PENTODE for use as H.F. and L.F. amplifier
PENTHODE pour utilisation en amplificatrice H.F. et B.F.
PENTODE zur Verwendung als H.F. und N.F. Verstärker

Cathode : oxide-coated
Cathode : oxyde
Kathode : Oxyd

Heating : indirect — V_f = 12,6 V
Chauffage: indirect — I_f = 1,35 A
Heizung : indirekt

Capacitances
Capacités
Kapazitäten

C_a = 11 pF
C_{g1} = 20,5 pF ←
C_{ag1} = 0,1 pF

Typical characteristics
Caractéristiques types
Kenndaten

μ_{g2g1} = 6,7
S (I_a=40 mA) = 6 mA/V

λ	Freq.	C telegr.		B teleph.	
m	Mc/s	V_a (V)	W_o (W)	V_a (V)	W_o (W)
>5	<60	1000	132	1000	23
		800	107	800	23
		600	78	600	23
		C_{ag2} mod.		C_{g3} mod.	
>5	<60	800	75	1000	27
		600	51	800	26
				600	22

B mod.[1])

V_a (V)	W_o (W)
1000	194
800	110
600	82

Limiting values
Caractéristiques limites
Grenzdaten

V_a = max. 1000 V
W_a = max. 45 W
V_{g2} = max. 300 V
W_{g2} = max. 7 W
W_{g1} = max. 0,5 W

R_{g3} = max. 50 kΩ
R_{g1} = max. 25 kΩ[2])
R_{g1} = max. 50 kΩ[3])
I_k = max. 240 mA
I_{kp} = max. 1,5 A
V_{kf} = max. 100 V

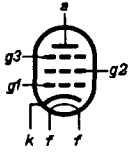
[1]) Two valves; deux tubes; zwei Röhren

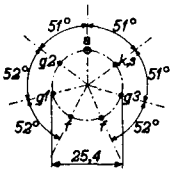
[2]) With fixed grid bias; à polarisation fixe; mit fester Gittervorspannung

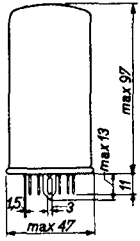
[3]) With automatic grid bias; à polarisation automatique; mit automatischer Gittervorspannung

PHILIPS

Dimensions in mm
Dimensions en mm
Abmessungen in mm







Base, culot, Sockel: Septar

Socket
Support 40202
Fassung

Mounting position: arbitrary
Montage : arbitrairement
Aufstellung : willkürlich

Net weight
Poids net 80 g
Nettogewicht

Shipping weight
Poids brut 125 g
Bruttogewicht

Operating conditions H.F. class C telegraphy
Caractéristiques d'utilisation H.F. classe C télégraphie
Betriebsdaten H.F. Klasse C Telegraphie

λ	=	>5	>5	>5	m
V_a	=	1000	800	600	V
V_{g1}	=	-120	-110	-100	V
V_{g2}	=	250	250	250	V
V_{g3}	=	0	0	0	V
I_a	=	177	190	205	mA
I_{g1}	=	5	6	7,5	mA
I_{g2}	=	28	28	28	mA
V_{g1p}	=	144	134	124	V
W_{ig1}	=	0,65	0,73	0,84	W
W_{g2}	=	7	7	7	W
W_{ia}	=	177	152	123	W
W_a	=	45	45	45	W
W_o	=	132	107	78	W
η	=	74,5	70,5	63,5	%

Operating conditions H.F. class B telephony
Caractéristiques d'utilisation H.F. classe B téléphonie
Betriebsdaten H.F. Klasse B Telephonie

λ	=	>5	>5	>5	m
V_a	=	1000	800	600	V
V_{g1}	=	-34	-33	-30,5	V
V_{g2}	=	250	250	250	V
V_{g3}	=	0	0	0	V
I_a	=	68	85	114	mA
I_{g2}	=	4,5	6	7,5	mA
V_{g1p}	=	20,5	22,5	26,5	V
W_{g2}	=	1,15	1,5	1,9	W
W_{ia}	=	68	68	68,4	W
W_a	=	45	45	45	W
W_o	=	23	23	23,4	W
η	=	34	34	34	%
m	=	100	100	100	%
I_{g1}	=	2	4	8	mA
W_{ig1}	=	0,08	0,17	0,38	W

