

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

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

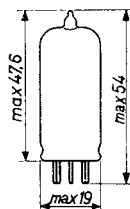
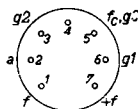
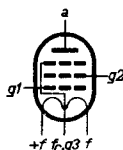
Parallel supply	V_f	=	1,4 V	2,8 V
Alimentation parallèle	I_f	=	50 mA	25 mA
Parallelspeisung				

Pins	
Broches 5-(1+7)	1-7
Stifte	

Series supply	V_f	=	1,3 V	2,6 V
Alimentation série				
Serienspeisung				

Pins	
Broches 5-(1+7)	1-7
Stifte	

Dimensions in mm
Dimensions en mm
Abmessungen in mm

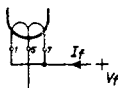


Base, culot, Sockel: MINIATURE

Capacitances
Capacités
Kapazitäten

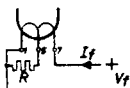
C_{g1}	=	5,0 pF
C_a	=	4,7 pF
C_{ag1}	<	0,4 pF

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



$V_f = 1,4 \text{ V}$
 $I_f = 50 \text{ mA}$
 pins
 broches 5-(1+7)
 Stifte

$V_a^{1)} = 64 \quad 85 \text{ V}$
 $V_{g2}^{1)} = 64 \quad 85 \text{ V}$
 $V_{g1} = -3,3 \quad -5,2 \text{ V}$
 $I_a = 3,5 \quad 5 \text{ mA}$
 $I_{g2} = 0,65 \quad 0,9 \text{ mA}$
 $S = 1,3 \quad 1,4 \text{ mA/V}$
 $\mu_{g2g1} = 7 \quad 7$
 $R_i = 170 \quad 150 \text{ k}\Omega$
 $R_{a\sim} = 15 \quad 13 \text{ k}\Omega$
 $W_o(dt_{ot}=10\%) = 100 \quad 200 \text{ mW}$
 $V_i(dt_{ot}=10\%) = 2,6 \quad 3,5 \text{ V}_{eff}$
 $V_i(W_o=50\text{mW}) = 1,6 \quad 1,5 \text{ V}_{eff}$

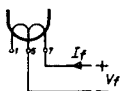
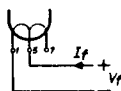


$V_f = 2,8 \text{ V}$
 $I_f = 25 \text{ mA}$
 $R = 680 \Omega$
 pins
 broches 1-7
 Stifte

$V_a^{1)} = 90 \text{ V}$
 $V_{g2}^{1)} = 90 \text{ V}$
 $V_{g1} = -6,3 \text{ V}$
 $R_{a\sim} = 20 \text{ k}\Omega$
 $I_a = 3,7 \text{ mA}$
 $I_{g2} = 0,7 \text{ mA}$
 $W_o(dt_{ot}=10\%) = 150 \text{ mW}$
 $V_i(dt_{ot}=10\%) = 2,8 \text{ V}_{eff}$
 $V_i(W_o=50\text{mW}) = 1,2 \text{ V}_{eff}$

¹⁾ See page 5; voir page 5; siehe Seite 5

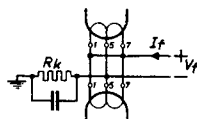
Current saving circuit class A
Montage économisateur classe A
Stromsparschaltung Klasse A



$V_f = 1,4 \text{ V}$
 $I_f = 25 \text{ mA}$
pins or
broches 1-5 ou 5-7
Stifte oder

$V_a^{1)}$	=	64	35 V
$V_{g2}^{1)}$	=	64	85 V
V_{g1}	=	-3,3	-5,2 V
I_a	=	1,75	2,5 mA
I_{g2}	=	0,33	0,45 mA
$R_{a\sim}$	=	30	25 k Ω
$W_o(dt_{ot}=10\%)$	=	50	100 mW
$V_i(dt_{ot}=10\%)$	=	2,6	3,6 V_{eff}
$V_i(W_o=50 \text{ mW})$	=	2,6	2,4 V_{eff}

