

Netzröhre für GW-Heizung
indirekt geheizt
Serien- oder Parallelspeisung

DC-AC-Heating
Indirectly heated
connected in parallel or series

TELEFUNKEN

EL 95

Endpentode
Power Pentode

U_f **6,3** V
 I_f **200** mA

Meßwerte · Measuring values

U_a	250	V
U_{g2}	250	V
U_{g1}	-9	V
I_a	24	mA
I_{g2}	4,5	mA
S	5	mA/V
R_i	80	k Ω
$\mu_{g2/g1}$	17	

Betriebswerte · Typical operation

Eintakt-A-Betrieb · Class A amplifier

U_a	200	250	V
U_{g2}	200	250	V
R_k	230	320	Ω
I_a	23	24	mA
I_{g2}	4,2	4,5	mA
R_a	8	10	k Ω
$U_{g1\text{eff}} (N)$	4,5	5	V
N (12 %)	2,3	3	W
$U_{g1\text{eff}} (50 \text{ mW})$	0,5	0,5	V

2 Röhren in Gegentakt-AB-Betrieb

2 tubes push-pull, class AB

U_a	200	250	V
U_{g2}	200	250	V
R_k	360¹⁾	360¹⁾	Ω
I_{a0}	2×17,5	2×22	mA
$I_{a\text{ausgest.}}$	2×20	2×26	mA
I_{g20}	2×3,2	2×4,2	mA
$I_{g2\text{ausgest.}}$	2×5,2	2×7,5	mA
R_{aa}	10	10	k Ω
$U_{g1\text{eff}} (N)$	7 ¹⁾	9 ¹⁾	V
N	4,1	7	W
k	4,5	5	%
$U_{g1\text{eff}} (50 \text{ mW})$	0,5 ¹⁾	0,5 ¹⁾	V

2 Röhren in Gegentakt-B-Betrieb

2 tubes push-pull, class B

U_a	200	250	V
U_{g2}	200	250	V
U_{g1}	-10	-13	V
I_{a0}	2×7	2×8	mA
$I_{a\text{ausgest.}}$	2×19	2×24	mA
I_{g20}	2×1,2	2×1,2	mA
$I_{g2\text{ausgest.}}$	2×5	2×7,2	mA
R_{aa}	10	10	k Ω
$U_{g1\text{eff}} (N)$	7 ¹⁾	9 ¹⁾	V
N	4	6,5	W
k	3,5	3,5	%
$U_{g1\text{eff}} (50 \text{ mW})$	0,7 ¹⁾	0,7 ¹⁾	V

¹⁾ pro Röhre · each tube



2 Röhren in Gegentakt-AB-Betrieb

 R_k gemeinsam

2 tubes push-pull, class AB

 R_k common

U_a	250	V
U_{g2}	250	V
R_k	220	Ω
I_{ao}	2×19	mA
I_a	2×24	mA
I_{g2o}	$2 \times 3,2$	mA
I_{g2}	$2 \times 7,2$	mA
R_{aa}	10	k Ω
$U_{g1\text{eff}} (N)$	9,5 ¹⁾	V
N	6	W
k	5	%

1) pro Röhre • each tube

2) R_k gemeinsam • R_k common

Nennwert-Grenzdaten

Design centre ratings

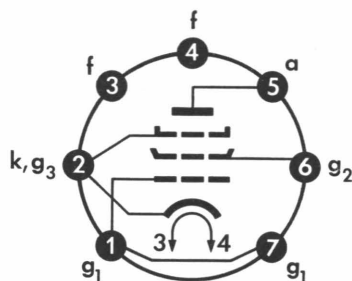
U_{ao}	550	V
U_a	300	V
N_a	6	W
$N_a^{2)}$	5	W
U_{g2o}	550	V
U_{g2}	300	V
N_{g2}	1,25	W
$N_{g2\text{ ausgest.}}$	2,5	W
I_k	35	mA
R_{g1}	2	M Ω
$U_{g1e} (I_{g1} \leq +0,3 \mu A)$	-1,3	V
$U_{f/k}$	100	V
$R_{f/k}$	20	k Ω

