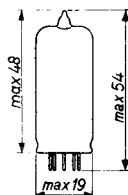
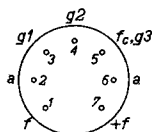
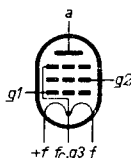


OUTPUT PENTODE for battery receivers
 PENTHODE DE SORTIE pour des appareils batterie
 ENDPENTODE für Batteriegeräte

Heating: direct by battery current, rectified A.C.
 or D.C.; series or parallel supply
 Chauffage: direct par courant batterie, C.A. redressé
 ou C.C.; alimentation en série ou en
 parallèle
 Heizung: direkt durch Batteriestrom, gleichgerich-
 teten Wechselstrom oder Gleichstrom;
 Serien-oder Parallelspeisung

Parallel supply:	Vf =	1,4 V	2,8 V
Alimentation en	If =	100 mA	50 mA
parallèle:	Pins		
Parallelspeisung:	Broches	5-(1+7)	1-7
	Stifte		
Series supply:	Vf =	1,35 V	2,7 V
Alimentation en	Pins		
série:	Broches	5-(1+7)	1-7
Serienspeisung:	Stifte		

Dimensions in mm
 Dimensions en mm
 Abmessungen in mm



Base, culot, Sockel: Miniature

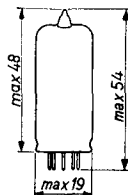
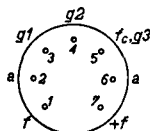
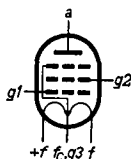
Capacitances	Cg1 = 4,35 pF
Capacités	Ca = 6,0 pF
Kapazitäten	Cag1 < 0,4 pF

OUTPUT PENTODE for battery receivers
 PENTHODE DE SORTIE pour des appareils batterie
 ENDPENTODE für Batteriegeräte

Heating: direct by D.C.; series or parallel supply
 Chauffage: direct par C.C.; alimentation en série ou en parallèle
 Heizung: direkt durch Gleichstrom; Serien- oder Parallelspeisung

Parallel supply:	Vf =	1,4 V	2,8 V
Alimentation en	If =	100 mA	50 mA
parallèle:	Pins		
Parallelspeisung:	Broches	5-(1+7)	1-7
	Stifte		
Series supply:	Vf =	1,3 V	2,6 V
Alimentation en	Pins		
série:	Broches	5-(1+7)	1-7
Serienspeisung:	Stifte		

Dimensions in mm
 Dimensions en mm
 Abmessungen in mm



Base, culot, Sockel: Miniature

Capacitances
 Capacités
 Kapazitäten

$C_{g1} = 4,35 \text{ pF}$
 $C_a = 6,0 \text{ pF}$
 $C_{ag1} < 0,4 \text{ pF}$

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

A. $V_f=1,4V$; $I_f=100mA$; pins, broches, Stifte 5-(1+7)

V_a	=	45	67,5	90	V
V_{g2}	=	45	67,5	67,5	V
V_{g1}	=	-4,5	-7	-7	V
I_a	=	3,8	7,2	7,4	mA
I_{g2}	=	0,8	1,5	1,4	mA
S	=	1,25	1,55	1,57	mA/V
μg_{2g1}	=	5	5	5	
R_i	=	0,1	0,1	0,1	M Ω
R_a	=	8	5	8	k Ω
W_o	=	65	180	270	mW
V_i	=	3,5	5,5	5,5	V_{eff}
d_{tot}	=	12	10	12	%
$V_i (W_o=50mW)$	=	2,0	2,5	1,95	V_{eff}

B. $V_f=2,8V$; $I_f=50mA$; pins, broches, Stifte 1-7

V_a	=	45	67,5	90	V
V_{g2}	=	45	67,5	67,5	V
V_{g1}	=	-4,5	-7	-7	V
I_a	=	3,0	6,0	6,1	mA
I_{g2}	=	0,7	1,2	1,1	mA
S	=	1,1	1,4	1,42	mA/V
μg_{2g1}	=	5	5	5	
R_i	=	0,1	0,1	0,1	M Ω
R_a	=	8	5	8	k Ω
W_o	=	50	160	235	mW
V_i	=	3,5	5,5	5,5	V_{eff}
d_{tot}	=	12,5	12	13	%
$V_i (W_o=50mW)$	=	3,5	2,5	1,95	V_{eff}

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

A. $V_f = 1,4 \text{ V}$; $I_f = 100 \text{ mA}$; pins, broches, Stifte 5-(1+7)

V_a	=	45	41	67,5	V
V_{g2}	=	45	41	67,5	V
V_{g1}	=	-4,5	-3,5	-7	V
I_a	=	3,8	4,0	7,2	mA
I_{g2}	=	0,8	0,8	1,5	mA
S	=	1,25	1,3	1,55	mA/V
μ_{g2g1}	=	5	4,5	5	
R_i	=	100	90	100	k Ω
R_a	=	8	7	5	k Ω
W_o	=	65	45	180	mW
V_i	=	3,5	2,9	5,5	V_{eff}
d_{tot}	=	12	13	10	%
$V_i(W_o=50 \text{ mW})$	=	2,8	-	2,5	V_{eff}

V_a	=	61	90	84	V
V_{g2}	=	61	67,5	1) ¹⁾	V
V_{g1}	=	-6	-7	-6,5	V
I_a	=	6,6	7,4	8,0	mA
I_{g2}	=	1,4	1,4	1,7	mA
S	=	1,5	1,57	1,55	mA/V
μ_{g2g1}	=	4,5	5	4,5	
R_i	=	100	100	100	k Ω
R_a	=	7	8	7	k Ω
W_o	=	125	270	190	mW
V_i	=	4,5	5,1	5,1	V_{eff}
d_{tot}	=	14	12	13	%
V_i	=	2,0	1,95	1,9	V_{eff}

¹⁾ $R_{g2} = 10\text{k}\Omega$, decoupled with $0,47 \mu\text{F}$ ($V_{bg2} \approx 84 \text{ V}$)
 $R_{g2} = 10\text{k}\Omega$, découplé par $0,47 \mu\text{F}$ ($V_{bg2} \approx 84 \text{ V}$)
 $R_{g2} = 10\text{k}\Omega$, entkoppelt durch $0,47 \mu\text{F}$ ($V_{bg2} \approx 84 \text{ V}$)

Operating characteristics class B
Caractéristiques d'utilisation classe B
Betriebsdaten Klasse B
A. $V_f=1,4V$; $I_f=100mA$; pins, broches, Stifte 5-(1+7)
($V_{b_a} = 90V$; $V_{b_{g2}} = 67,5V$)

V_a	=	80	V
V_{g2}	=	57,5	V
V_{g1}	=	-9,9	V
R_{aa}	=	16	k Ω
V_i	=	0 7,3	V_{eff}
I_a	=	2x1,5 2x4,4	mA
I_{g2}	=	2x0,3 2x1,35	mA
W_o	=	0 325	mW
d_{tot}	=	- 5	%

B. $V_f=2,8V$; $I_f=50mA$; pins, broches, Stifte 1-7
($V_{b_a} = 90V$; $V_{b_{g2}} = 67,5V$)

V_a	=	81	V
V_{g2}	=	58,5	V
V_{g1}	=	-9,2	V
R_{aa}	=	18	k Ω
V_i	=	0 7,0	V_{eff}
I_a	=	2x1,5 2x4,2	mA
I_{g2}	=	2x0,3 2x1,25	mA
W_o	=	0 315	mW
d_{tot}	=	4,7	%

Limiting values
Caractéristiques limites
Grenzdaten

V_a	= max.	90	V
W_a	= max.	0,7	W
V_{g2}	= max.	67,5	V
W_{g2}	= max.	0,15	W
V_{g1} ($I_{g1}=+0,3\mu A$)	= max.	+0,2	V
I_k	= max.	11	mA
R_{g1}	= max.	2	M Ω

B. $V_f = 2,8 \text{ V}$; $I_f = 50 \text{ mA}$; pins, broches, Stifte 1- 7

V_a	=	45	41	67,5	V
V_{p2}	=	45	41	67,5	V
V_{p1}	=	-4,5	-3,5	-7	V
I_a	=	3,0	3,2	6,0	mA
I_{p2}	=	0,7	0,7	1,2	mA
S	=	1,1	1,15	1,4	mA/V
μg_{2g1}	=	5	45	5	
R_1	=	100	110	100	k Ω
R_a	=	8	7	5	k Ω
W_0	=	50	38	160	mW
V_1	=	3,5	2,8	5,5	V_{eff}
dt_{tot}	=	12,5	13	12	%
$V_1(W_0 = 50 \text{ mW})$	=	3,5	-	2,5	V_{eff}