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



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

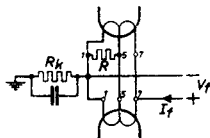
V_b	=	67,5	90	V
$R_k^{2)}$	=	470	560	Ω
$R_{a\sim}$	=	20	20	k Ω
V_i	=	0 1,7 5,7	0 1,5 7,9	V_{eff}
I_a	=	2x2,3 - 2x3,4	2x3,25 - 2x4,75	mA
I_{g2}	=	2x0,43 - 2x0,95	2x0,60 - 2x1,50	mA
W_o	=	- 50 220	- 50 420	mW
dt_{ot}	=	- - 3	- - 4	%

¹⁾²⁾ See page 5; voir page 5; siehe Seite 5

Operating characteristics class AB

Caractéristiques d'utilisation classe AB

Betriebsdaten Klasse AB

Only for battery use; seulement pour opération batterie;
nur für Batteriebetrieb

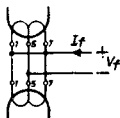
$V_f = 2,8 \text{ V}$
 $I_f = 50 \text{ mA}$
 pins
 broches = 1-7
 Stifte

V_b	=	67,5		90	V			
$R_k^{2)}$	=	470		560	Ω			
R	=	470		330	Ω			
$R_{aa\sim}$	=	20		20	k Ω			
V_i	=	0	2,0	5,6	0	1,5	7,7	V_{eff}
I_a	=	2x1,95	-	2x3,1	2x2,85	-	2x4,4	mA
I_{g2}	=	2x0,36	-	2x0,8	2x0,52	-	2x1,25	mA
W_o	=	-	50	200	-	50	400	mW
dt_{tot}	=	-	-	3,6	-	-	4,0	%

Operating characteristics class B

Caractéristiques d'utilisation classe B

Betriebsdaten Klasse B



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

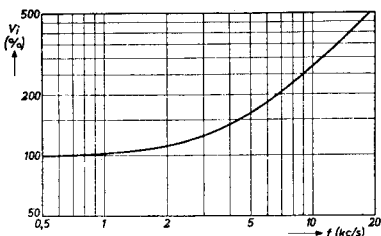
$V_a^1)$	=	61,5		81,5	V			
$V_{g2}^1)$	=	61,5		81,5	V			
V_{g1}	=	-5,8		-8,5	V			
$R_{aa\sim}$	=	20		16	k Ω			
V_i	=	0	2,75	5,7	0	2,8	7,9	V_{eff}
I_a	=	2x0,75	-	2x3,4	2x1,0	-	2x5,0	mA
I_{g2}	=	2x0,14	-	2x0,95	2x0,18	-	2x1,3	mA
W_o	=	-	50	220	-	50	440	mW
dt_{tot}	=	-	-	3	-	-	2,6	%

¹⁾²⁾ See page 5; voir page 5; siehe Seite 5

This tube can be used without special precautions against microphonic effect when the sensitivity for the higher frequencies is decreased according to the figure below.

Ce tube peut être utilisé sans précautions spéciales contre l'effet microphonique quand la sensibilité pour les fréquences plus élevées est diminuée suivant la figure ci-dessous

Diese Röhre darf ohne spezielle Massnahmen gegen Mikrophonie verwendet werden wenn die Empfindlichkeit für die höheren Frequenzen nach untenstehender Abbildung verringert wird.



- 1) Based on a battery voltage of 67.5 or 90 V, reduced by the negative bias

Se basant sur une tension de batterie de 67,5 ou 90 V, diminuée de la polarisation négative

Basiert auf einer Batteriespannung von 67,5 oder 90 V, verringert um die negative Vorspannung

- 2) An additional current of 3,5 mA is fed through R_k , this current being normally drawn by the preceding stages

On a fait circuler un courant supplémentaire de 3,5 mA à travers R_k , ce courant étant normalement consommé par les étages précédents

Ein zusätzlicher Strom von 3,5 mA wird hierbei durch R_k geführt, da dies im allgemeinen mit dem von den vorhergehenden Stufen aufgenommenen Strom übereinstimmt

