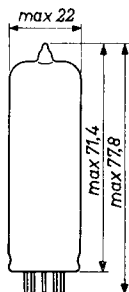
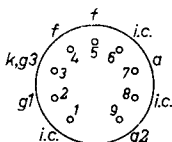
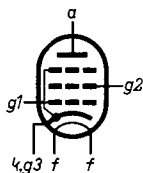


OUTPUT PENTODE
PENTHODE DE SORTIE
ENDPENTODE

Heating: indirect by A.C. or D.C.;
parallel supply
Chauffage: indirect par C.A. ou C.C.;
alimentation en parallèle
Heizung: indirekt durch Wechsel-
oder Gleichstrom;
Parallelspeisung

$V_f = 6,3 \text{ A}$
 $I_f = 0,76 \text{ A}$

Dimensions in mm
Dimensions en mm
Abmessungen in mm



Base, culot, Sockel: NOVAL

Capacitances
Capacités
Kapazitäten

$C_{g1} = 10,8 \text{ pF}$
 $C_a = 6,5 \text{ pF}$
 $C_{ag1} < 0,5 \text{ pF}$
 $C_{g1f} < 0,25 \text{ pF}$

Operating characteristics class A
 Caractéristiques d'utilisation classe A
 Betriebsdaten Klasse A

V_a	=			250		V
V_{g2}	=			250		V
V_{g1}	=			-7,3		V
R_k	=			135		Ω
R_a	=			5,2		k Ω
V_1	=	0	0,3	3,4	4,3	4,7 ²⁾ V_{eff}
I_a	=	48	-	-	49,5	49,2 mA
I_{g2}	=	5,5	-	-	10,8	11,6 mA
S	=	11,3	-	-	-	mA/V
R_1	=	38	-	-	-	k Ω
μ_{g2g1}	=	19	-	-	-	
W_0 ¹⁾	=	0	0,05	4,5	5,7	6,0 W
d_{tot} ¹⁾	=	-	-	6,8	10	%
d_2 ¹⁾	=	-	-	3,0	2,0	%
d_3 ¹⁾	=	-	-	5,8	9,5	%
V_a	=			250		V
V_{g2}	=			250		V
V_{g1}	=			-7,3		V
R_k	=			135		Ω
R_a	=			4,5		k Ω
V_1	=	0	0,3	3,5	4,4	4,8 ²⁾ V_{eff}
I_a	=	48	-	-	50,6	50,5 mA
I_{g2}	=	5,5	-	-	10	11 mA
S	=	11,3	-	-	-	mA/V
R_1	=	38	-	-	-	k Ω
μ_{g2g1}	=	19	-	-	-	
W_0 ¹⁾	=	0	0,05	4,5	5,7	6,0 W
d_{tot} ¹⁾	=	-	-	7,5	10	%
d_2 ¹⁾	=	-	-	5,7	5,0	%
d_3 ¹⁾	=	-	-	4,5	8	%

¹⁾ Measured with fixed bias
 Mesuré avec polarisation fixe
 Gemessen mit fester Gittervorspannung

²⁾ $I_{g1} = +0,3 \mu A$

Operating characteristics class A (continued)
 Caractéristiques d'utilisation classe A (continuation)
 Betriebsdaten Klasse A (Fortsetzung)

V_a	=		250		V	
V_{g2}	=		250		V	
V_{g1}	=		-8,4		V	
R_k	=		210		Ω	
R_a	=		7		k Ω	
V_i	=	0	0,3	3,5	5,5 ²⁾	V_{eff}
I_a	=	36	-	36,8	36	mA
I_{g2}	=	4,1	-	8,5	14,6	mA
S	=	10	-	-	-	mA/V
R_i	=	40	-	-	-	k Ω
μ_{g2g1}	=	19	-	-	-	
W_o ¹⁾	=	0	0,05	4,2	5,6	W
d_{tot} ¹⁾	=	-	-	10	-	%
d_2 ¹⁾	=	-	-	1,7	-	%
d_3 ¹⁾	=	-	-	8,7	-	%
V_a	=		250		V	
V_{g2}	=		210		V	
V_{g1}	=		-6,4		V	
R_k	=		160		Ω	
R_a	=		7		k Ω	
V_i	=	0	0,3	3,4	3,8 ²⁾	V_{eff}
I_a	=	36	-	36,6	36,5	mA
I_{g2}	=	3,9	-	7,3	8,0	mA
S	=	10,4	-	-	-	mA/V
R_i	=	40	-	-	-	k Ω
μ_{g2g1}	=	19	-	-	-	
W_o ¹⁾	=	0	0,05	4,3	4,7	W
d_{tot} ¹⁾	=	-	-	10	-	%
d_2 ¹⁾	=	-	-	1,8	-	%
d_3 ¹⁾	=	-	-	9,3	-	%