V_a	=	61	90	84	V
V_{g2}	=	61	67,5	¹⁾	V
V_{g1}	=	-5,5	-7	-6	V
I_a	=	6,5	6,1	7,6	mA
I_{p2}	=	1,4	1,1	1,6	mA
S	=	1,45	1,42	1,5	mA/V
μg_{2g1}	=	4,5	5	4,5	
R_1	=	100	100	105	k Ω
R_a	=	7	8	7	k Ω
W_0	=	120	235	180	mW
V_1	=	4,4	4,7	4,7	V_{eff}
dt_{tot}	=	14	13	13	%
$V_1(W_0 = 50 \text{ mW})$	=	2,0	1,95	1,9	V_{eff}

¹⁾ $R_{g2} = 10 \text{ k}\Omega$, decoupled with $0,47 \mu\text{F}$ ($V_{bg2} = 84 \text{ V}$)
 $R_{g2} = 10 \text{ k}\Omega$, d  coupl   par $0,47 \mu\text{F}$ ($V_{bg2} = 84 \text{ V}$)
 $R_{g2} = 10 \text{ k}\Omega$, entkoppelt durch $0,47 \mu\text{F}$ ($V_{bg2} = 84 \text{ V}$)

B. $V_f = 2,8 \text{ V}$; $I_f = 50 \text{ mA}$; pins, broches, Stifte 1- 7

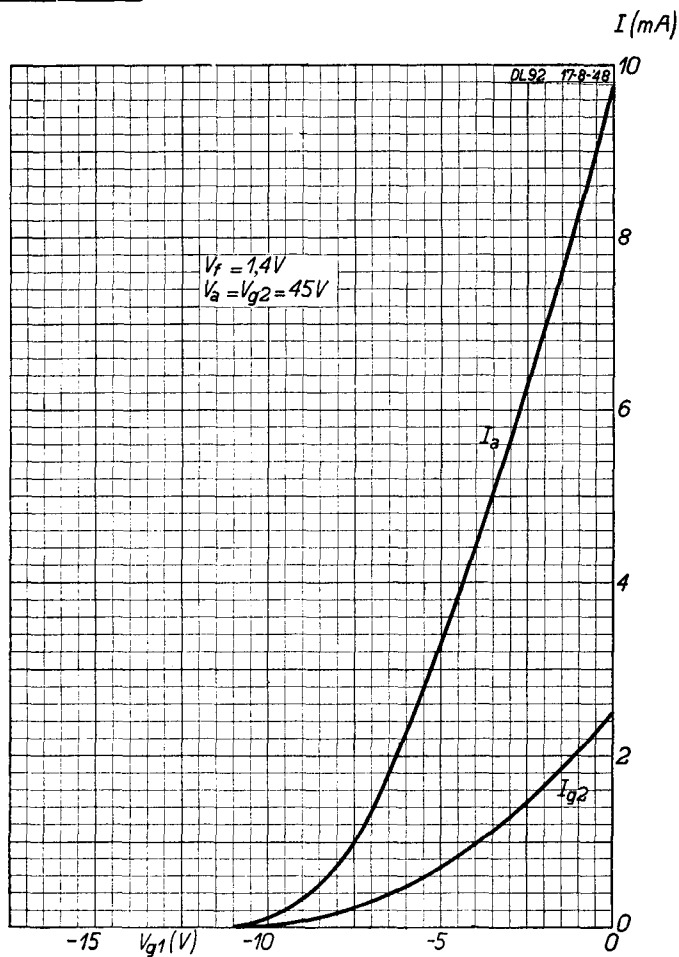
V_a	=	45	41	67,5	V
V_{g2}	=	45	41	67,5	V
V_{g1}	=	-4,5	-3,5	-7	V
I_a	=	3,0	3,2	6,0	mA
I_{g2}	=	0,7	0,7	1,2	mA
S	=	1,1	1,15	1,4	mA/V
μ_{g2g1}	=	5	45	5	
R_i	=	100	110	100	k Ω
R_a	=	8	7	5	k Ω
W_o	=	50	38	160	mW
V_i	=	3,5	2,8	5,5	V_{eff}
dt_{tot}	=	12,5	13	12	%
$V_i(W_o = 50 \text{ mW})$	=	3,5	-	2,5	V_{eff}

V_a	=	61	90	84	V
V_{g2}	=	61	67,5	¹⁾	V
V_{g1}	=	-5,5	-7	-6	V
I_a	=	6,5	6,1	7,6	mA
I_{g2}	=	1,4	1,1	1,6	mA
S	=	1,45	1,42	1,5	mA/V
μ_{g2g1}	=	4,5	5	4,5	
R_i	=	100	100	105	k Ω
R_a	=	7	8	7	k Ω
W_o	=	120	235	180	mW
V_i	=	4,4	4,7	4,7	V_{eff}
dt_{tot}	=	14	13	13	%
$V_i(W_o = 50 \text{ mW})$	=	2,0	1,95	1,9	V_{eff}

¹⁾ $R_{g2} = 10 \text{ k}\Omega$, decoupled with $0,47 \text{ }\mu\text{F}$ ($V_{bg2} = 84 \text{ V}$)
 $R_{g2} = 10 \text{ k}\Omega$, d coupl  par $0,47 \text{ }\mu\text{F}$ ($V_{bg2} = 84 \text{ V}$)
 $R_{g2} = 10 \text{ k}\Omega$, entkoppelt durch $0,47 \text{ }\mu\text{F}$ ($V_{bg2} = 84 \text{ V}$)

DL 92

"Miniwatt"



54-971

Limiting values
Caractéristiques limites
Grenzdaten

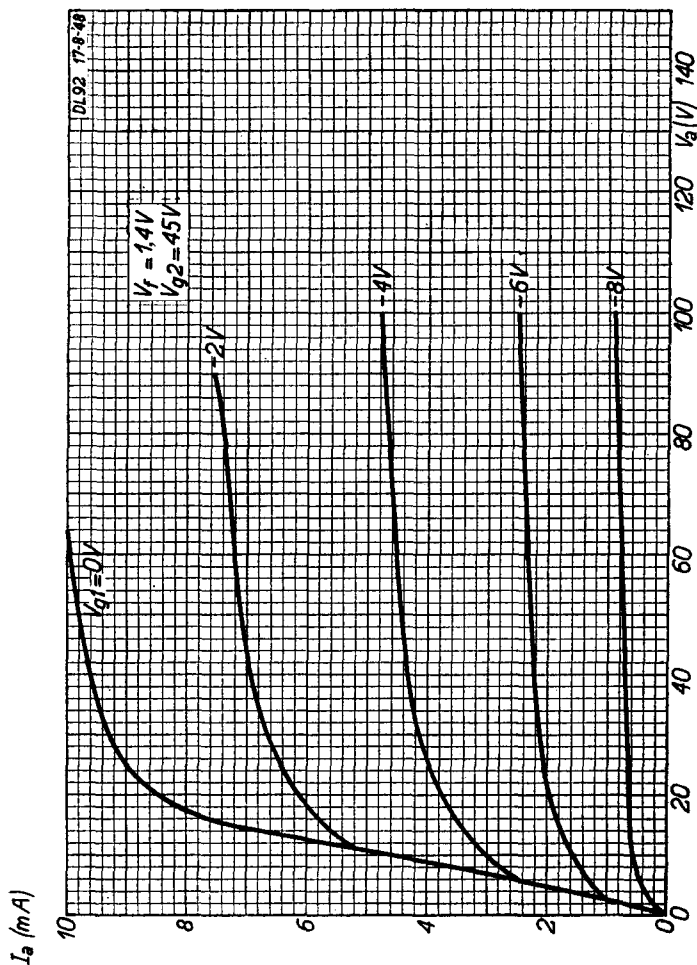
V_a	= max.	90 V
W_a	= max.	0,7 W
V_{g2}	= max.	67,5 V
W_{g2}	= max.	0,15 W
$V_{g1}(I_{g1} = +0,3 \mu A)$	= max.	0 V
I_k	= max.	11 mA
R_{g1}	= max.	2 M Ω