Limiting values
Caractéristiques limites
Grenzdaten

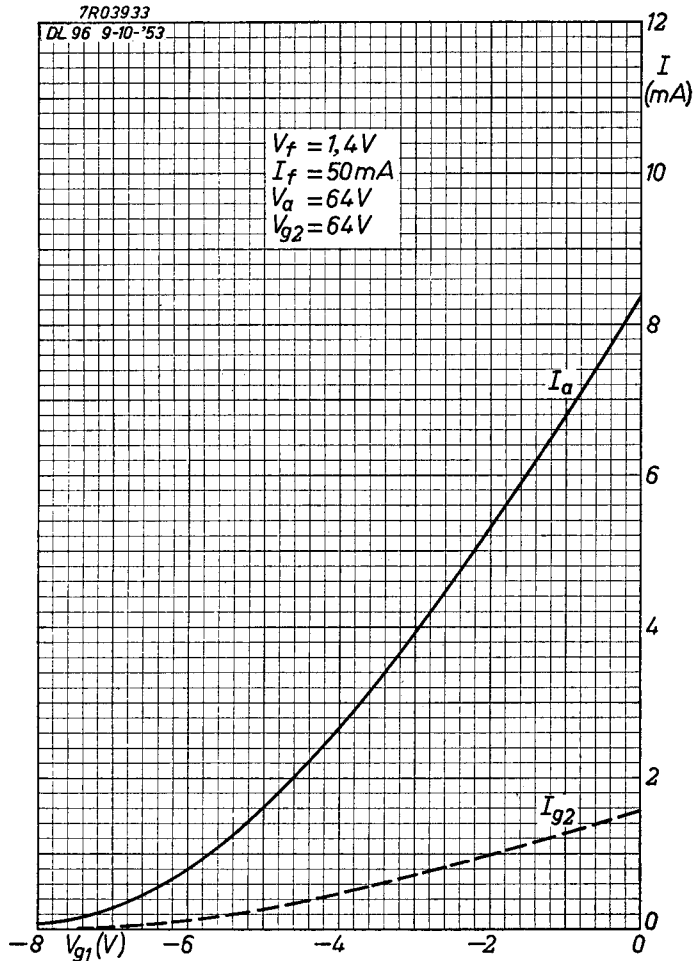
V_b	= max.	90 V
$V_b^{2)}$	= max.	110 V
V_a	= max.	90 V
W_a	= max.	0,6 W
V_{g2}	= max.	90 V
W_{g2}	= max.	0,2 W
V_{g1} ($I_{g1}=+0,3\mu A$)	= max.	0 V
$I_k(\text{pins, broches, Stifte 5-7})$	= max.	3 mA
$I_k(\text{pins, broches, Stifte 5-(1+7)})$	= max.	6 mA
$I_k(\text{pins, broches, Stifte 1-7})$	= max.	4,5 mA
R_{g1}	= max.	2 M Ω

