

TRIODE-PENTODE

Triode pentode; triode section intended for use as reactance tube, pentode section intended for use as sine wave oscillator or pulse shaper in television receivers.

QUICK REFERENCE DATA			
<u>Pentode section</u>			
Anode current	I_a	6	mA
Transconductance	S	5.5	mA/V
Amplification factor	$\mu_{g_2g_1}$	47	-
Internal resistance	R_i	400	k Ω
<u>Triode section</u>			
Anode current	I_a	3.5	mA
Transconductance	S	3.5	mA/V
Amplification factor	μ	70	-

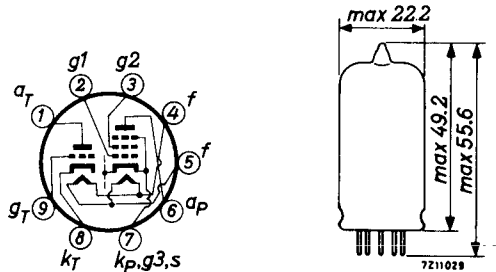
HEATING: Indirect by A.C. or D.C.; series supply

Heater current	I_f	300	mA
Heater voltage	V_f	9	V

DIMENSIONS AND CONNECTIONS

Dimensions in mm

Base: Noval



CAPACITANCES

Pentode section

Grid No.1 to all except anode	$C_{g1(a)}$	5.4	pF
Anode to grid No.1	C_{ag1}	0.06	pF
Grid No.1 to heater	C_{g1f}	max. 0.1	pF

Triode section

Grid to all except anode	$C_{g(a)}$	2.4	pF
Anode to grid	C_{ag}	1.5	pF
Grid to heater	C_{gf}	max. 0.1	pF

TYPICAL CHARACTERISTICS

Pentode section

Anode voltage	V_a	100	100	200	100	V
Grid No.2 voltage	V_{g2}	100	100	200	100	V
Grid No.1 voltage	V_{g1}	-1	0	max. -16	max. -1.3	V
Anode current	I_a	6	12.5	0.01	-	mA
Grid No.2 current	I_{g2}	1.7	3.5	-	-	mA
Transconductance	S	5.5	-	-	-	mA/V
Internal resistance	R_i	400	-	-	-	k Ω
Amplification factor	μ_{g2g1}	47	-	-	-	-
Grid No.1 current	I_{g1}	-	-	-	0.3	μ A

Triode section

Anode voltage	V_a	200	200	200	V
Grid voltage	V_g	-2	-	max. -1.3	V
Anode current	I_a	3.5	10	-	mA
Transconductance	S	3.5	-	-	mA/V
Internal resistance	R_i	20	-	-	k Ω
Amplification factor	μ	70	-	-	-
Grid current	I_g	-	10	0.3	μ A

LIMITING VALUES (Design centre rating system)Pentode section

Anode voltage	V_{aO}	max.	550 V
	V_a	max.	250 V
Anode dissipation	W_a	max.	1.2 W
Grid No.2 voltage	V_{g2O}	max.	550 V ¹⁾
	V_{g2}	max.	250 V
Grid No.2 dissipation	W_{g2}	max.	0.8 W
Grid No.1 voltage	$-V_{g1}$	max.	220 V ¹⁾
Grid resistor, fixed bias	R_{g1}	max.	0.56 M Ω
automatic bias	R_{g1}	max.	1 M Ω
Cathode current, average	I_k	max.	15 mA
peak	I_{kp}	max.	50 mA
$T_{imp} = \text{max. } 30 \mu\text{s}, \delta = \text{max. } 0.3$			
Cathode to heater voltage	V_{kf}	max.	100 V ²⁾
Grid circuit impedance	Z_{g1} (f = 50 Hz)	max.	300 k Ω ²⁾