¹⁾ Measured with fixed bias
 Mesuré avec polarisation fixe
²⁾ Gemessen mit fester Gittervorspannung

²⁾ $I_{g1} = +0,3 \mu A$

Operating characteristics class B, two tubes
 Caractéristiques d'utilisation classe B, deux tubes
 Betriebsdaten Klasse B, zwei Röhren

V_a	=	250		300	V
V_{g2}	=	250		300	V
V_{g1}	=	-11,6		-14,7	V
R_{aa}	=	8		8 k Ω	
V_i	=	0 8		0 10 V_{eff}	
I_a	=	2x10	2x37,5	2x7,5	2x46 mA
I_{g2}	=	2x1,1	2x7,5	2x0,8	2x11 mA
W_o	=	0	11	0	17 W
d_{tot}	=	-	3	-	4 %

Operating characteristics class AB, two tubes
 Caractéristiques d'utilisation classe AB, deux tubes
 Betriebsdaten Klasse AB, zwei Röhren

V_a	=	250		300	V
V_{g2}	=	250		300	V
R_k	=	130		130	Ω
R_{aa}	=	8		8 k Ω	
V_i	=	0 8		0 10 V_{eff}	
I_a	=	2x31	2x37,5	2x36	2x46 mA
I_{g2}	=	2x3,5	2x7,5	2x4	2x11 mA
W_o	=	0	11	0	17 W
d_{tot}	=	-	3	-	4 %

Operating characteristics in triode connection, class A
(screen grid connected to anode)

Caractéristiques d'utilisation en montage triode, classe A
(grille-écran reliée à l'anode)

Betriebsdaten in Triodenschaltung, Klasse A
(Schirmgitter verbunden mit Anode)

V_a	=	250	V
R_k	=	270	Ω
R_a	=	3,5	k Ω
V_1	=	0 1,0 6,7	V_{eff}
I_a	=	34 -	36 mA
W_o	=	- 0,05	1,95 W
d_{tot}	=	- -	9 %

Operating characteristics two tubes class AB in triode connection (Screen grid connected to anode)

Caractéristiques d'utilisation deux tubes en classe AB en montage triode (Grille-écran reliée à l'anode)

Betriebsdaten zwei Röhren in Klasse AB in Triodenschaltung (Schirmgitter verbunden mit Anode)

V_a	=	250	300	V
R_k	=	270	270	Ω
R_{aa}	=	10	10	k Ω
V_1	=	0 8,3	0 10	V_{eff}
I_a	=	2x20 2x21,7	2x24 2x26	mA
W_o	=	0 3,4	0 5,2	W
d_{tot}	=	- 2,5	- 2,5	%
$V_1 (W_o=50mW)$	=	0,95	0,9	V_{eff}

Limiting values
Caractéristiques limites
Grenzdaten

V_{a0}	= max.	550 V
V_a	= max.	300 V ¹⁾
W_a	= max.	12 W ¹⁾
V_{g20}	= max.	550 V
V_{g2}	= max.	300 V ¹⁾
W_{g2}	= max.	2 W
W_{g2p}	= max.	4 W
$-V_{g1}$	= max.	100 V
$-V_{g1}(I_{g1}=+0,3\mu A)$	= max.	1,3 V
I_k	= max.	65 mA
R_{g1}	= max.	1 $M\Omega^2)$
R_{g1}	= max.	0,3 $M\Omega^3)$
V_{kf}	= max.	100 V
R_{kf}	= max.	20 k Ω

¹⁾ When the heater and positive voltages are obtained from a storage battery by means of a vibrator, the max. values of V_a and V_{g2} are 250 V and that of W_a is 9 W.

