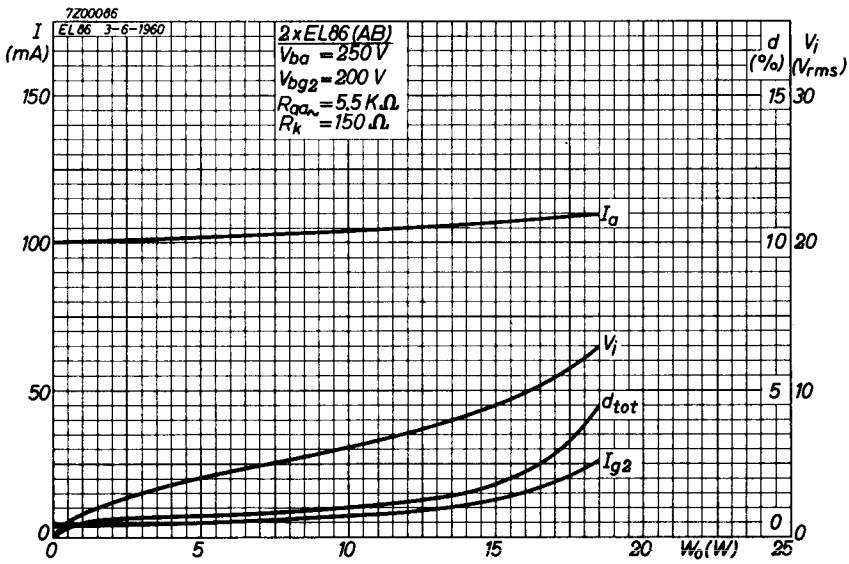
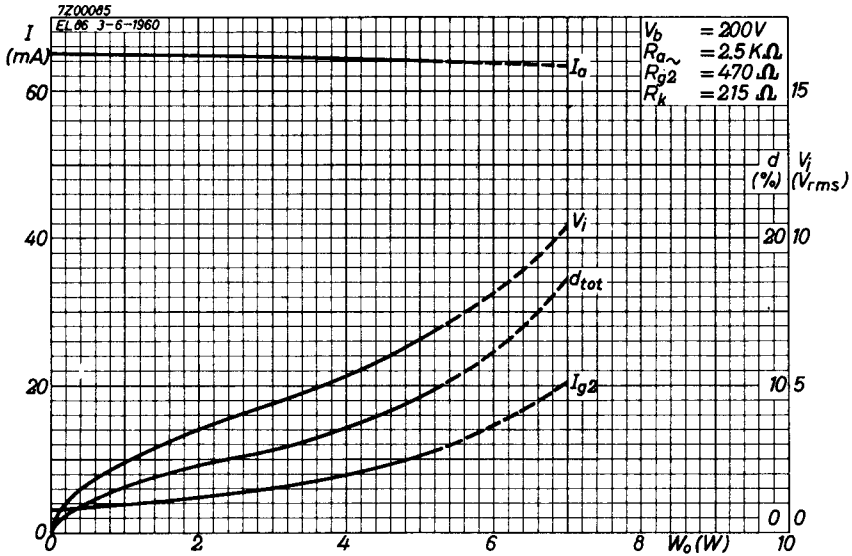
Anode voltage	V_{a0}	max.	550 V
	V_a	max.	250 V
Anode peak voltage	V_{ap}	max.	2 kV ¹⁾
Grid No.2 voltage	V_{g20}	max.	550 V
	V_{g2}	max.	250 V
Anode dissipation	W_a	max.	12 W ²⁾
Grid No.2 dissipation:			
average	W_{g2}	max.	1.75 W
peak	W_{g2p}	max.	6 W
Cathode current	I_k	max.	100 mA
Grid No.1 resistor:			
automatic bias	R_{g1}	max.	1 MΩ
frame output application with automatic bias	R_{g1}	max.	2 MΩ
Cathode to heater voltage	V_{kf}	max.	200 V

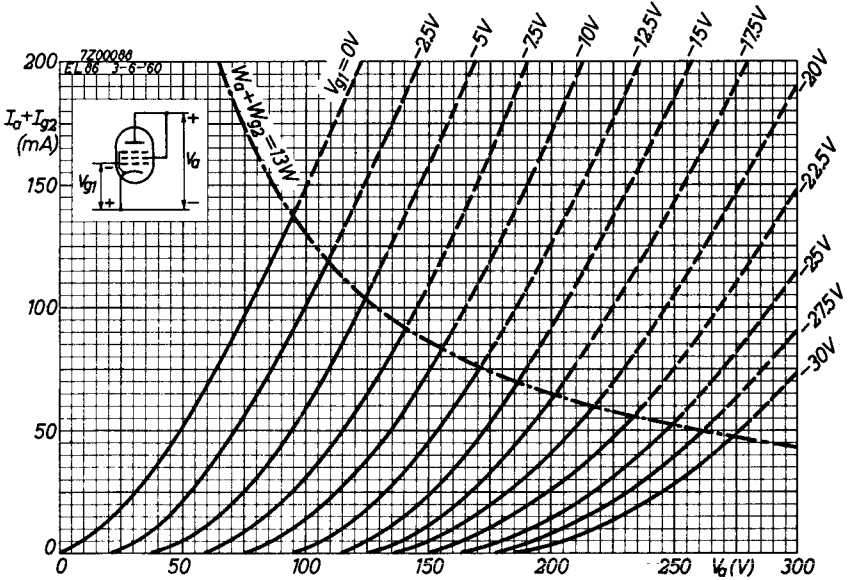
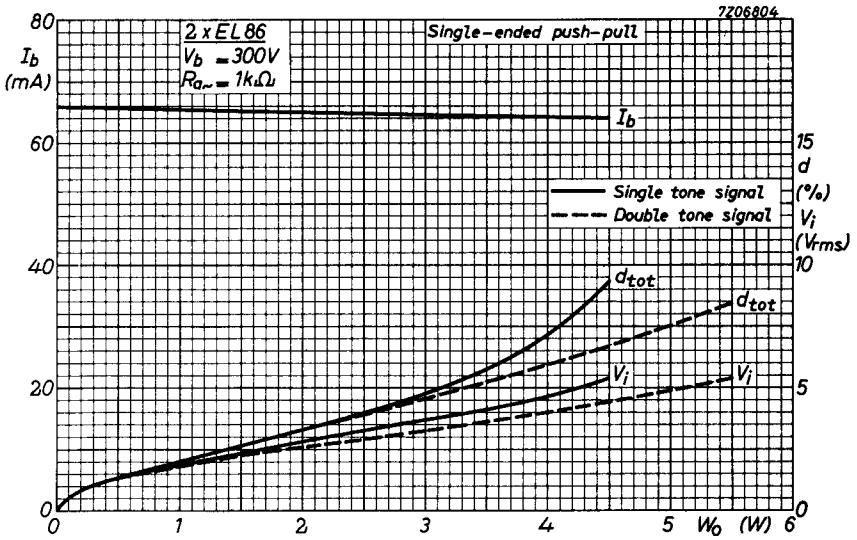
1) Valid for application in frame output circuits where the max. pulse duration is 4% of a cycle with a max. of 0.8 ms.

2) For frame output application $W_a = \text{max. } 10 \text{ W}$.









PHILIPS

Data handbook



Electronic
components
and materials

EL86

page	sheet	date
1	1	1969.01
2	2	1969.01
3	3	1969.01
4	4	1969.01
5	5	1969.01
6	6	1969.01
7	7	1969.01
8	8	1969.01
9	FP	1999.03.19