Limiting values

Caractéristiques limites

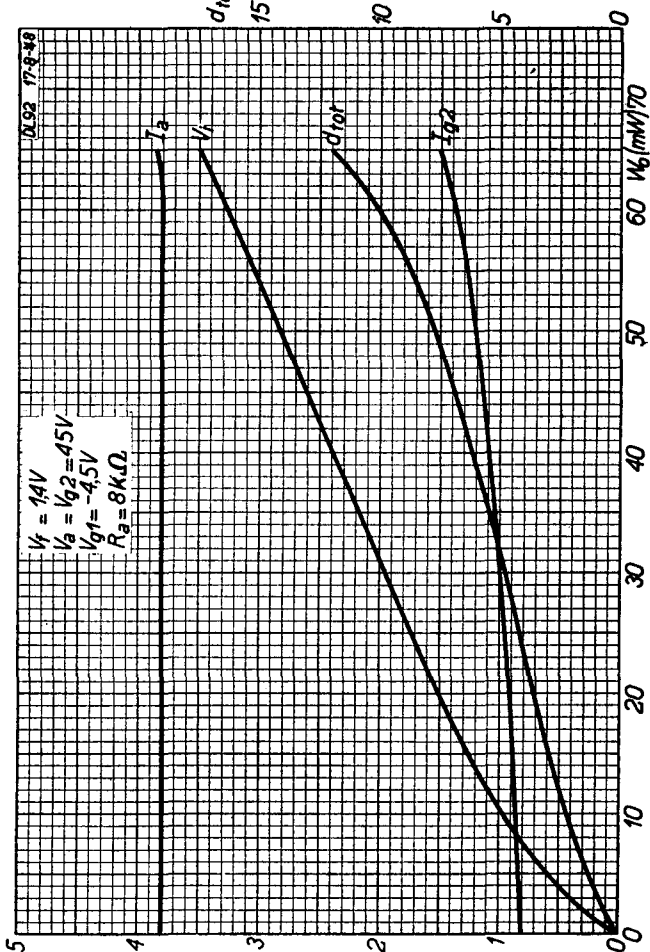
Grenzdaten

V_{a0}	= max.	90 V
V_a	= max.	90 V
W_a	= max.	0,7 W
V_{g20}	= max.	90 V
V_{g2}	= max.	67,5 V
W_{g2}	= max.	0,15 W
$V_{g1}(I_{g1} = +0,3 \mu A)$	= max.	0 V
I_k	= max.	11 mA
R_{g1}	= max.	2 M Ω



DL 92

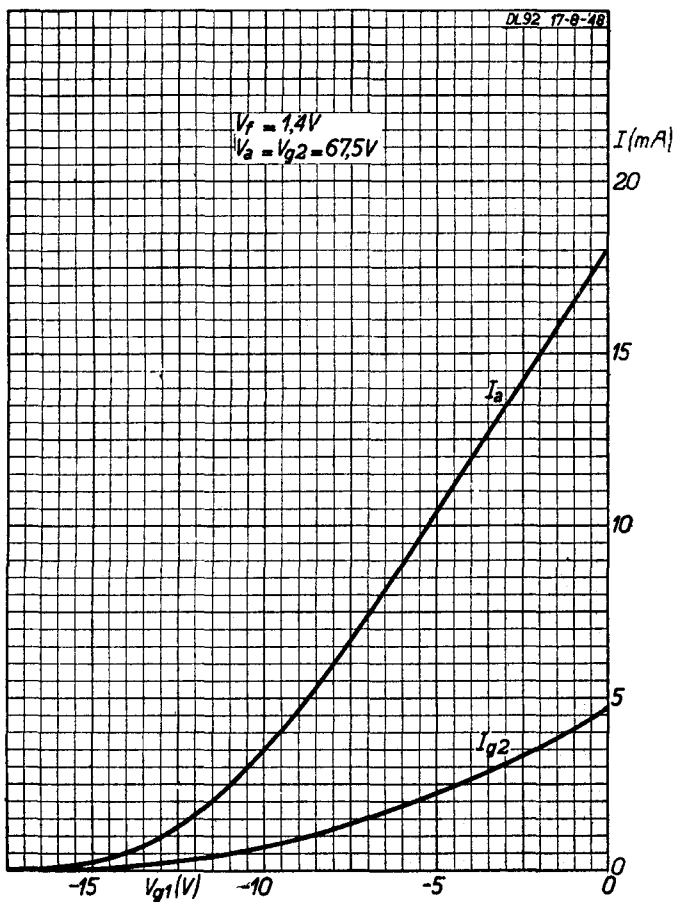
"Miniwatt"

 $V_i (V_{eff})$
 $I (mA)$
 $V_i = 14V$
 $V_a = V_{g2} = 45V$
 $V_{g1} = -4.5V$
 $R_a = 8k\Omega$


5.973

30.8.1948

6

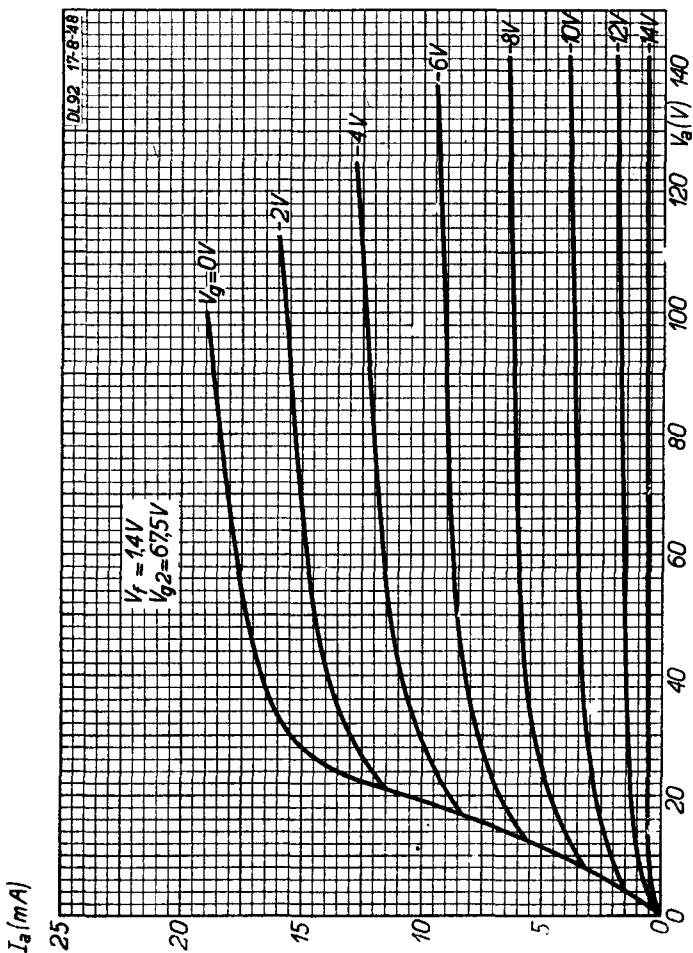


54974

DL 92

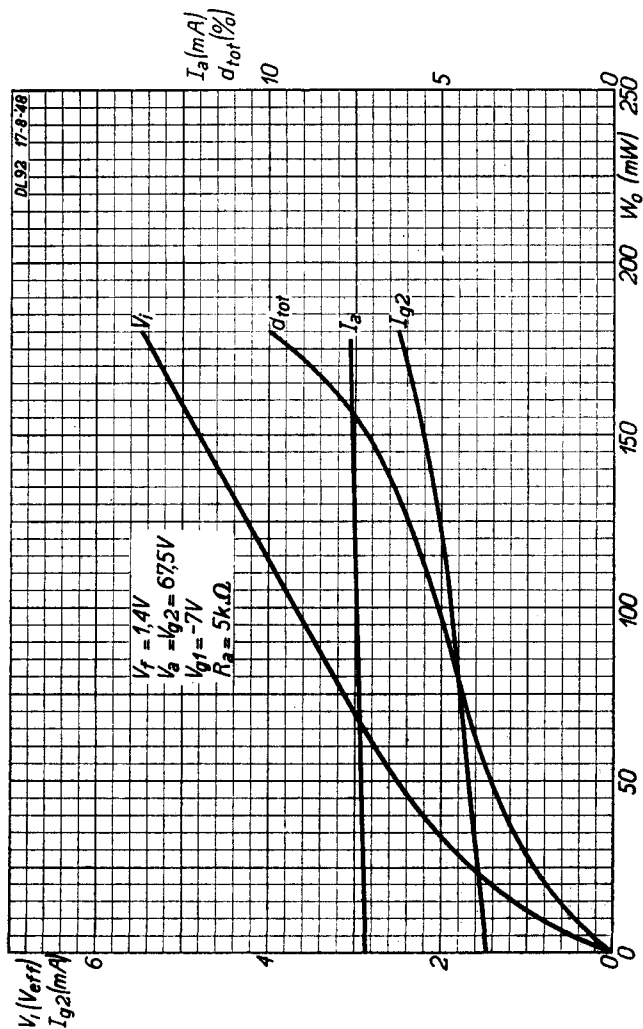
"Miniwatt"