²⁾ Absolute value; valeur absolue; Absolutwert

7R03933

DL 96 9-10-'53

$V_f = 1,4V$
 $I_f = 50mA$
 $V_a = 64V$
 $V_{g2} = 64V$



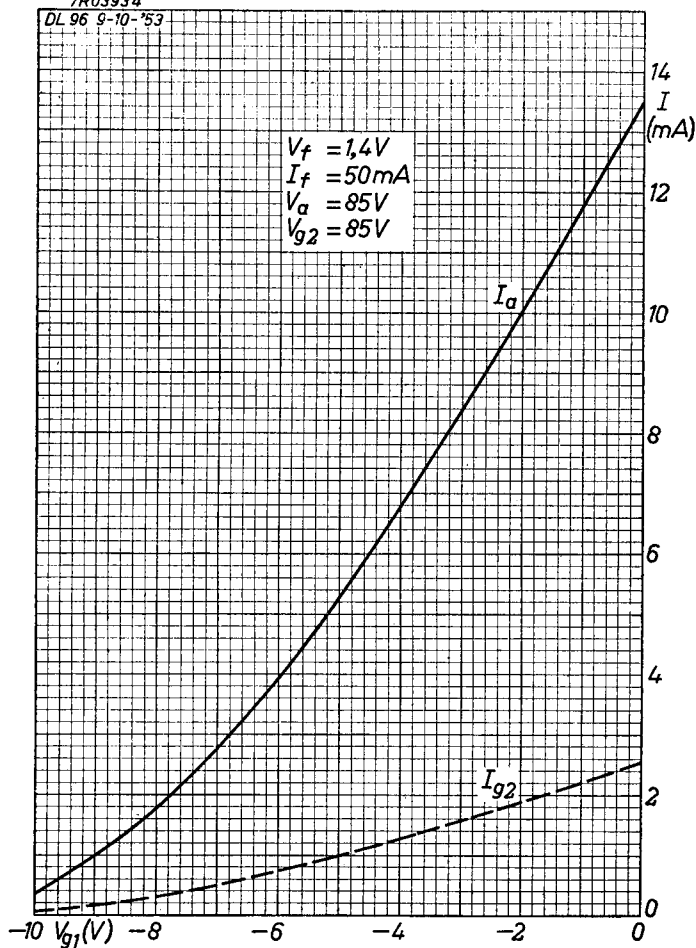
10.10.1953

A

DL 96**PHILIPS**

7R03934