Kapazitäten • Capacitances

C_{g1}	ca. 5,3	pF
C_a	ca. 3,5	pF
C_{g1a}	< 0,4	pF
C_{g1f}	< 0,2	pF

Sockelschaltbild

Basing diagram



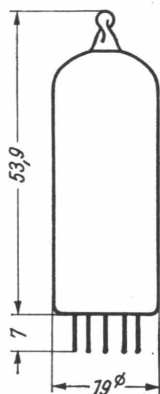
Pico 7 • Miniatur

Einbau beliebig • Mounting position any

max. Abmessungen

max. dimensions

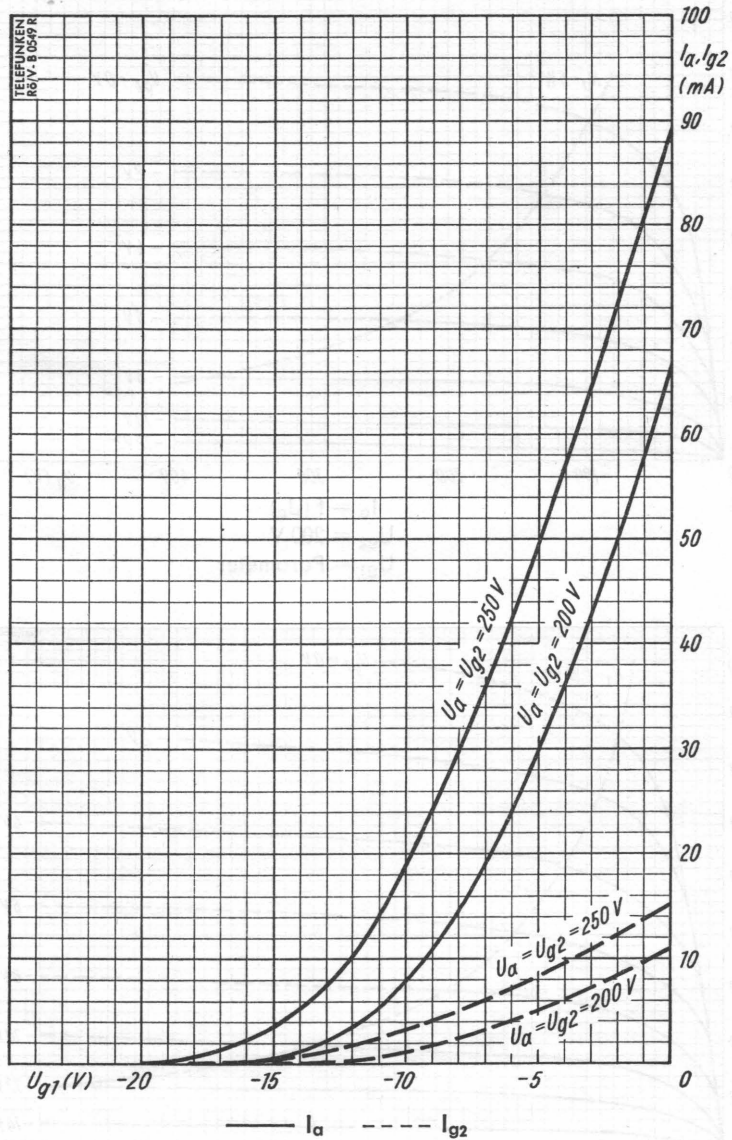
DIN 41 537, Nenngröße 44, Form A

Gewicht • Weight
max. 10 g

Wenn notwendig, muß gegen Herausfallen der Röhre aus der Fassung Vorsorge getroffen werden.