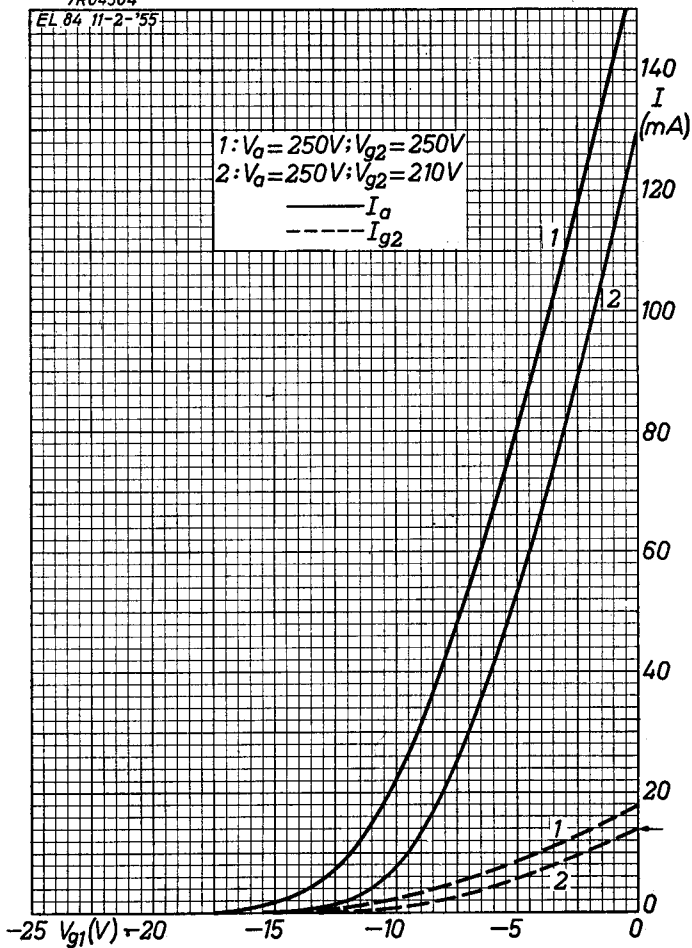
Si la tension de chauffage et les tensions positives sont obtenues d'un accumulateur par moyen d'un vibreur, les valeurs max. de V_a et V_{g2} sont de 250 V et celle de W_a est de 9 W.

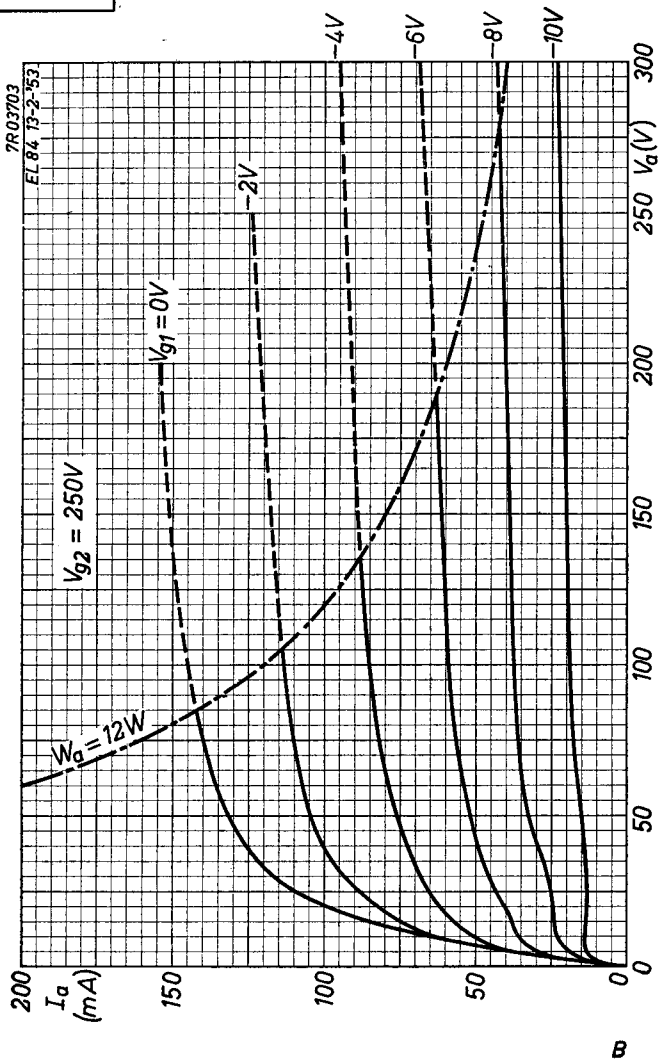
Wenn die Heizspannung und die positiven Spannungen mittels eines Wechselrichters von einem Akkumulator erhalten werden, sind die Grenzwerte von V_a und V_{g2} 250 V und von W_a 9 W.

- ²⁾ With automatic grid bias
Avec polarisation automatique
Bei automatischer Gittervorspannung
- ³⁾ With fixed bias
Avec polarisation fixe
Bei fester Gittervorspannung