54-975



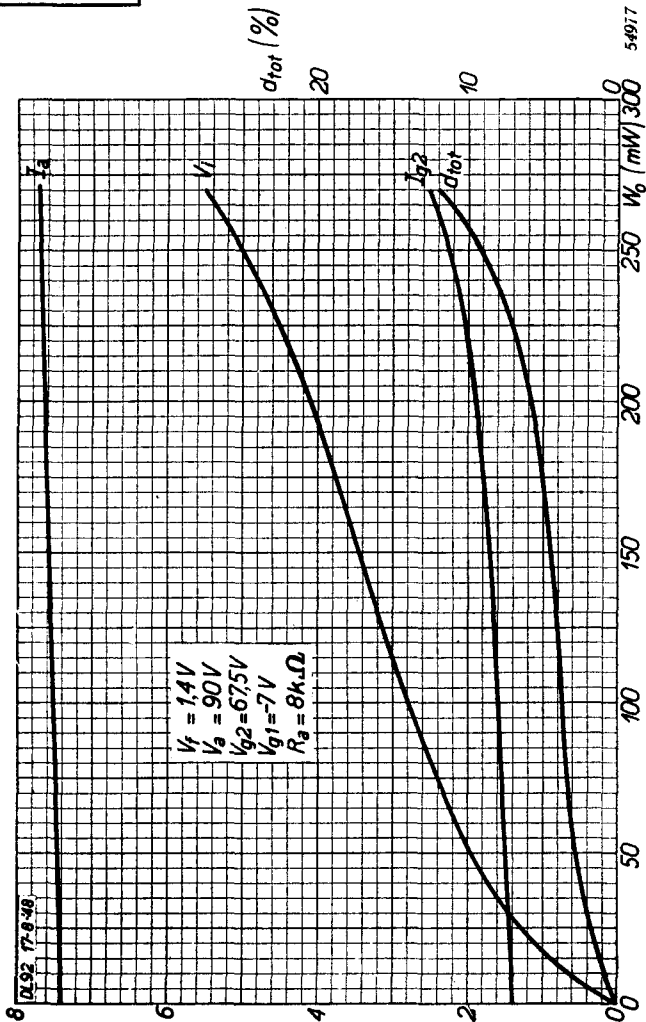
30.8.1948

8



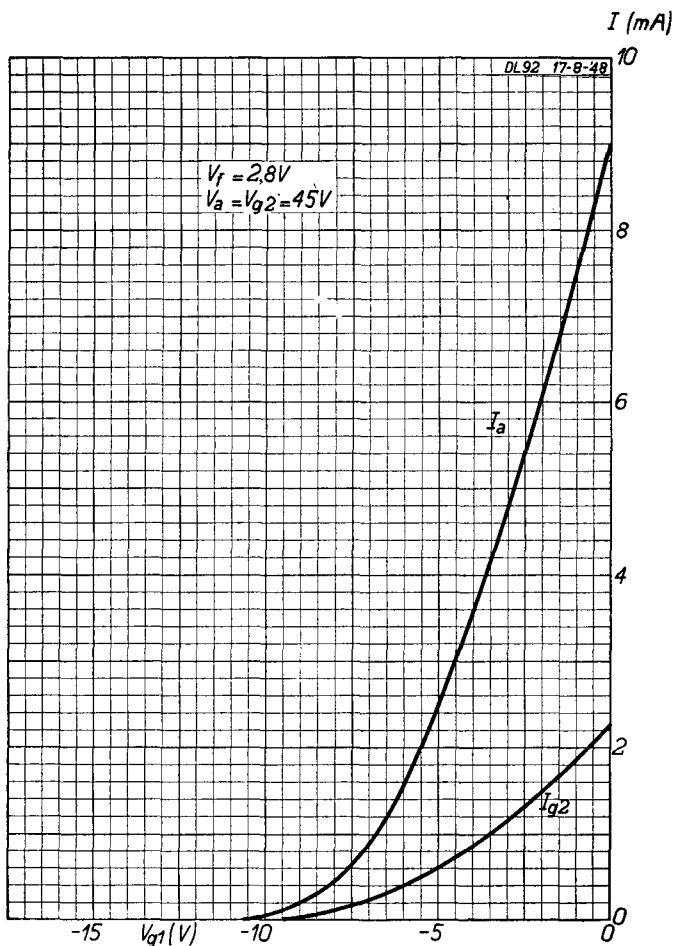
DL 92

"Miniwatt"