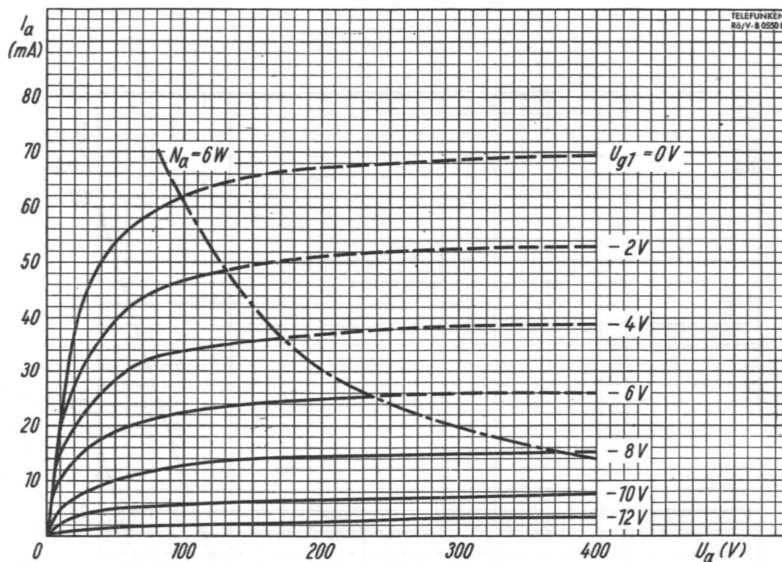
If necessary special precautions must be taken to prevent the tube from becoming dislodged from the socket.