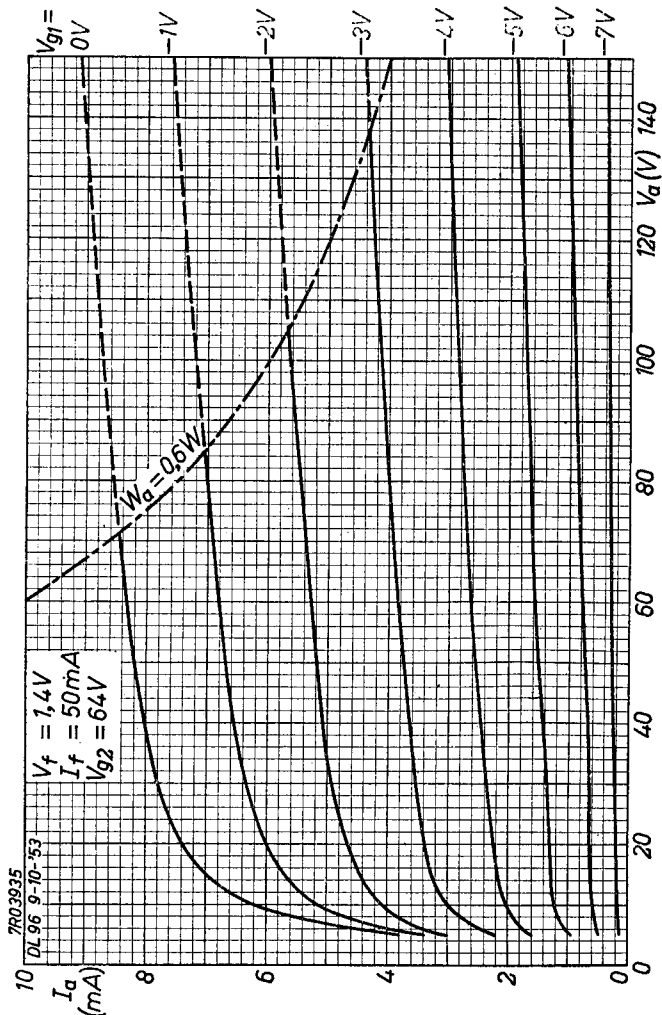
DL 96 9-10-'53



B

PHILIPS

DL96

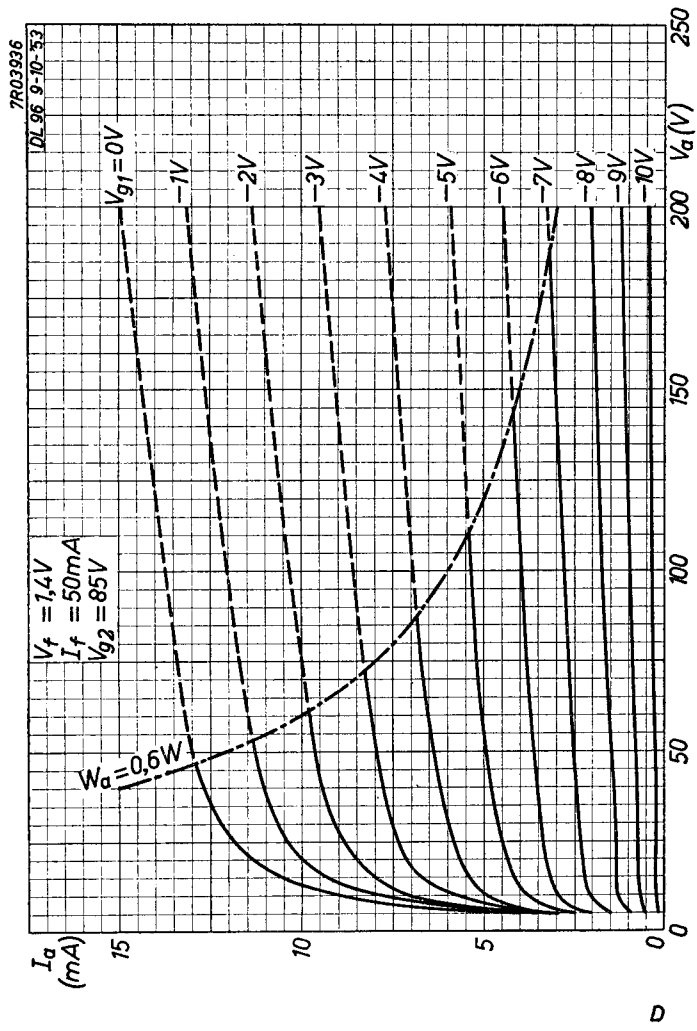


10.10.1953

c

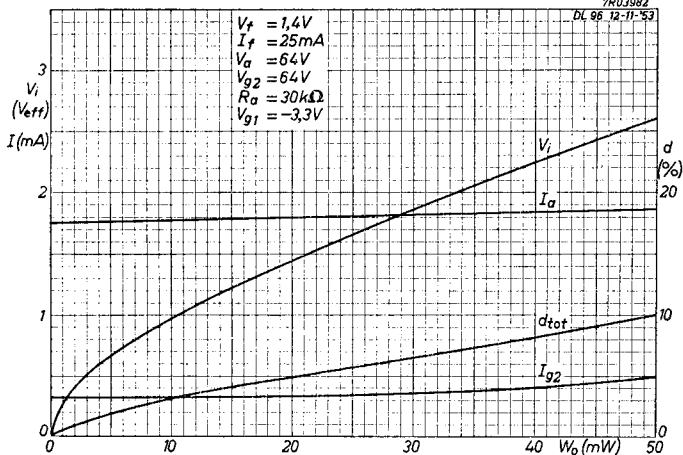
DL 96

PHILIPS



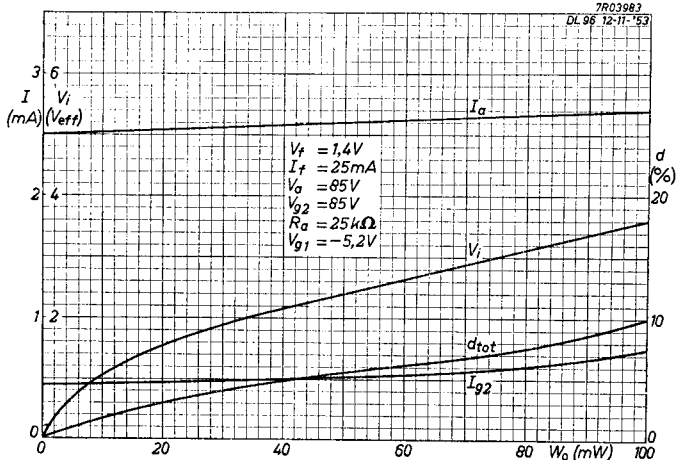