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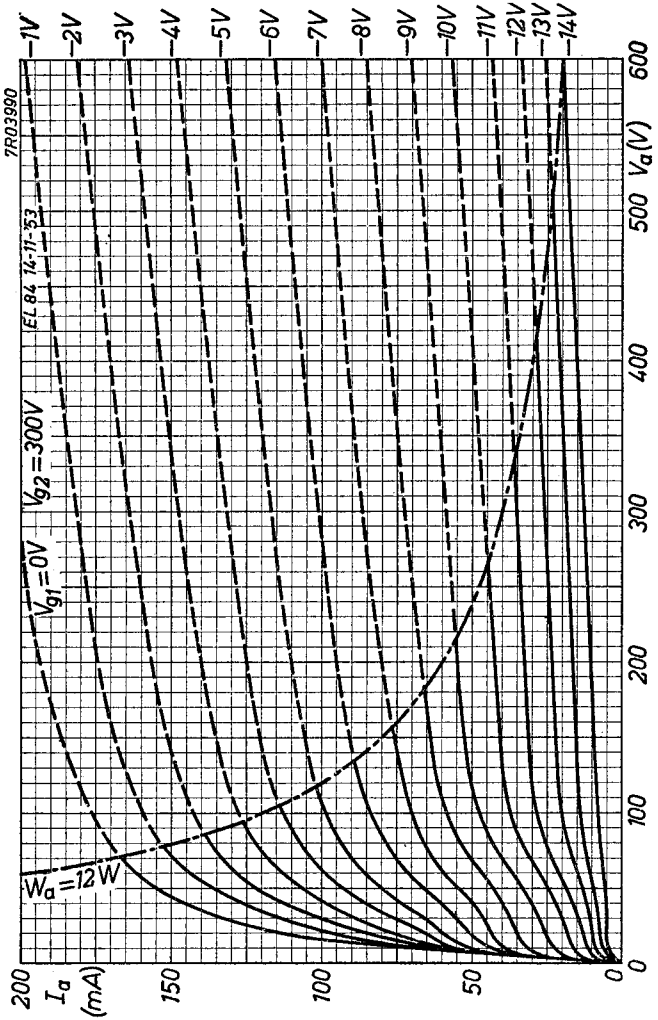
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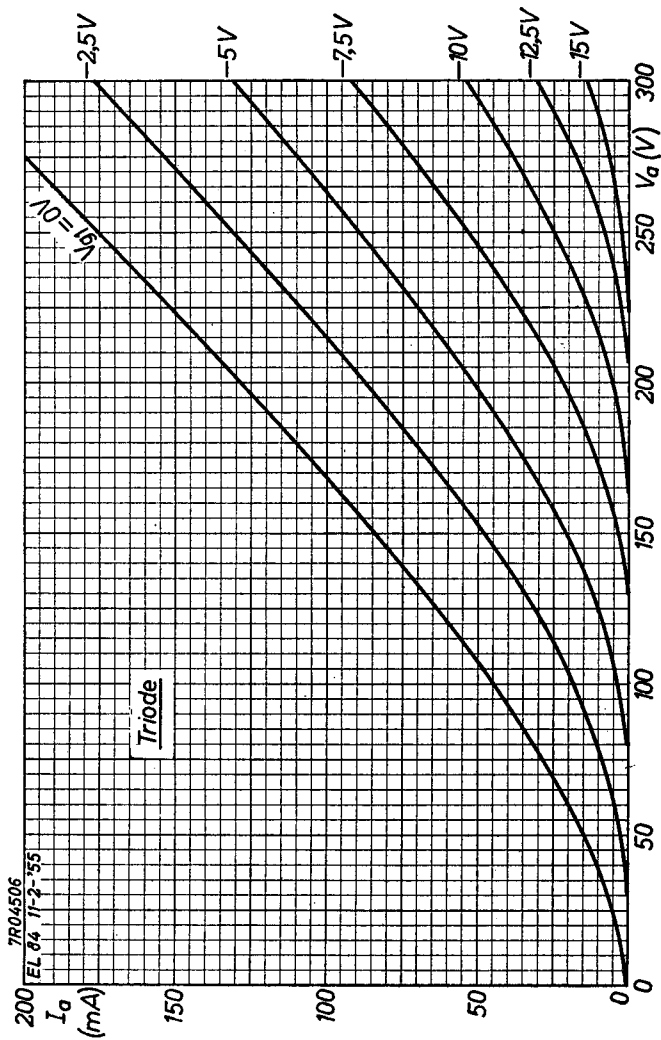