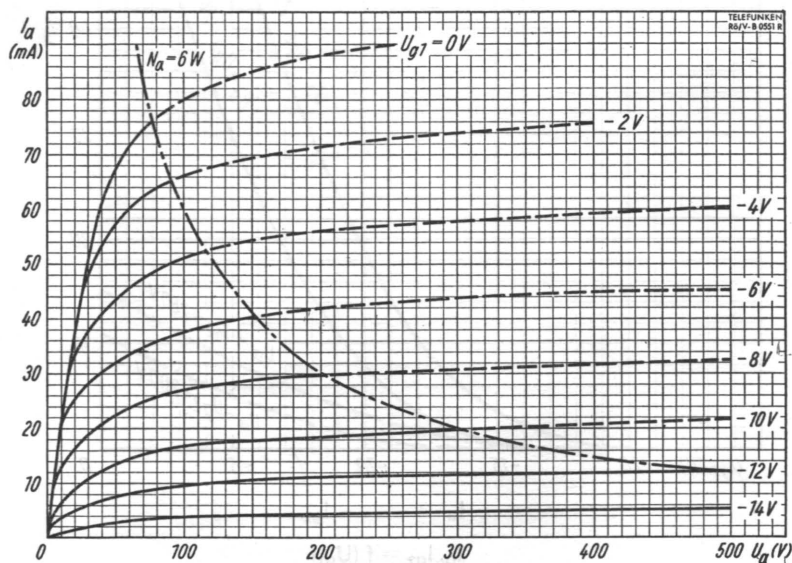


$I_a, I_{g2} = f(U_{g1})$
 $U_a = U_{g2} = \text{Parameter}$



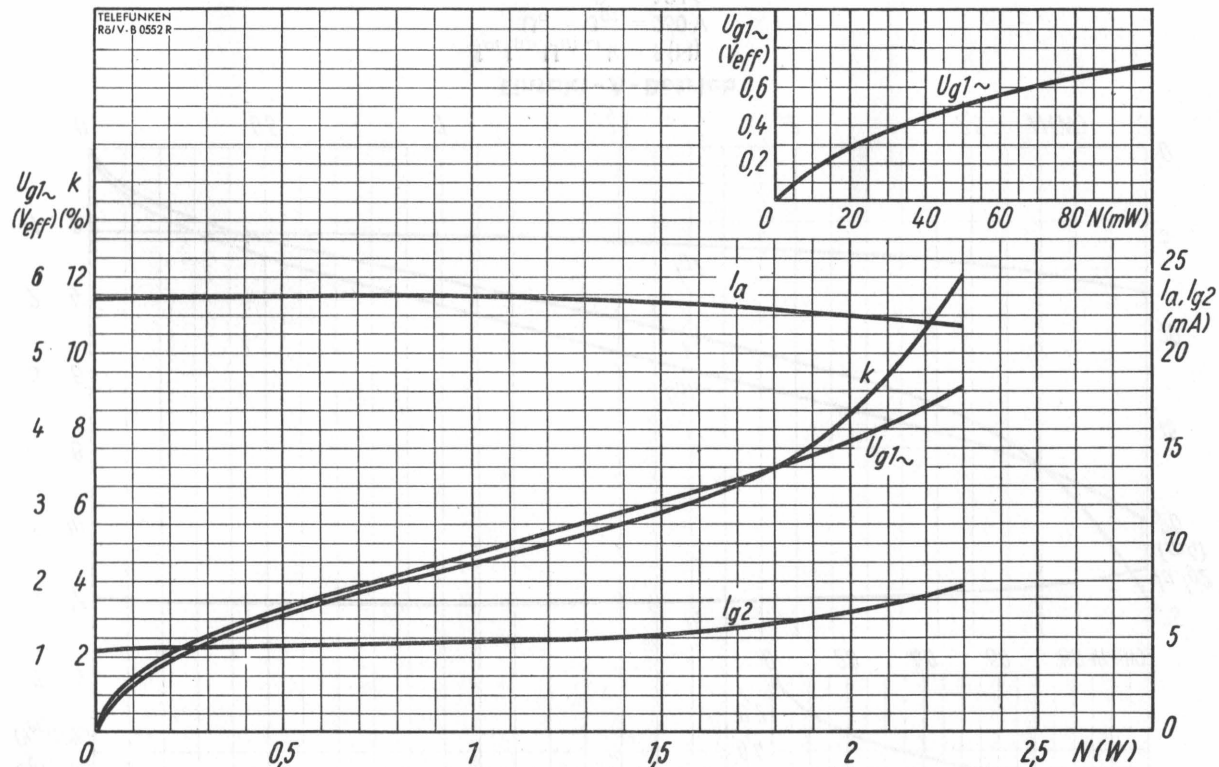


$I_a = f(U_a)$
 $U_{g2} = 200$ V
 $U_{g1} = \text{Parameter}$



$I_a = f(U_a)$
 $U_{g2} = 250$ V
 $U_{g1} = \text{Parameter}$





Eimant - A - Betrieb

$$I_a, I_{g2}, U_{g1\sim}, k = f(N)$$