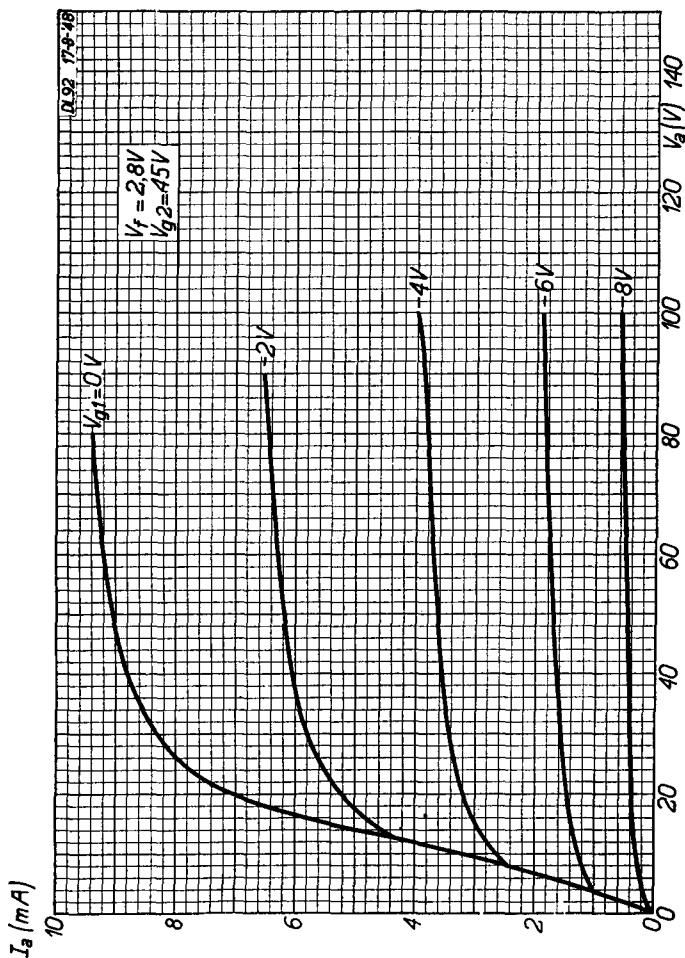
 $V_i (V_{off})$
 $I (mA)$


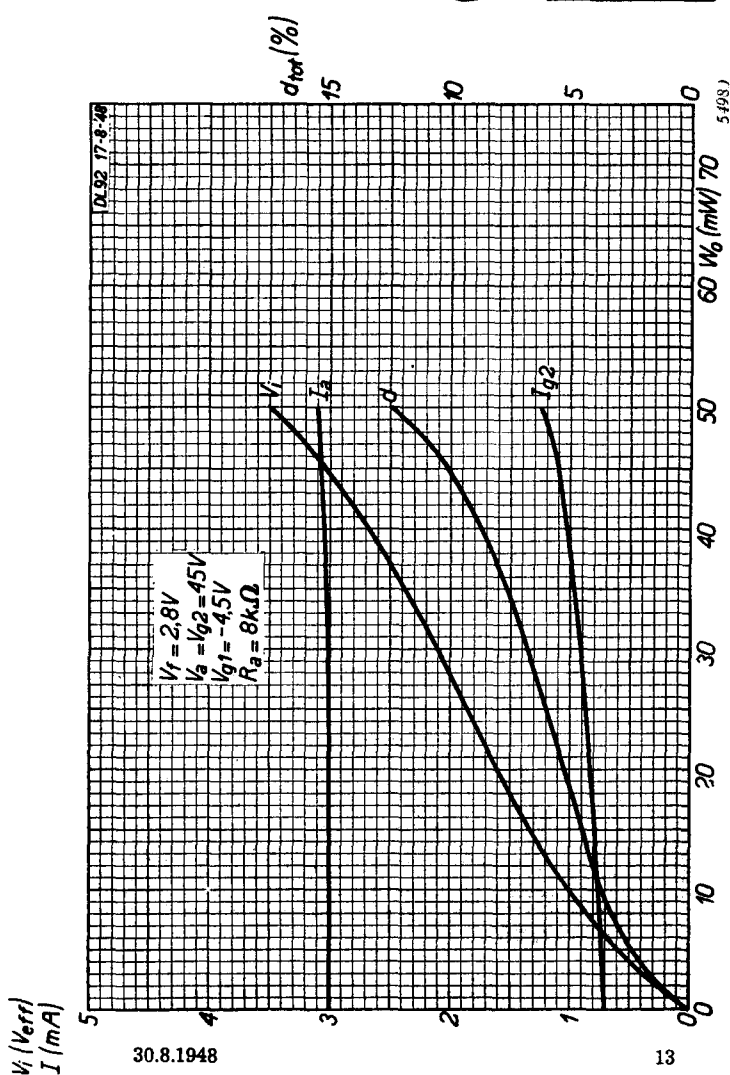
30.8.1948

10



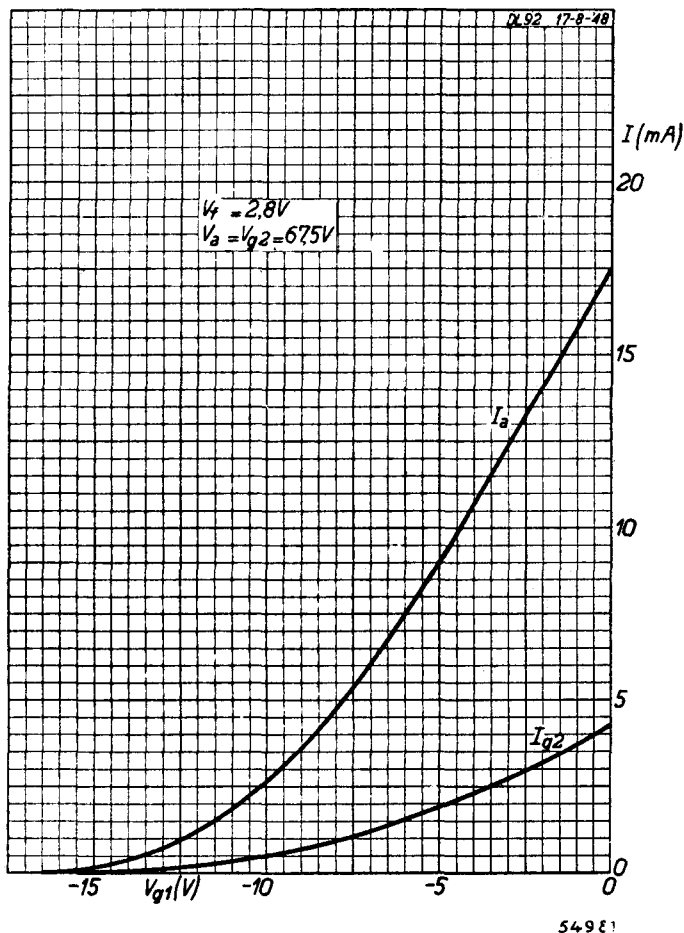
54978

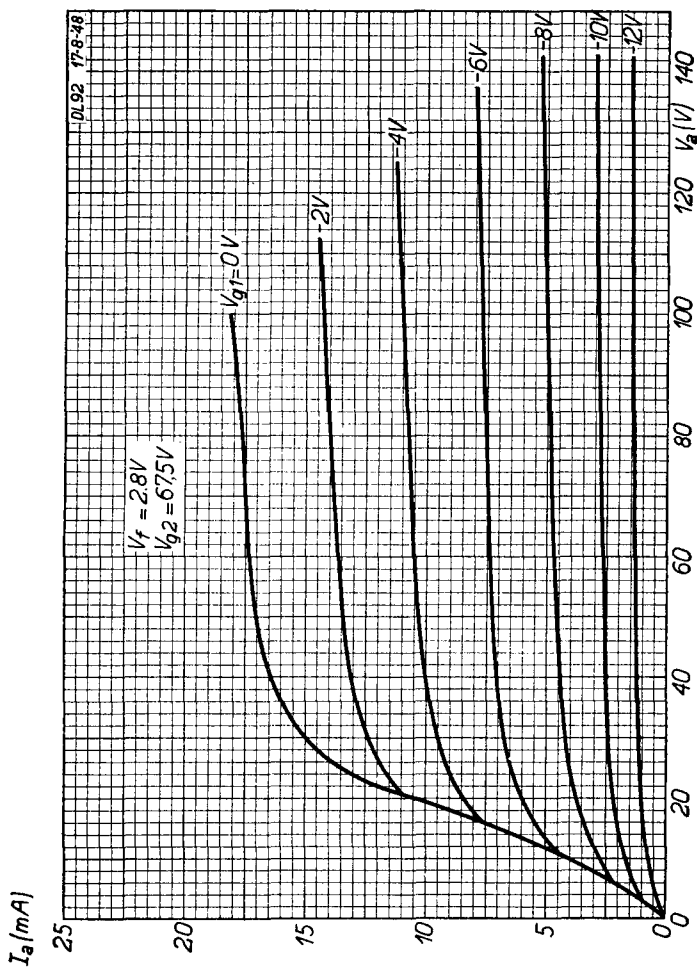


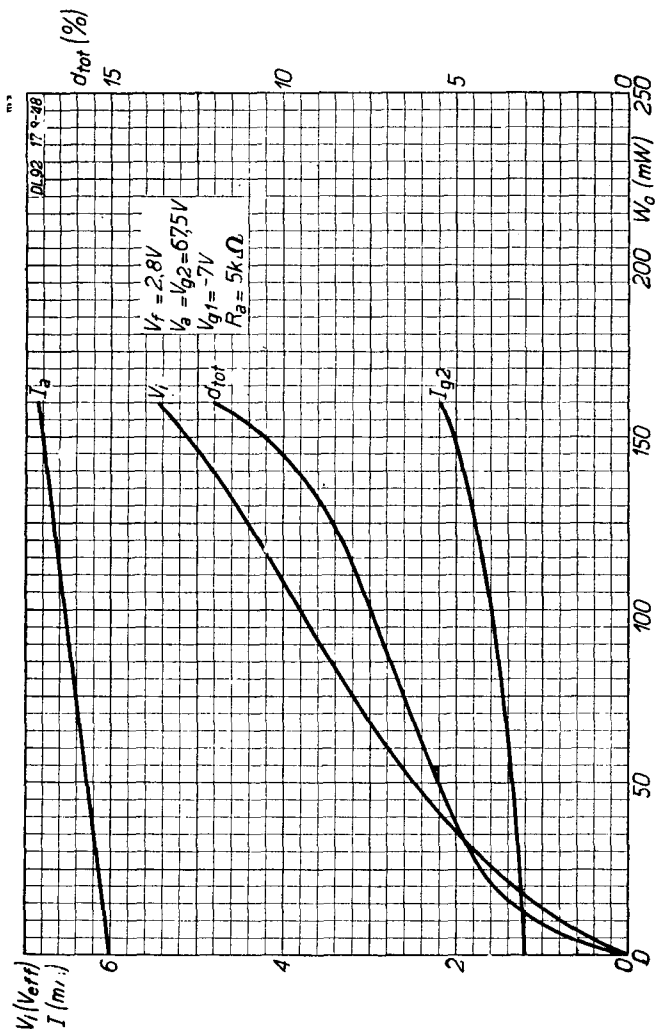


DL 92

"Miniwatt"