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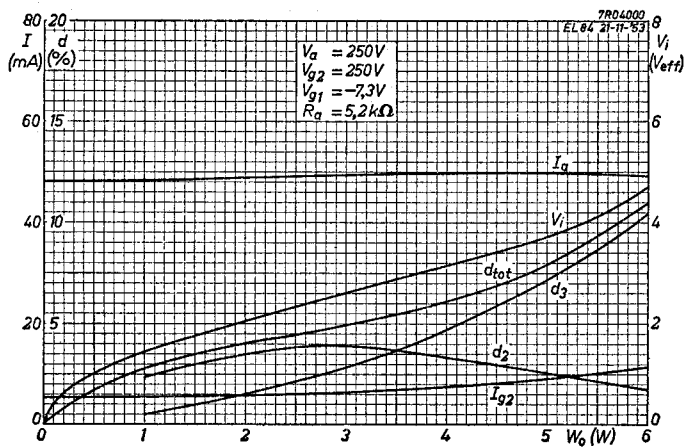
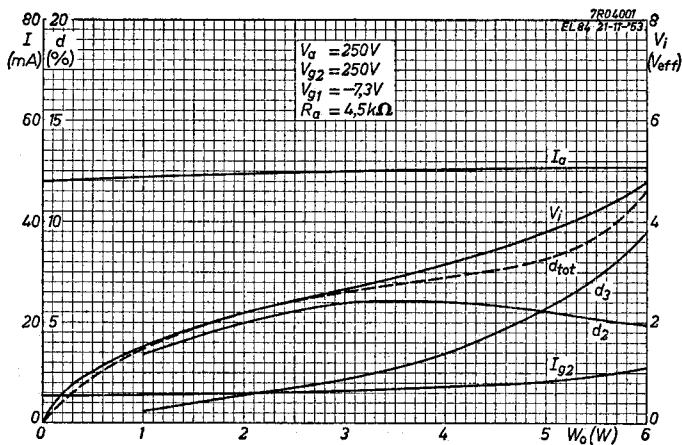
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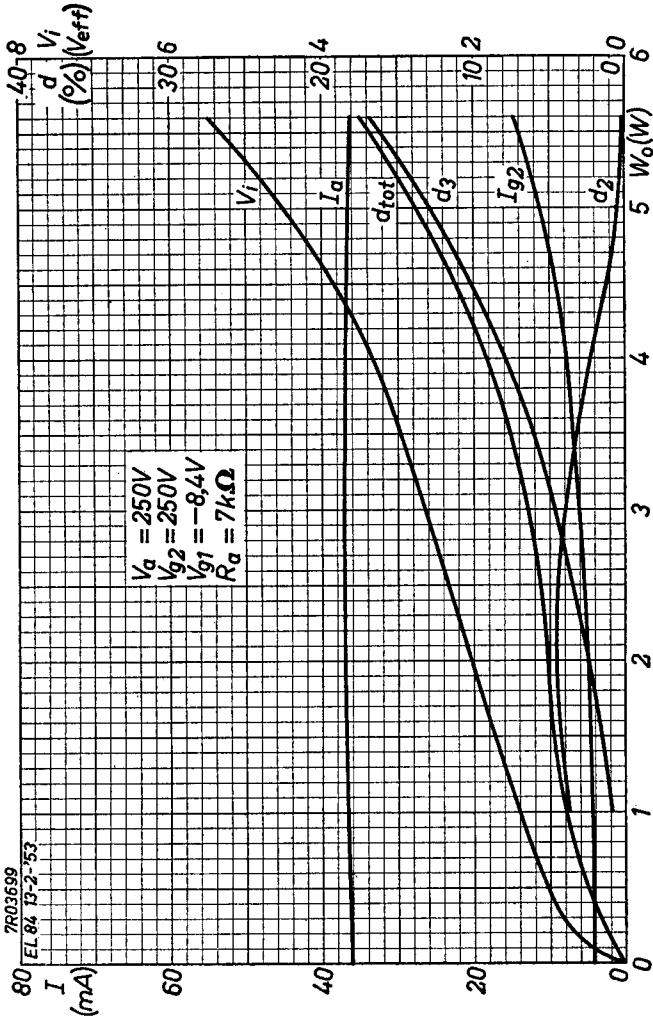