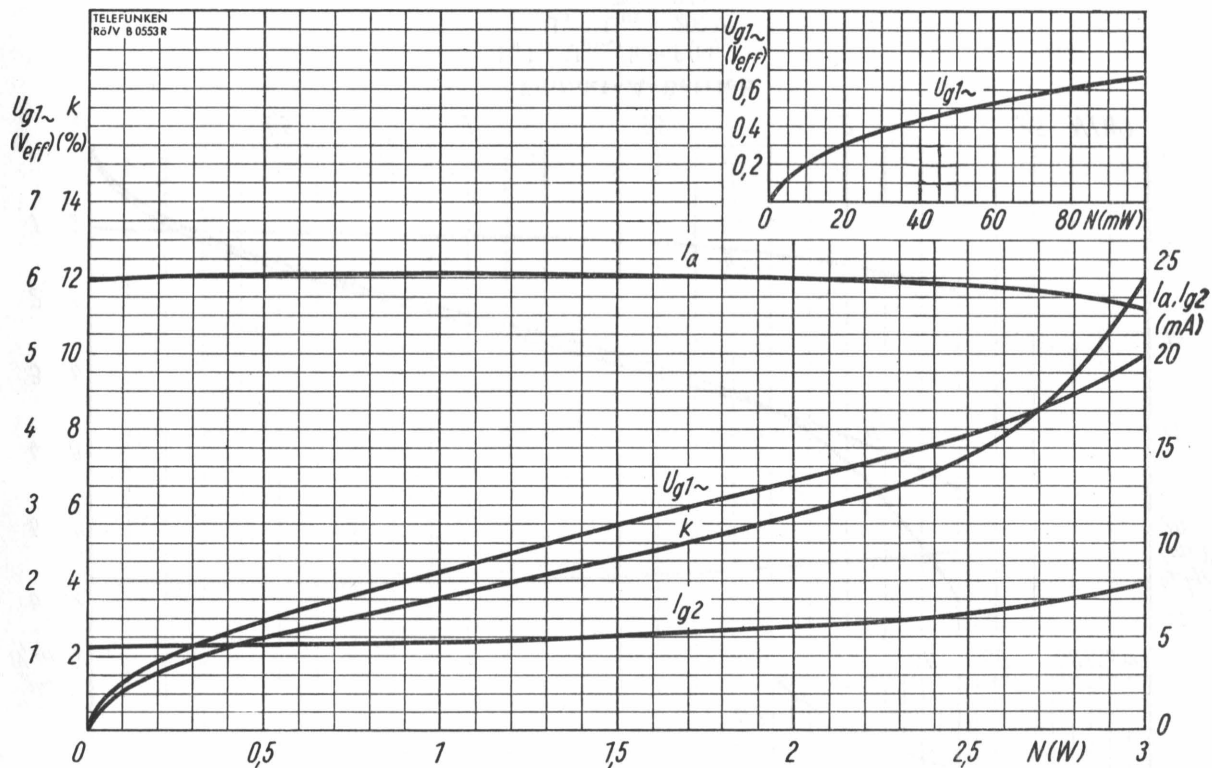
$$U_a = U_{g2} = 200 \text{ V}$$

$$R_a = 8 \text{ k}\Omega$$

$$R_k = 230 \Omega$$

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Eintakt - A - Betrieb

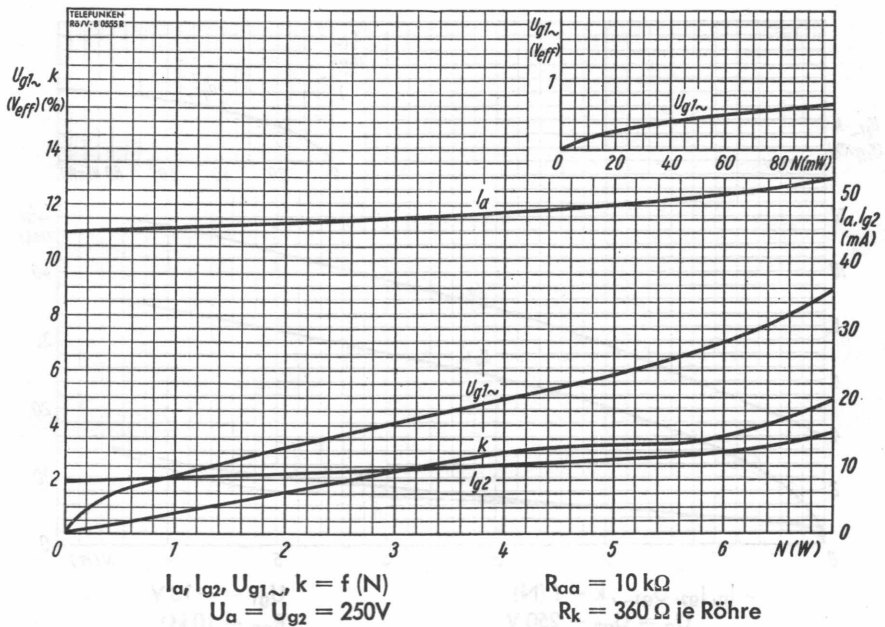
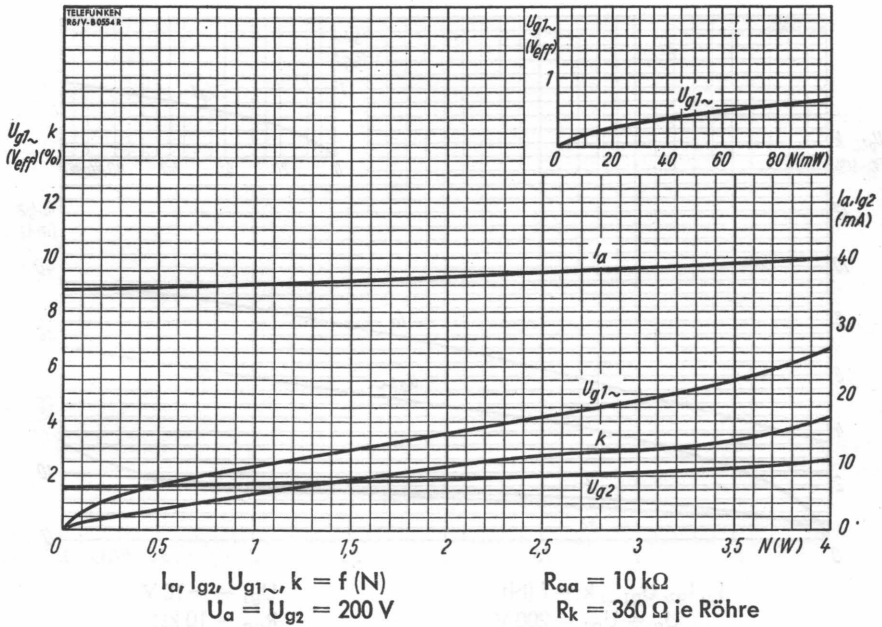
$$I_a, I_{g2}, U_{g1\sim}, k = f(N)$$