7R03982

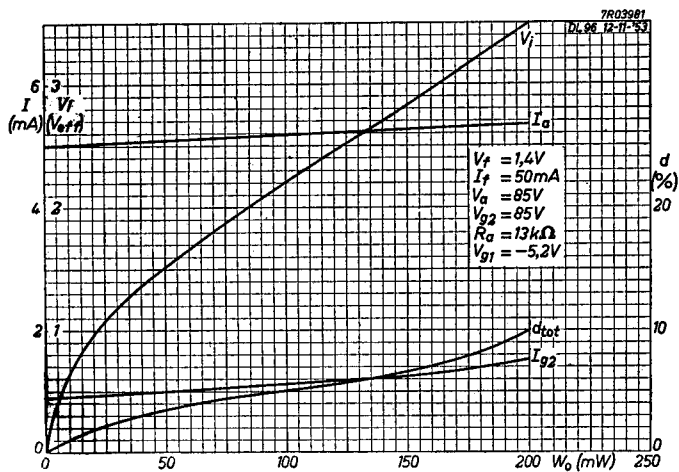
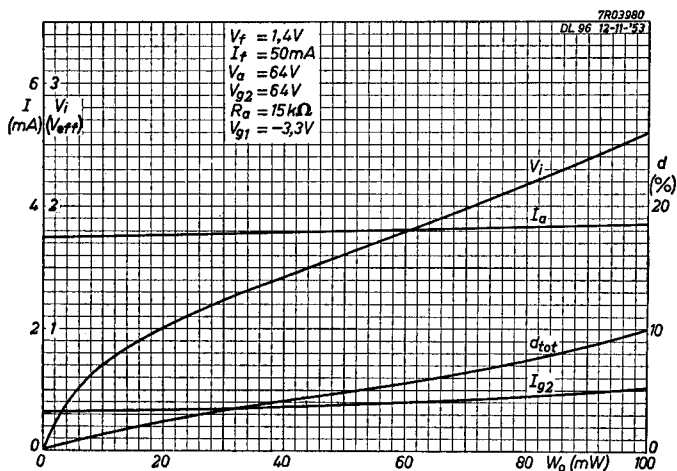
DL 96 12-11-'53



7R03983

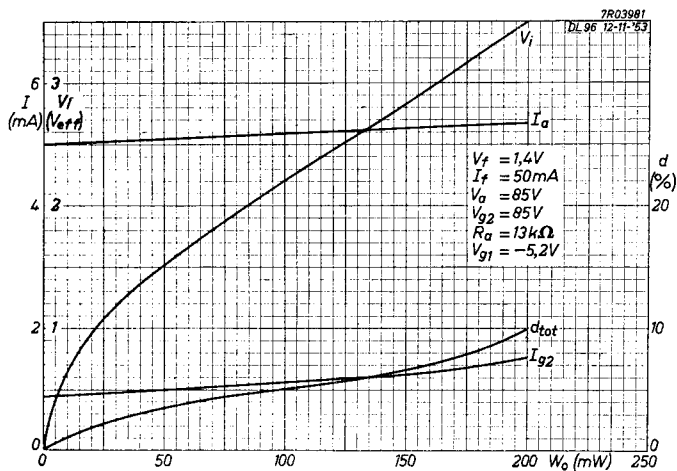
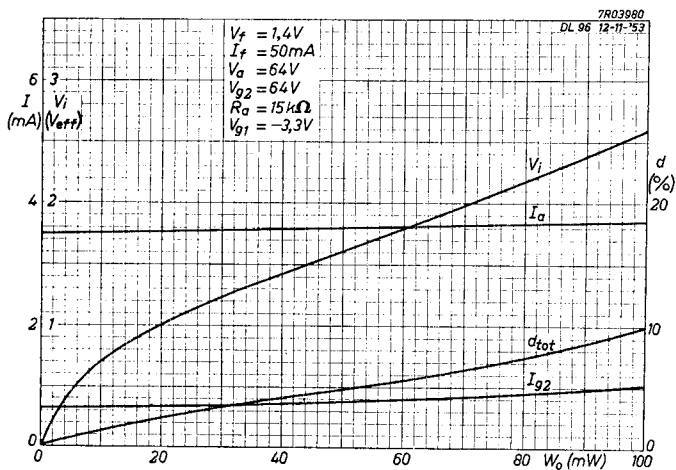
DL 96 12-11-'53