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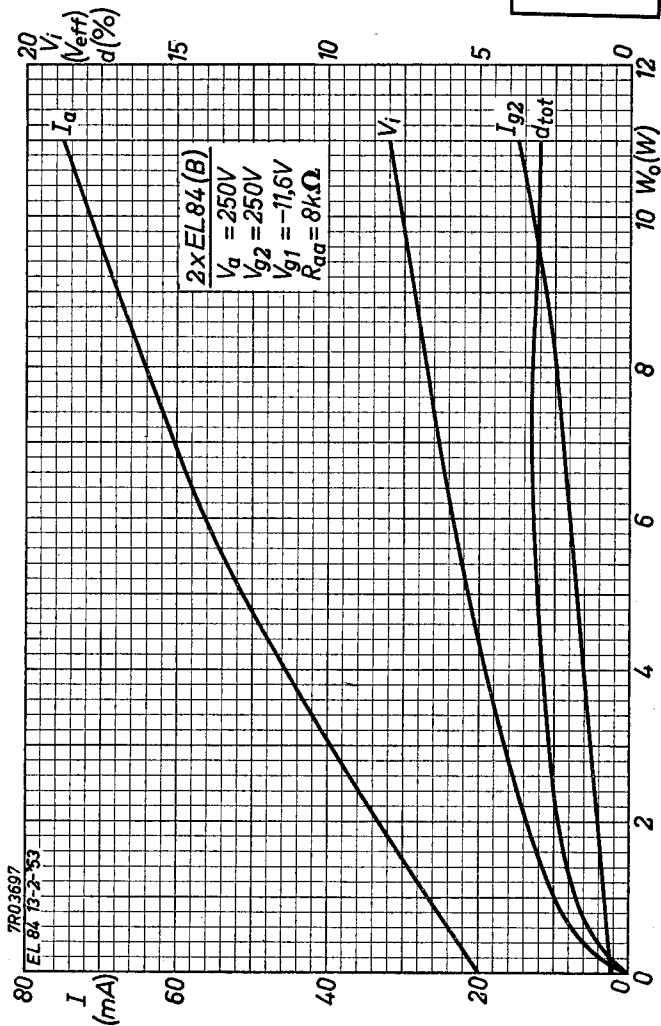
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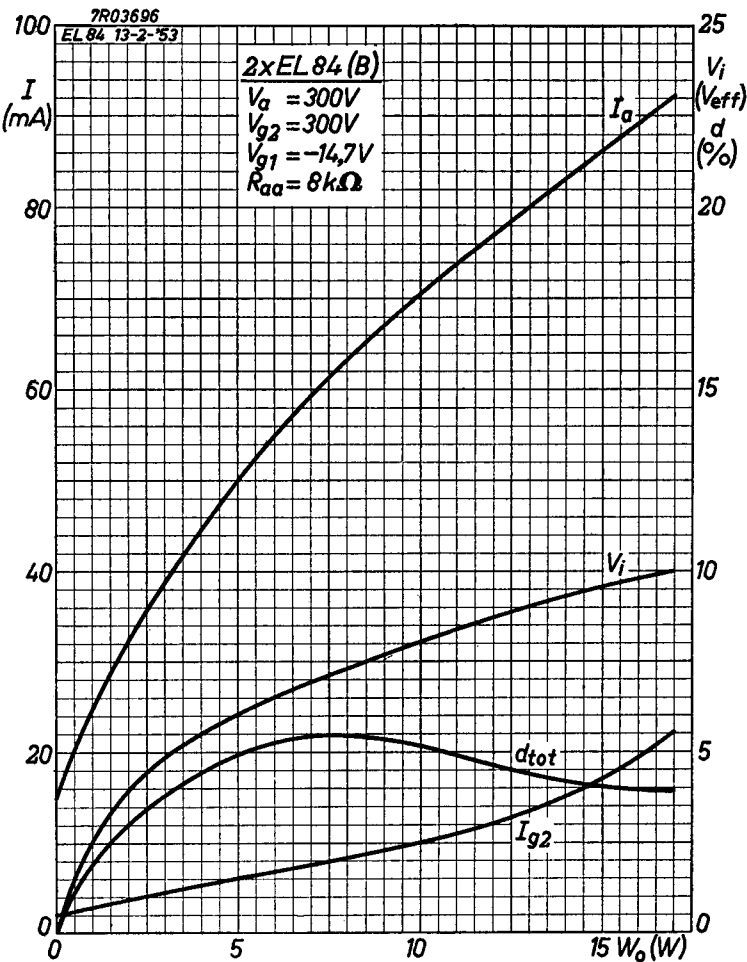
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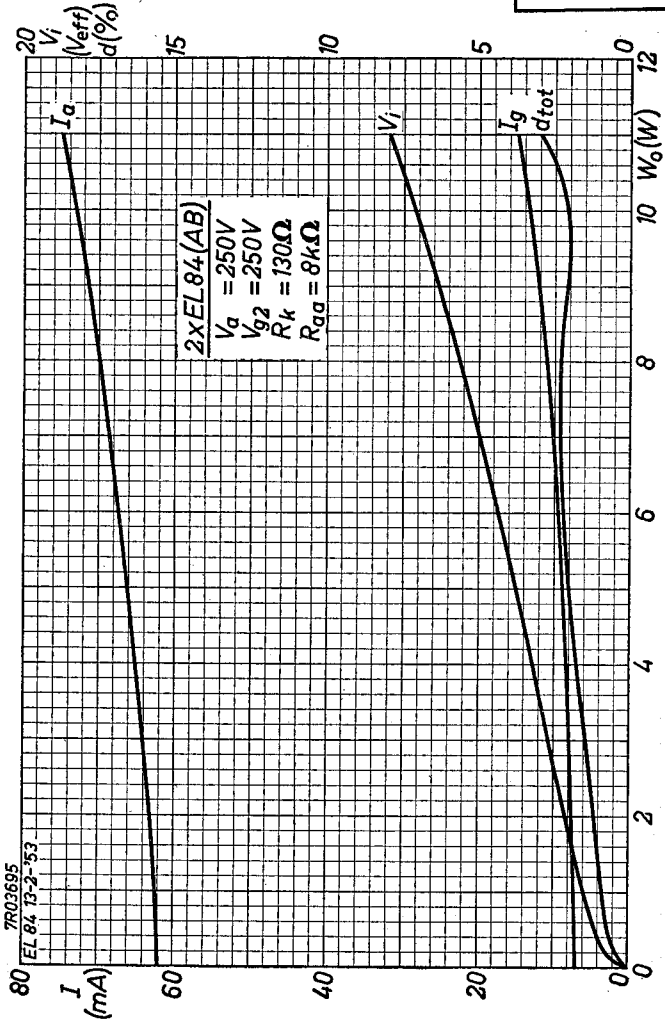