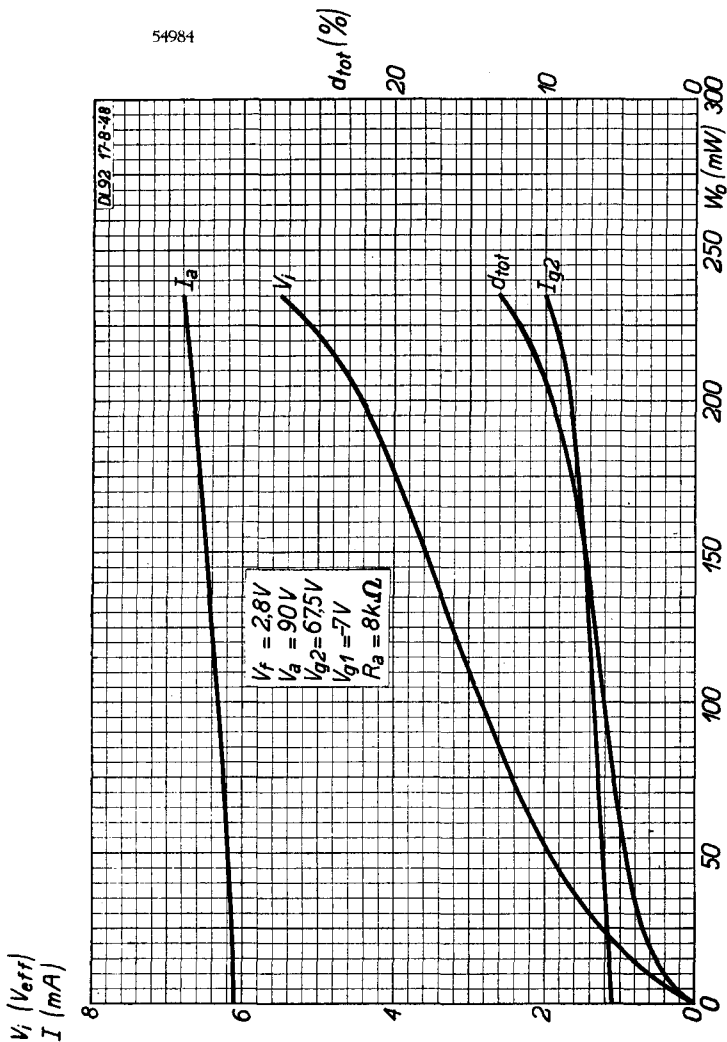






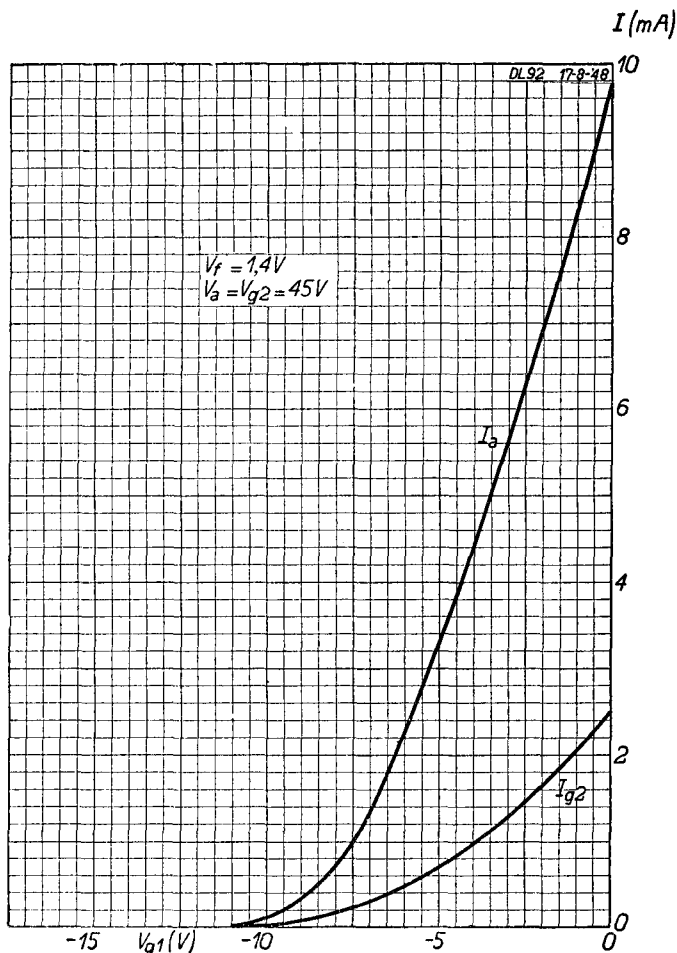
54983

54984

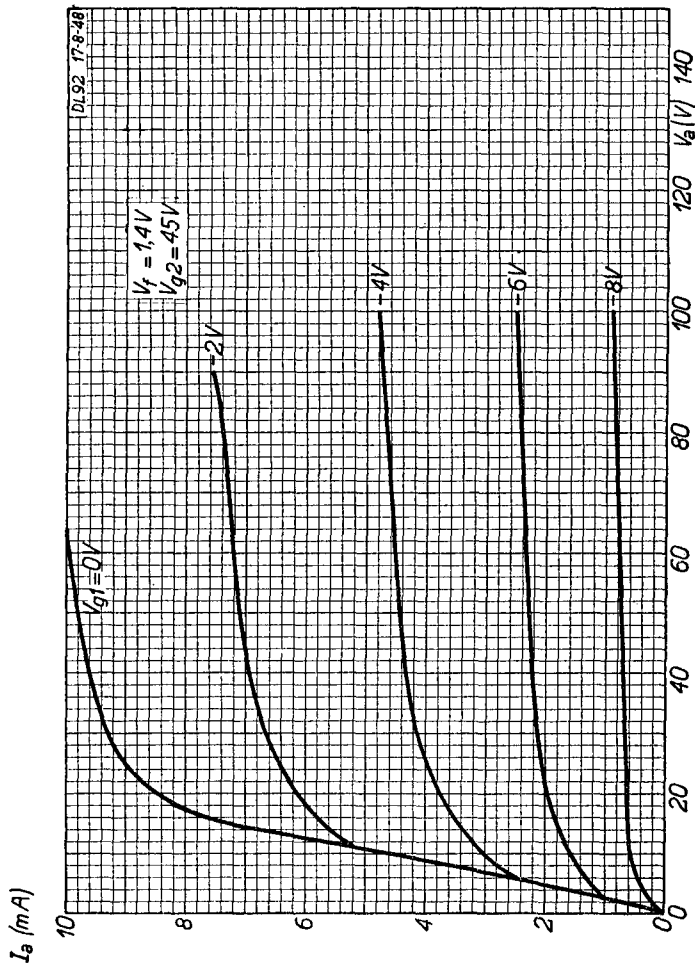


30.8.1948

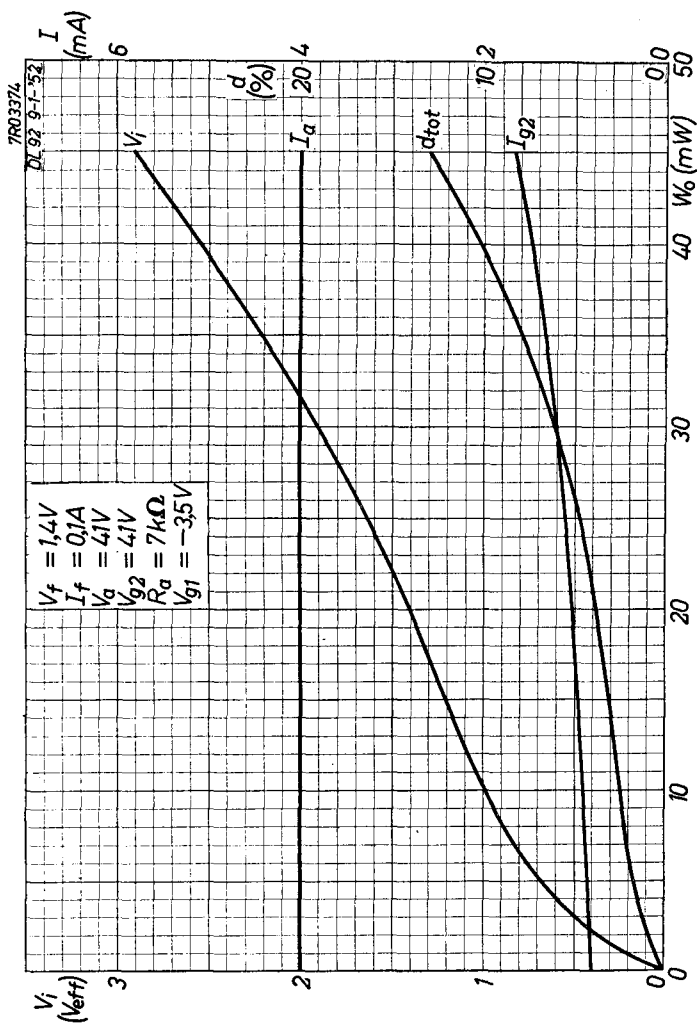
17