$$U_a = U_{g2} = 250 \text{ V}$$

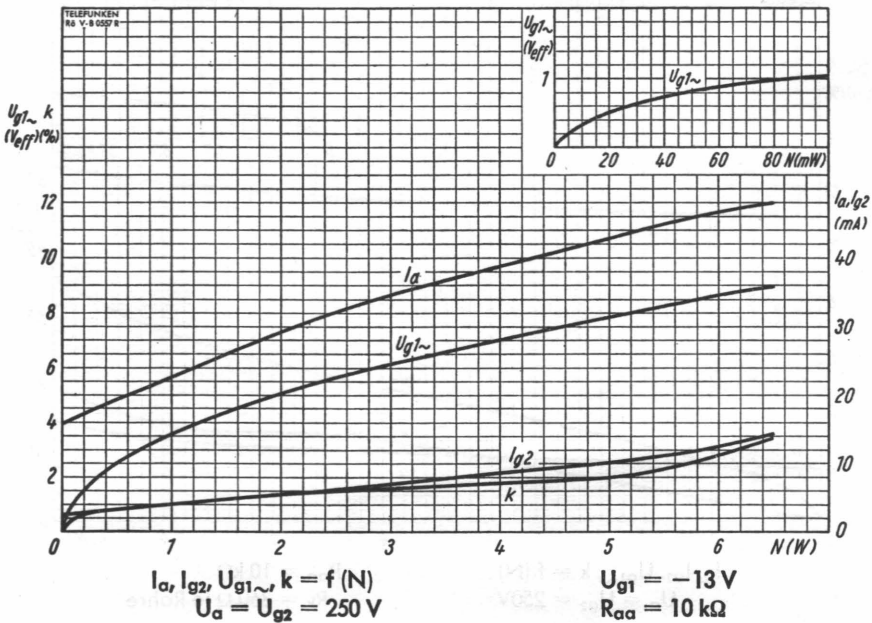
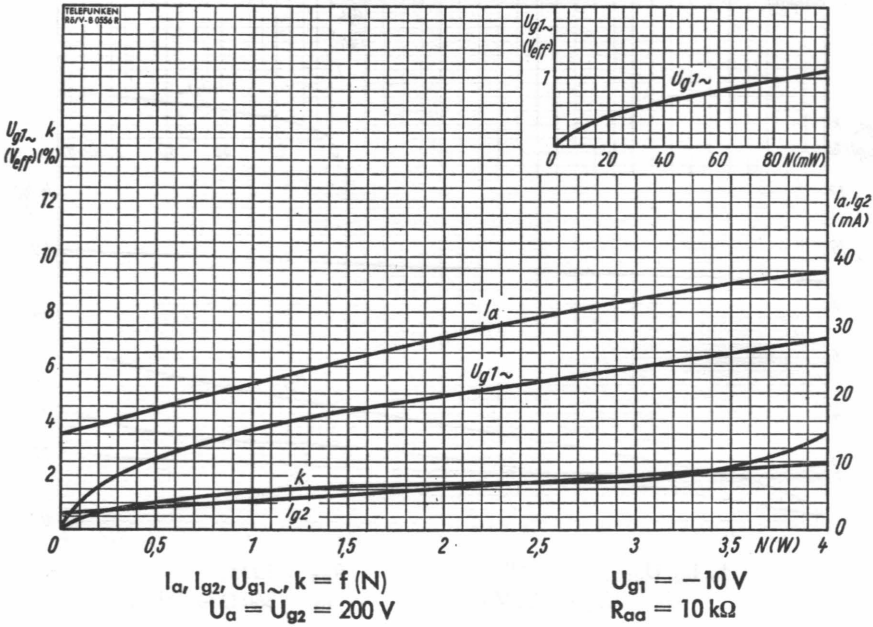
$$R_a = 10 \text{ k}\Omega$$