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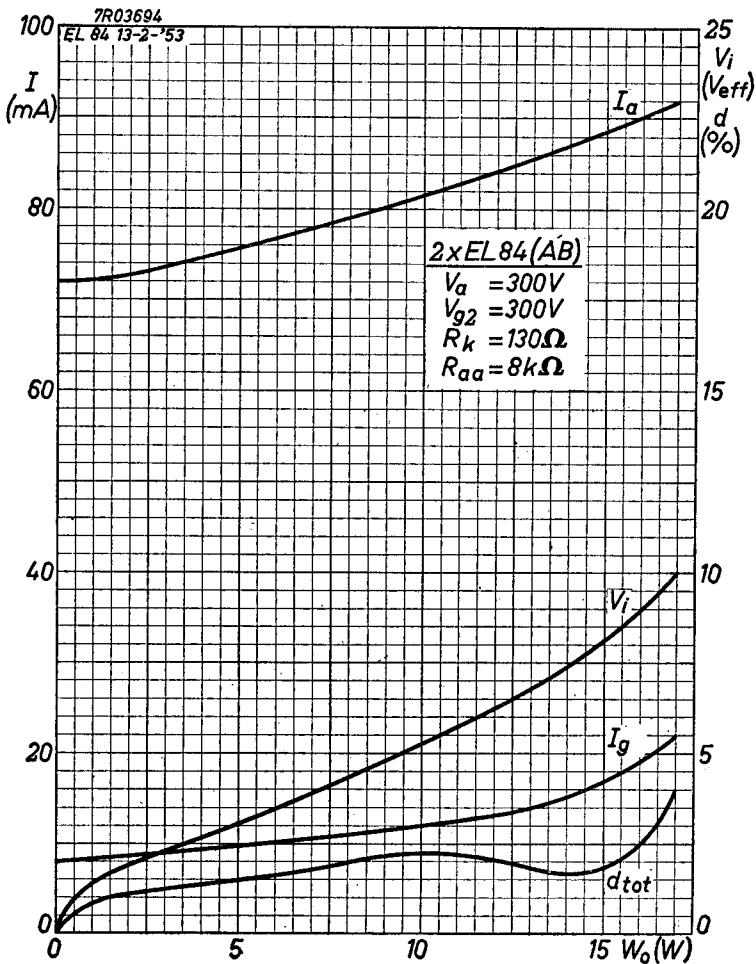
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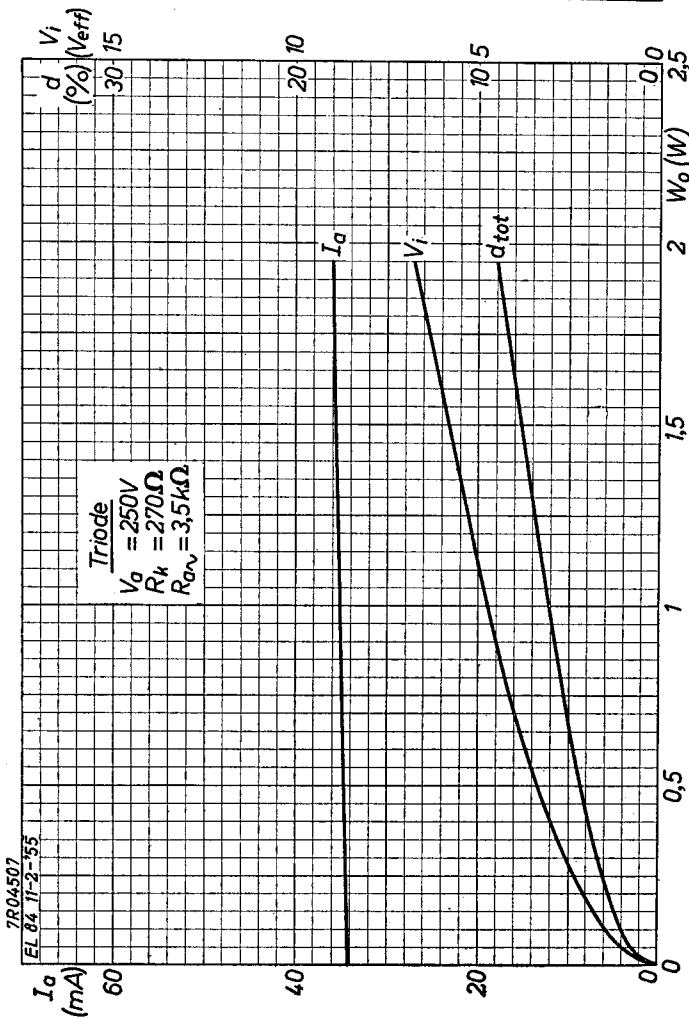
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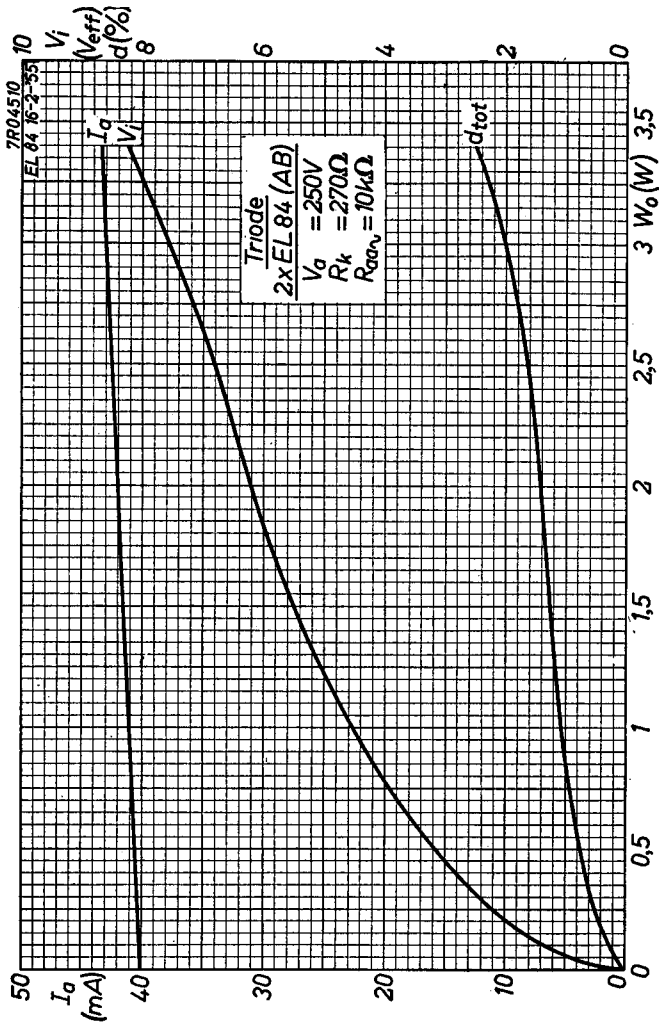