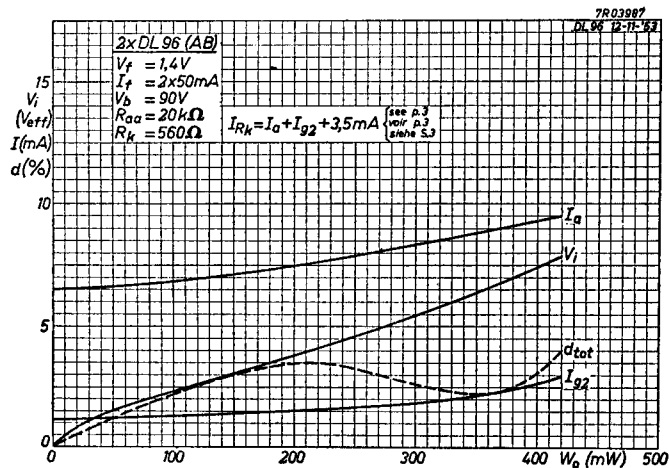
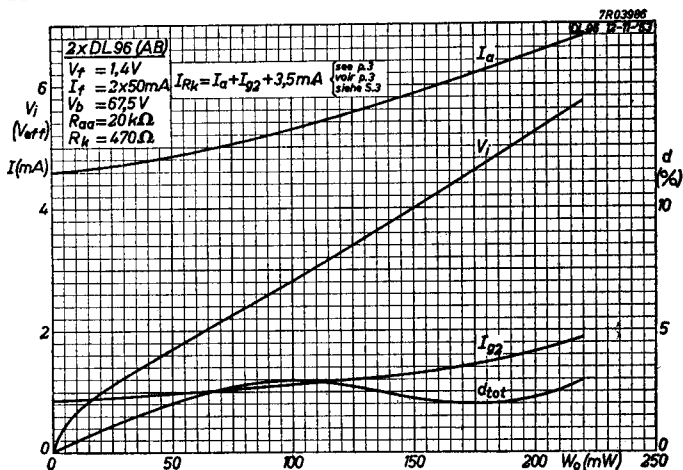