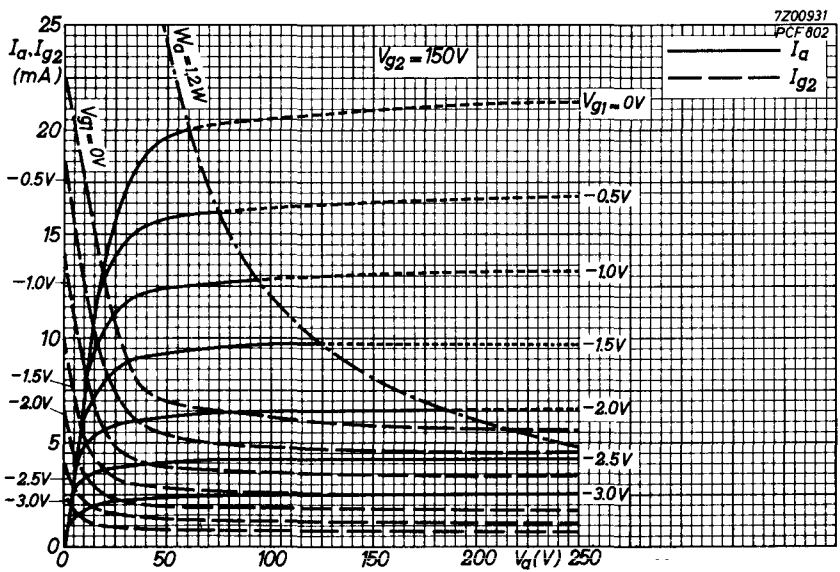
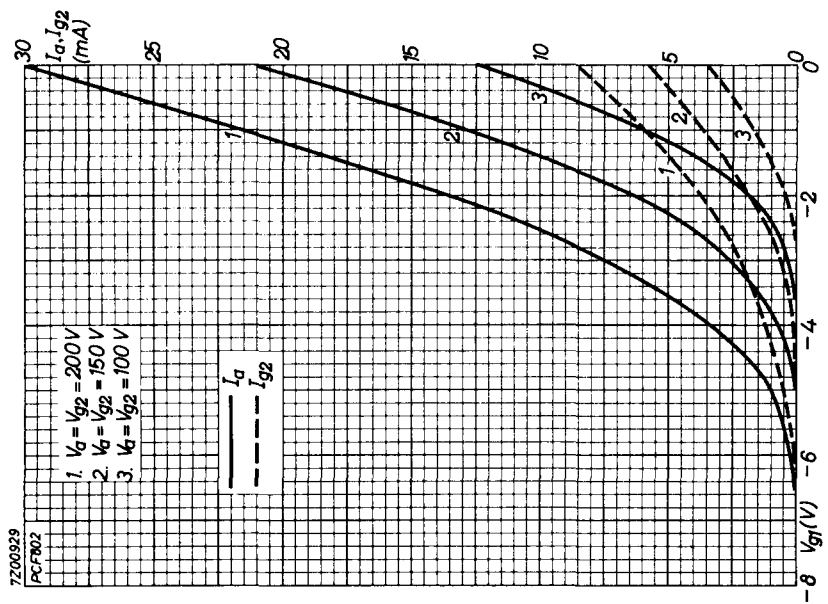
Triode section

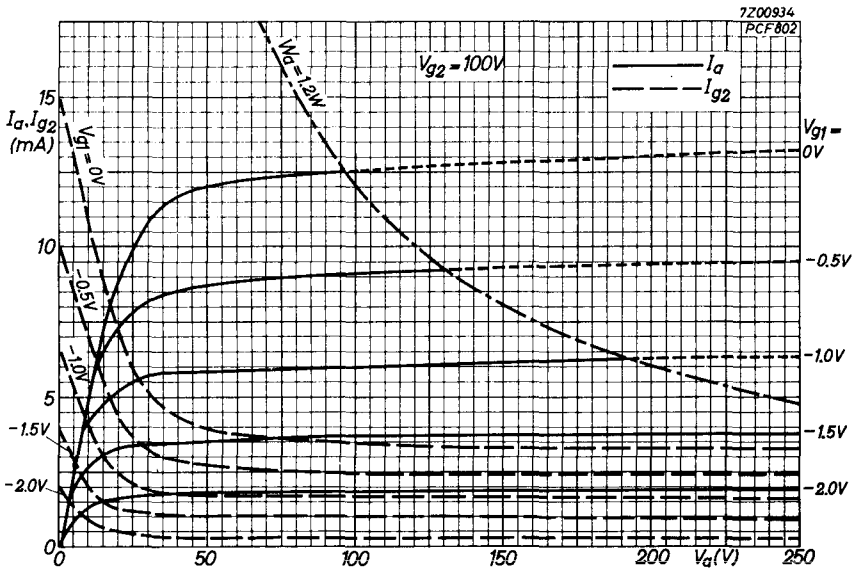
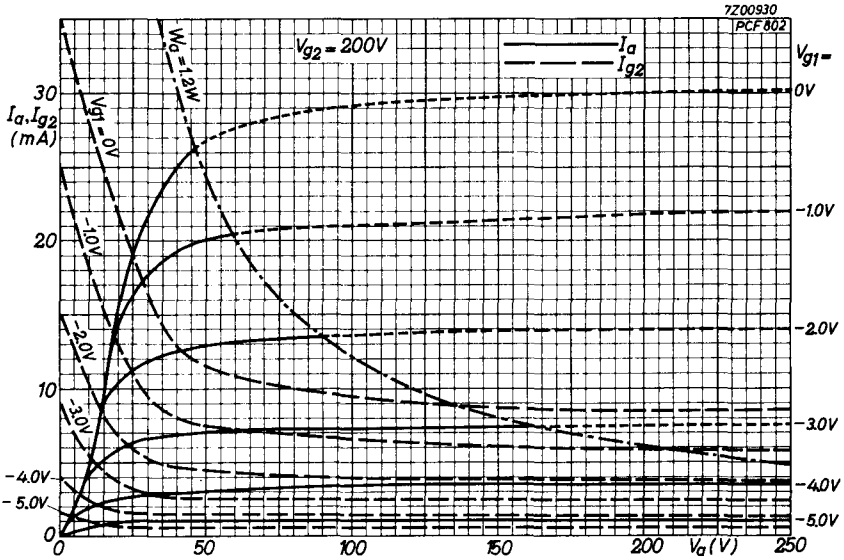
Anode voltage	V_{aO}	max.	550 V
	V_a	max.	250 V
Anode dissipation	W_a	max.	1.4 W
Grid resistor, fixed bias	R_g	max.	3 M Ω
Cathode current	I_k	max.	10 mA
Cathode to heater voltage	V_{kf}	max.	100 V ³⁾
Grid circuit impedance	Z_g (f = 50 Hz)	max.	50 k Ω ³⁾