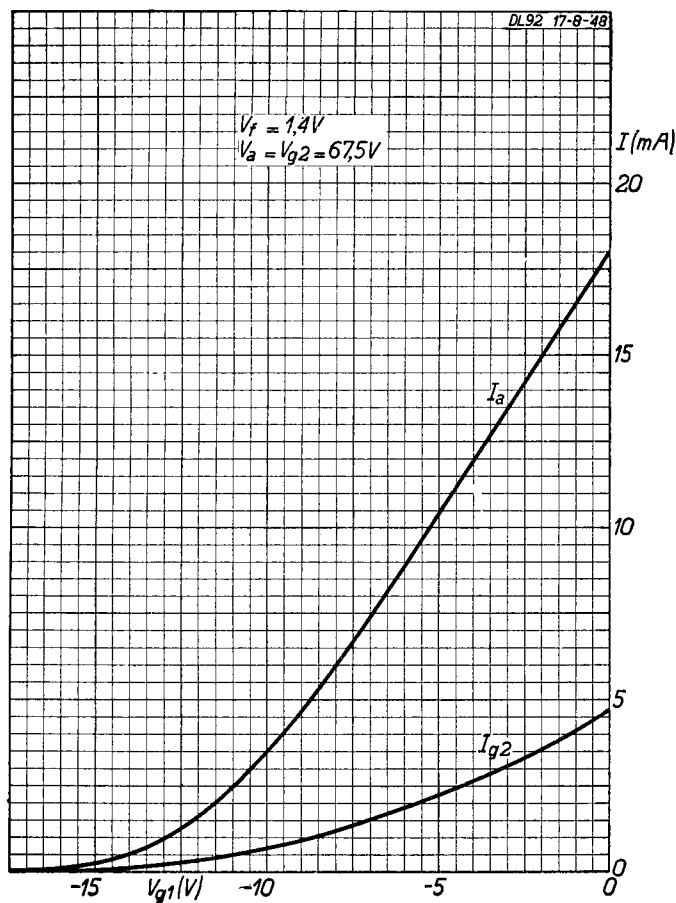


54971

DL 92**PHILIPS**

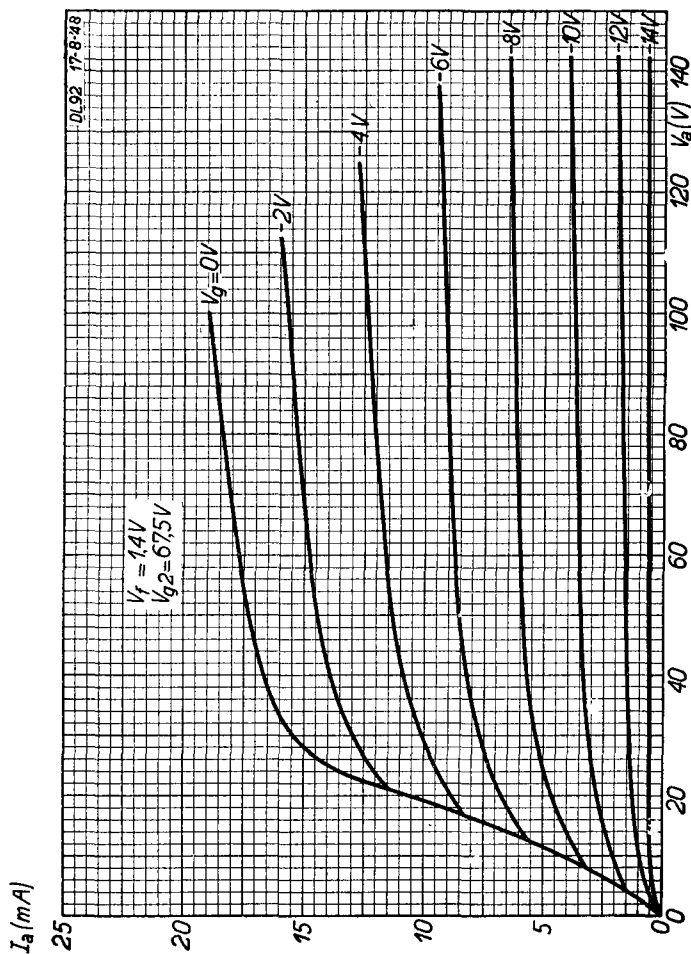
B



DL 92**PHILIPS**

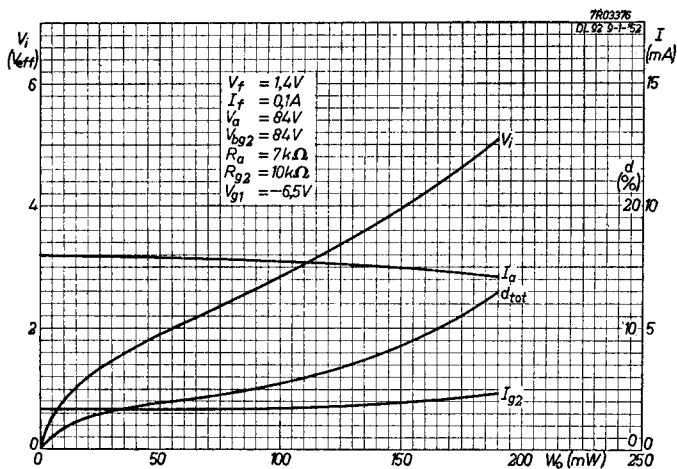
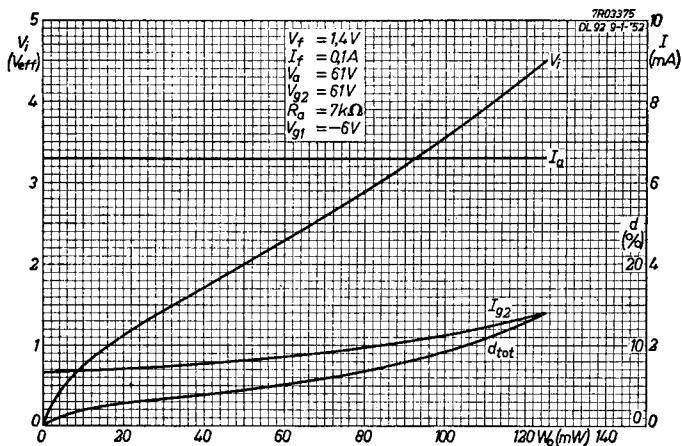
54974