$$R_k = 320 \Omega$$



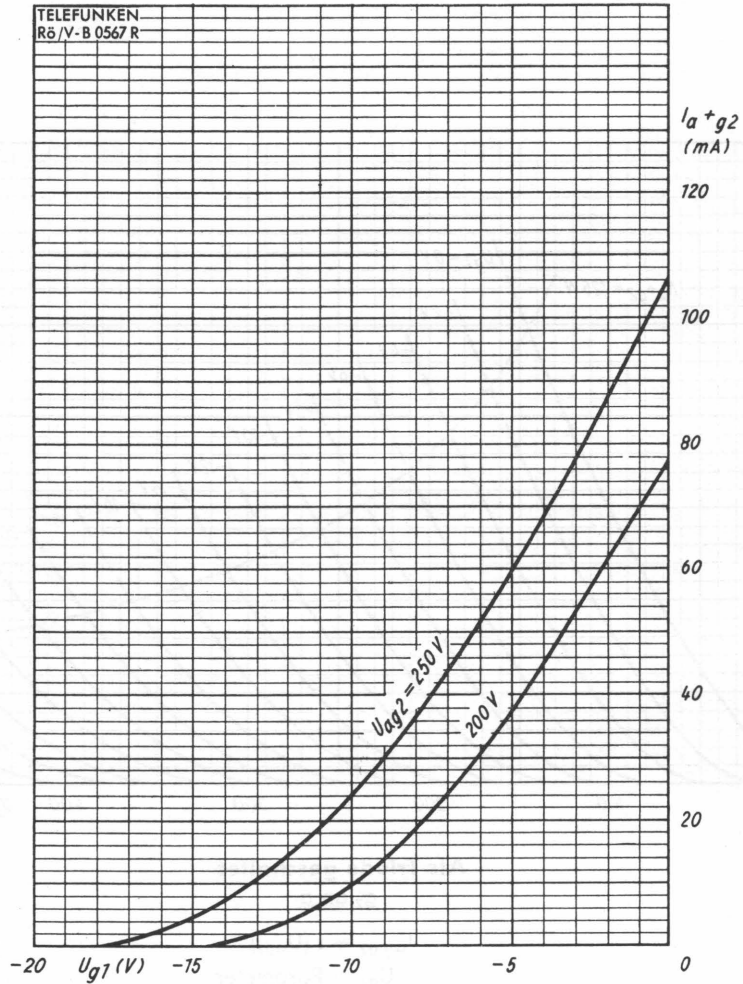


2 Röhren in Gegentakt-AB-Betrieb



2 Röhren in Gegentakt-B-Betrieb



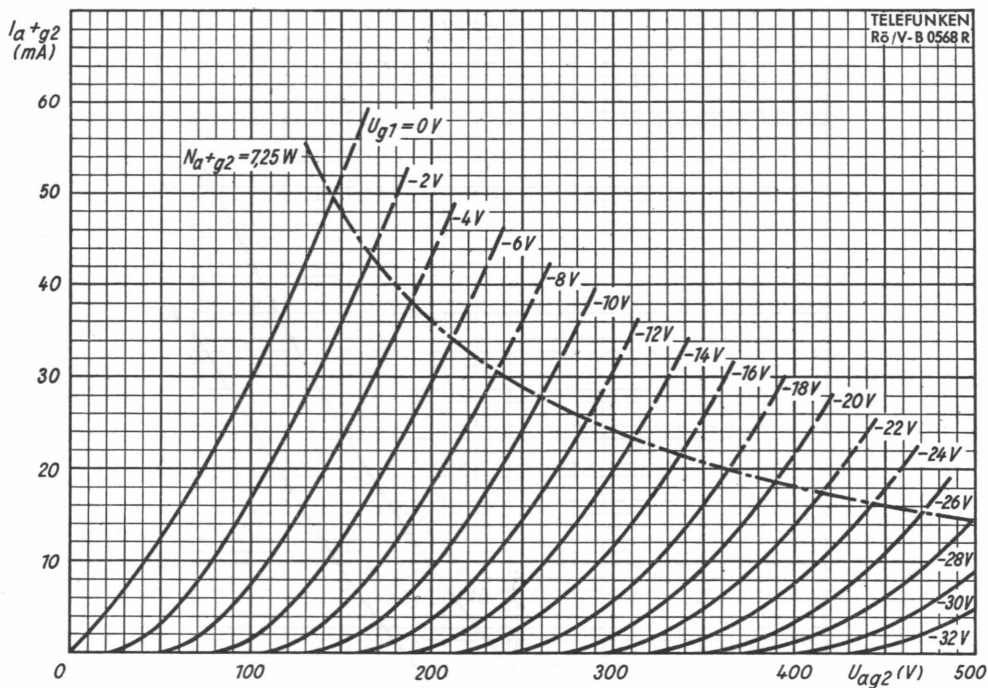


Als Triode geschaltet
 g_2 an a

$$I_{a+g2} = f(U_{g1})$$

$$U_{ag2} = \text{Parameter}$$





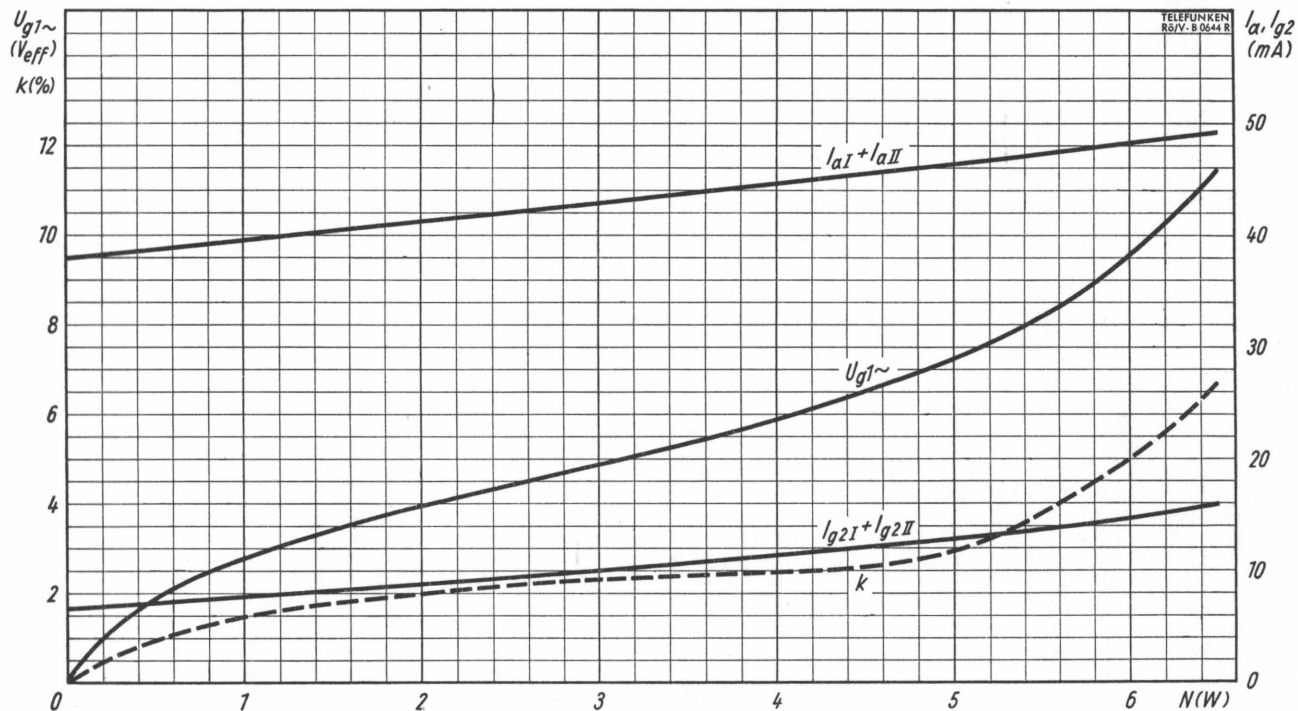
Als Triode geschaltet

g_2 an a

$$I_{a+g2} = f(U_{ag2})$$

U_{g1} = Parameter





2 Röhren in Gegentakt-AB-Betrieb, R_k gemeinsam

$$U_a = 250 \text{ V}$$

$$U_{g2} = 250 \text{ V}$$

$$R_k = 220 \Omega$$

$$R_{aa} = 10 \text{ k}\Omega$$

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