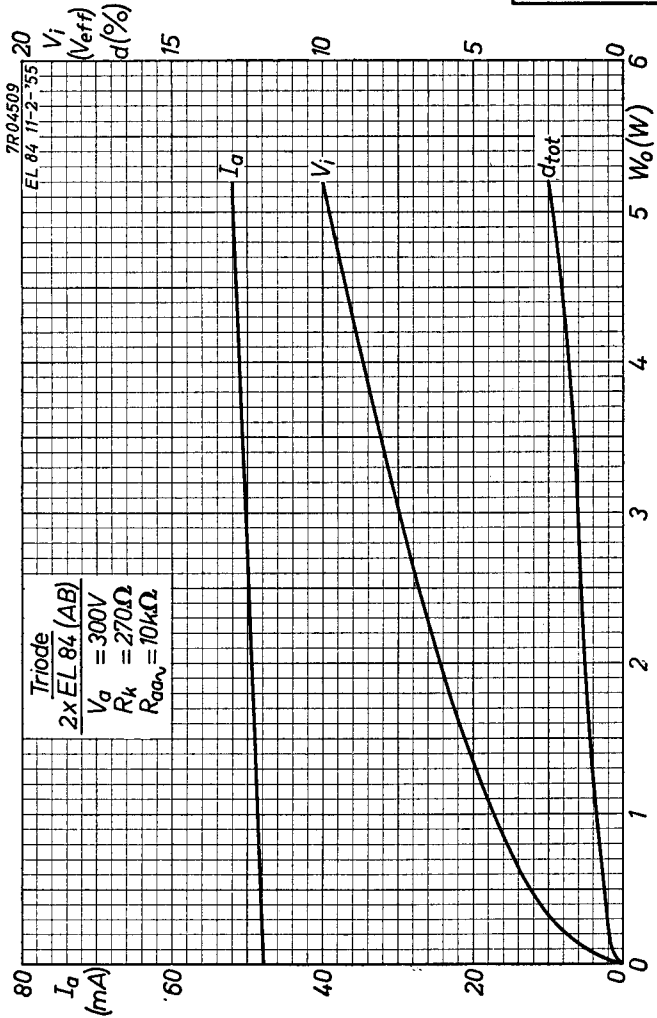
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*Electronic
Tube*

HANDBOOK

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