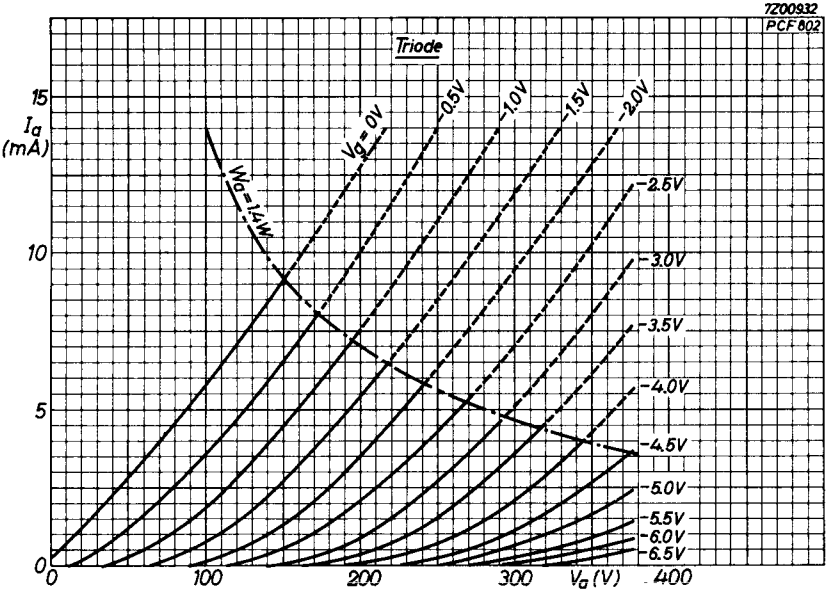
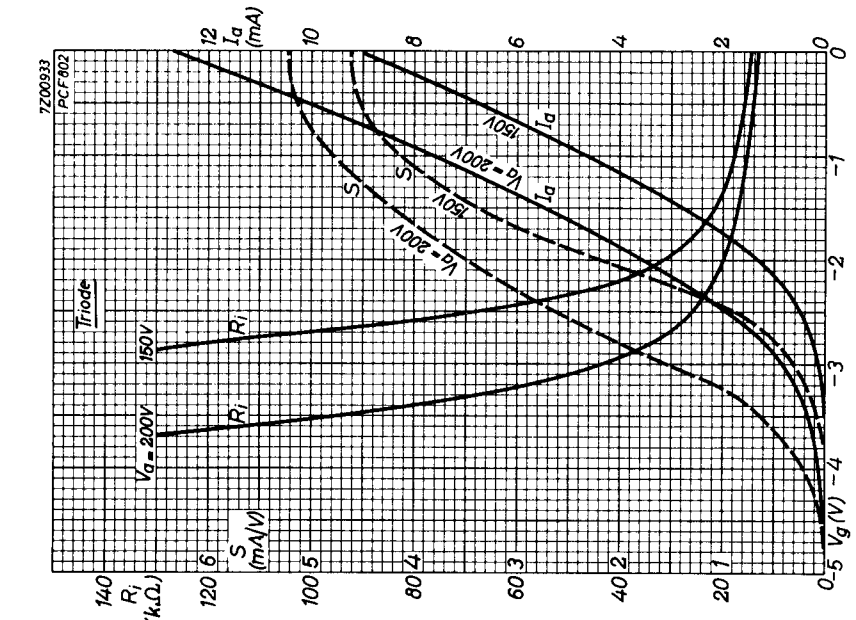
1) The instantaneous voltage between grid No.1 and grid No.2 should never exceed 550 V.

2) To avoid hum interference the A.C. component of V_{kf} should not exceed 65 V at the specified value of Z_{g1} .

3) To minimise hum interference decoupling of R_k is recommended. In circuits with undecoupled R_k the hum interference between grid and cathode will remain below 1000 μV when the A.C. component of V_{kf} does not exceed 25 V and the R_k is not higher than 1.2 k Ω at the specified value of Z_g .







PHILIPS

Data handbook



**Electronic
components
and materials**

PCF802

page	sheet	date
1	1	1969.12
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