DL 96

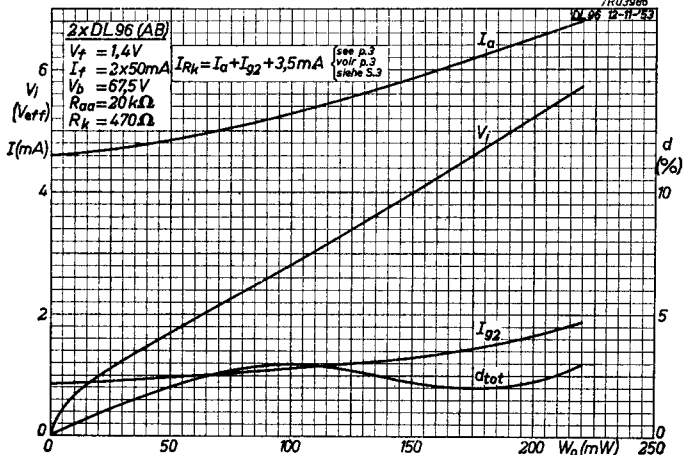
PHILIPS



DL 96**PHILIPS**

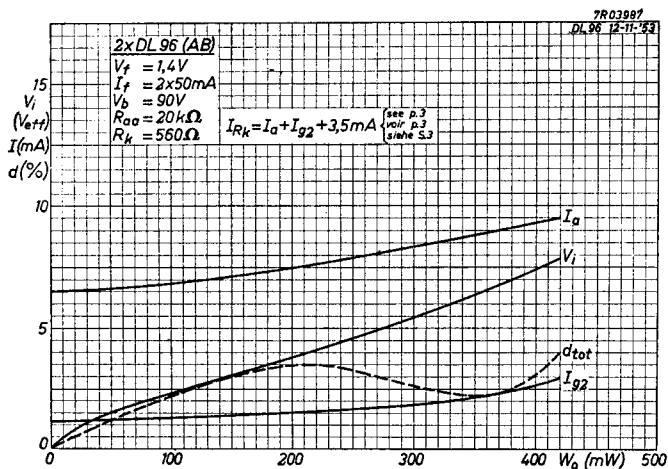
7R03986

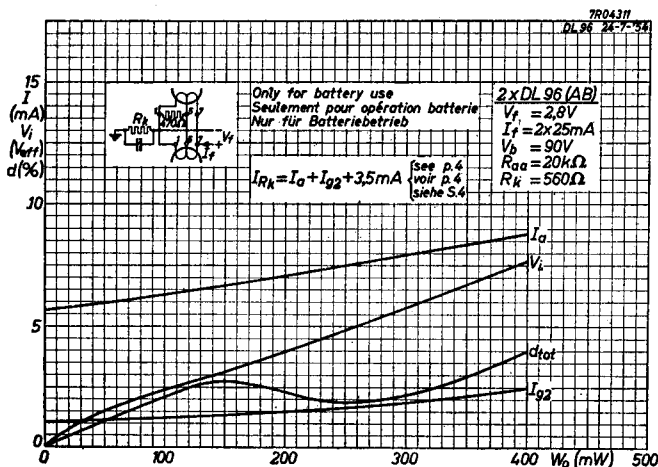
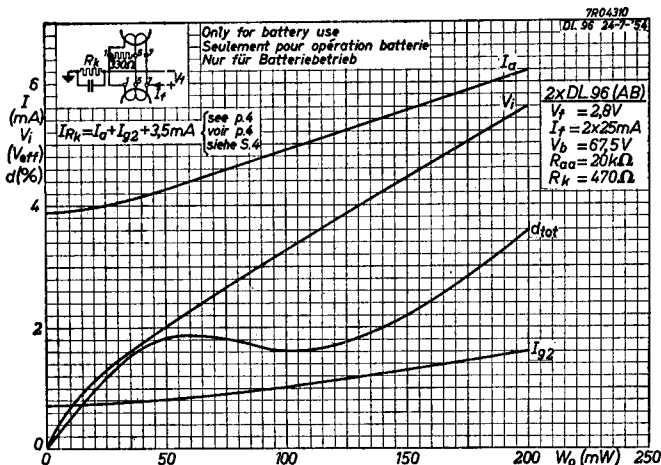
DL 96 12-11-53

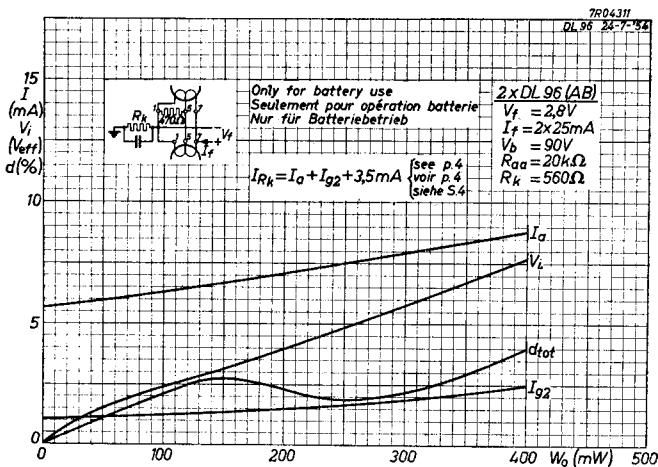
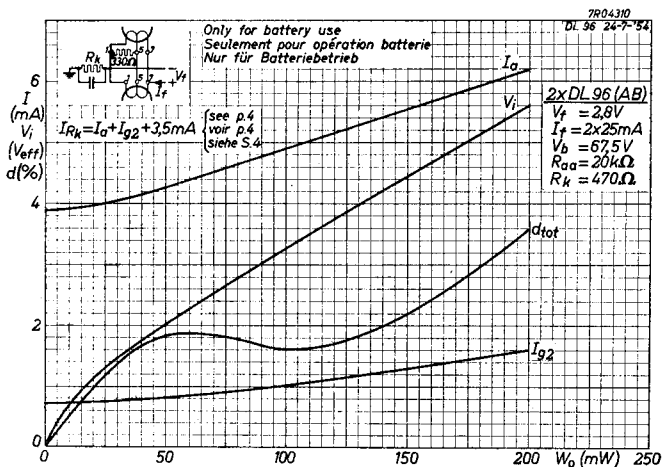


7R03997

DL 96 12-11-53





DL 96**PHILIPS**

DL 96**PHILIPS**