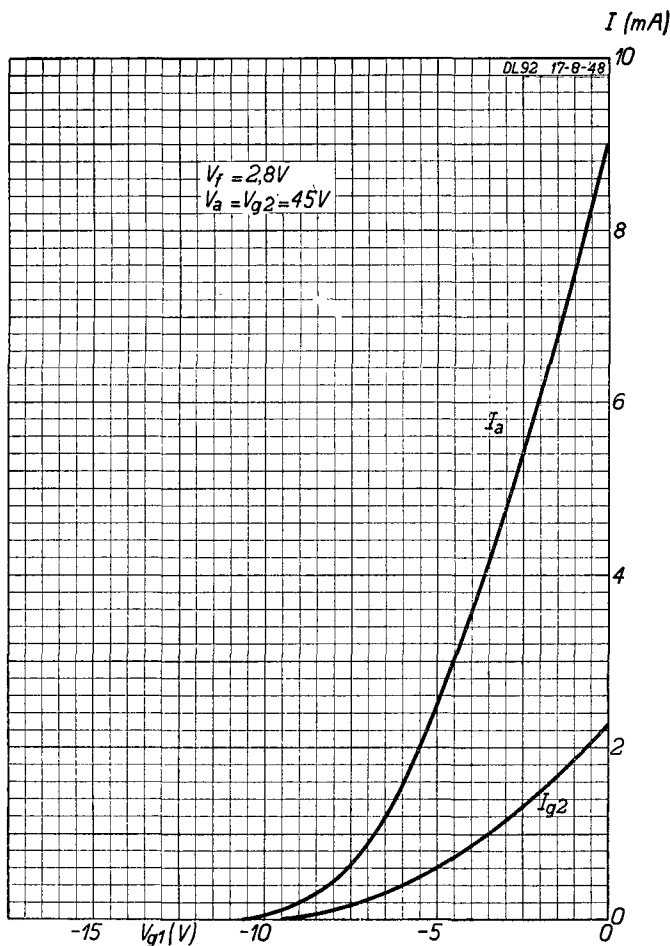
D



DL 92

PHILIPS

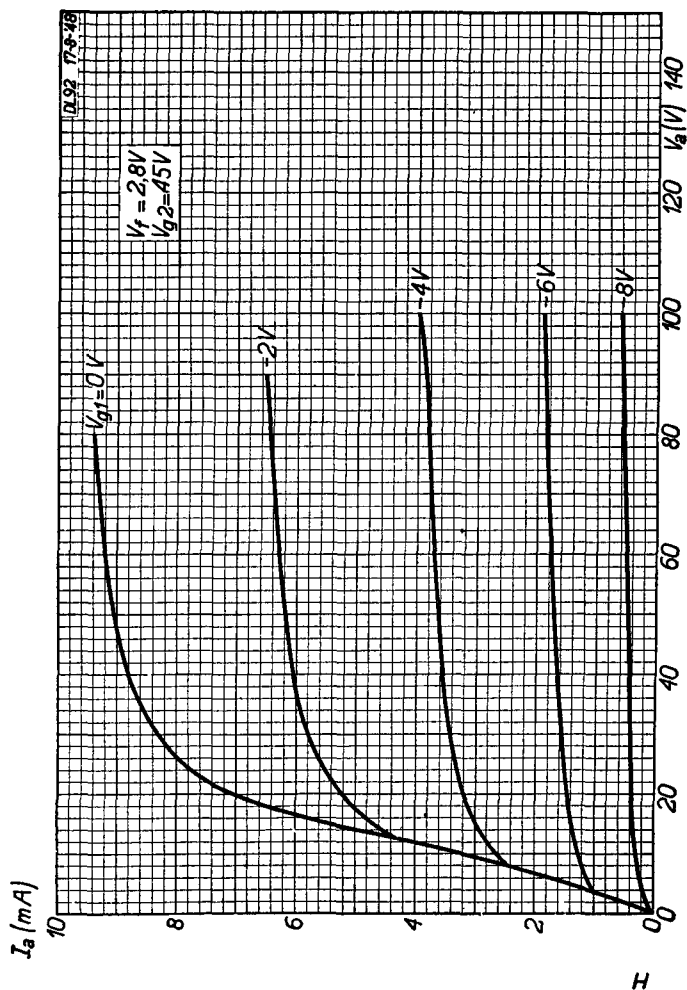




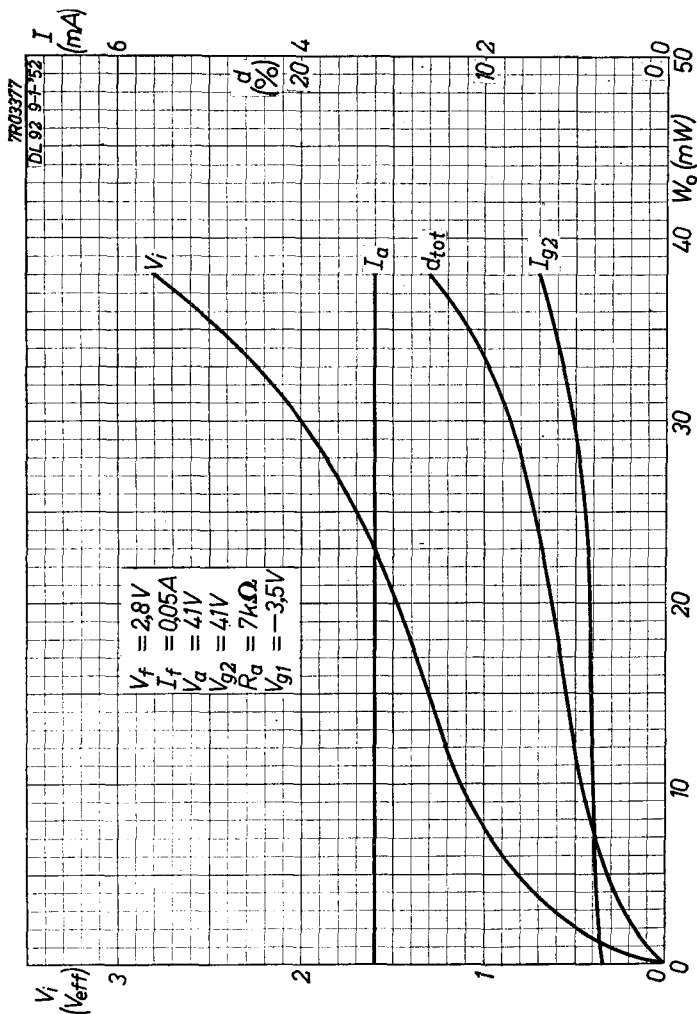
54978

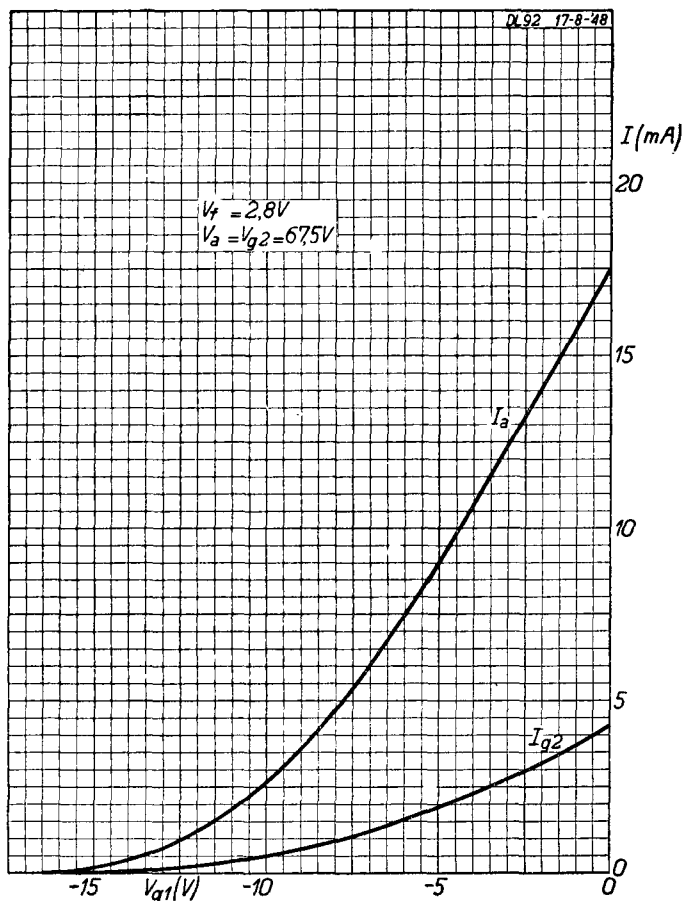
DL 92

PHILIPS

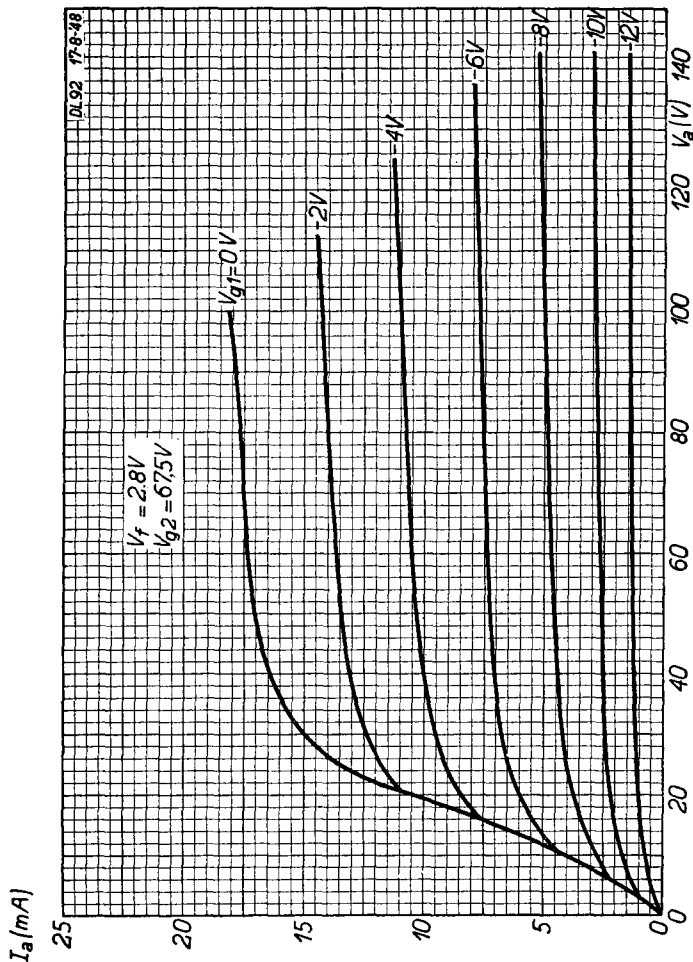


54979



DL 92**PHILIPS**

54981

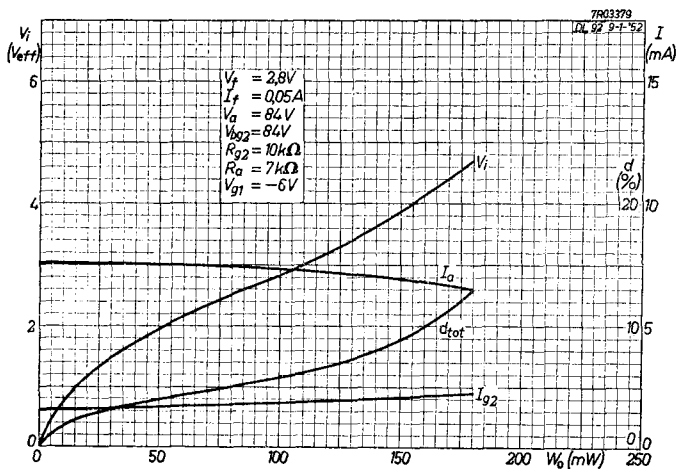
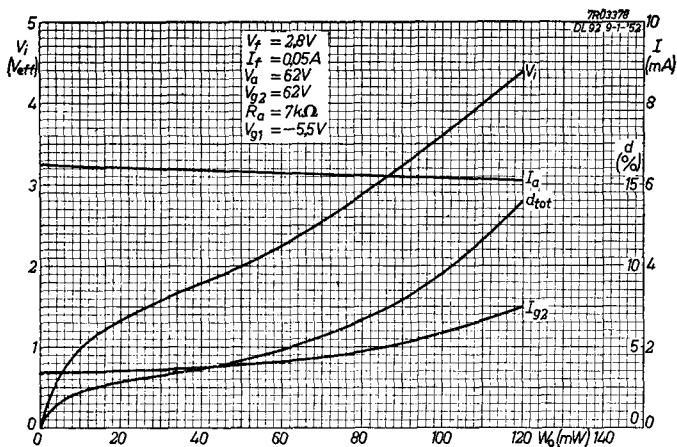


11.11.1953

K

DL 92

PHILIPS





	DL92	
page	sheet	date
1	1	1950.12.12
2	1	1953.11.11
3	2	1950.12.12
4	2	1953.11.11
5	3	1950.12.12
6	3	1953.11.11
7	3	1954.06.06
8	4	1950.12.12
9	4	1953.11.11
10	4	1954.06.06
11	5	1948.08.30
12	6	1948.08.30
13	7	1948.08.30
14	8	1948.08.30
15	9	1948.08.30
16	10	1948.08.30
17	11	1948.08.30
18	12	1948.08.30
19	13	1948.08.30

20	14	1948.08.30
21	15	1948.08.30
22	16	1948.08.30
23	17	1948.08.30
24	A	1953.11.11
25	B	1953.11.11
26	C	1952.04.04
27	D	1952.04.04
28	E	1953.11.11
29	F	1953.11.11
30	G	1953.11.11
31	H	1953.11.11
32	I	1952.04.04
33	J	1952.04.04
34	K	1953.11.11
35	L	1953.11.11
36, 37	FP	1999.08.23