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Operating conditions H.F. class C
Caractéristiques d'utilisation H.F. classe C
Betriebsdaten HF- Klasse C

		anode and screen grid modulation modulation d'anode et de grille-écran Anoden- und Schirmgitter-modulation		suppressor grid modulation modulation de grille d'arrêt Fanggittermodulation	
λ	=	>5	>5	>5	m
V_a	=	800	600	1000	V
V_{g1}	=	-120	-120	-100	V
V_{g2}	=	250	250	150	V
V_{g3}	=	0	0	-100	V
I_a	=	120	120	72	mA
I_{g1}	=	6,5	6,5	10	mA
I_{g2}	=	23	23	24	mA
V_{g1p}	=	150	150	140	V
W_{ig1}	=	0,9	0,9	1,3	W
W_{g2}	=	5,8	5,8	3,6	W
W_{ia}	=	96	72	72	W
W_a	=	21	21	45	W
W_o	=	75	51	27	W
η	=	78	71	37,5	%
m	=	100	100	100	%
V_{g2p}	=	250	250	-	V
V_{g3p}	=	-	-	100	V
W_{mod}	=	48	36	0	W

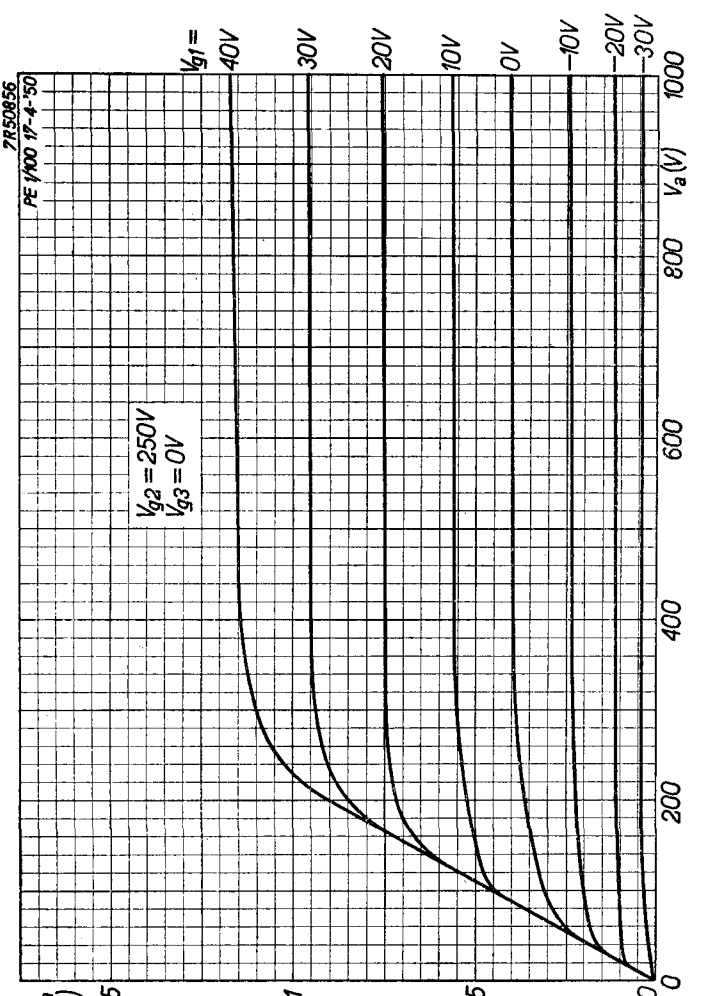
Operating conditions as L.F. class B amplifier and modulator, two valves
Caractéristiques d'utilisation comme amplificatrice et modulatrice B.F. classe B, deux tubes
Betriebsdaten als N.F. Verstärker und Modulator Klasse B, zwei Röhren

V_a	=	1000		800		V
V_{g1}	=	-34		-33,5		V
V_{g2}	=	250		250		V
V_{g3}	=	0		0		V
R_{aa}	=	8800		7560		Ω
V_{g1g1p}	=	0	84	0	68	V
I_a	=	2x26	2x134	2x28	2x108	mA
I_{g1}	=	0	2x0,8	0	0	mA
I_{g2}	=	2x5	2x28	2x8	2x27	mA
W_{ig1}	=	0	2x0,03	0	0	W
W_{g2}	=	2x1,3	2x7	2x2	2x6,8	W
W_{ia}	=	2x26	2x134	2x22,4	2x86,4	W
W_a	=	2x26	2x37	2x22,4	2x31,4	W
W_o	=	0	194	0	110	W
d_{tot}	=	-	5	-	4,5	%
η	=	-	72	-	63,5	%

V_a	=	600		V
V_{g1}	=	-33		V
V_{g2}	=	250		V
V_{g3}	=	0		V
R_{aa}	=	6320		Ω
V_{g1g1p}	=	0	66	V
I_a	=	2x28	2x102	mA
I_{g1}	=	0	0	mA
I_{g2}	=	2x11	2x28	mA
W_{ig1}	=	0	0	W
W_{g2}	=	2x2,8	2x7	W
W_{ia}	=	2x16,8	2x61,2	W
W_a	=	2x16,8	2x20,2	W
W_o	=	0	82	W
d_{tot}	=	-	3,3	%
η	=	-	67	%

PHILIPS

PE 1/100



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A

PE 1/100

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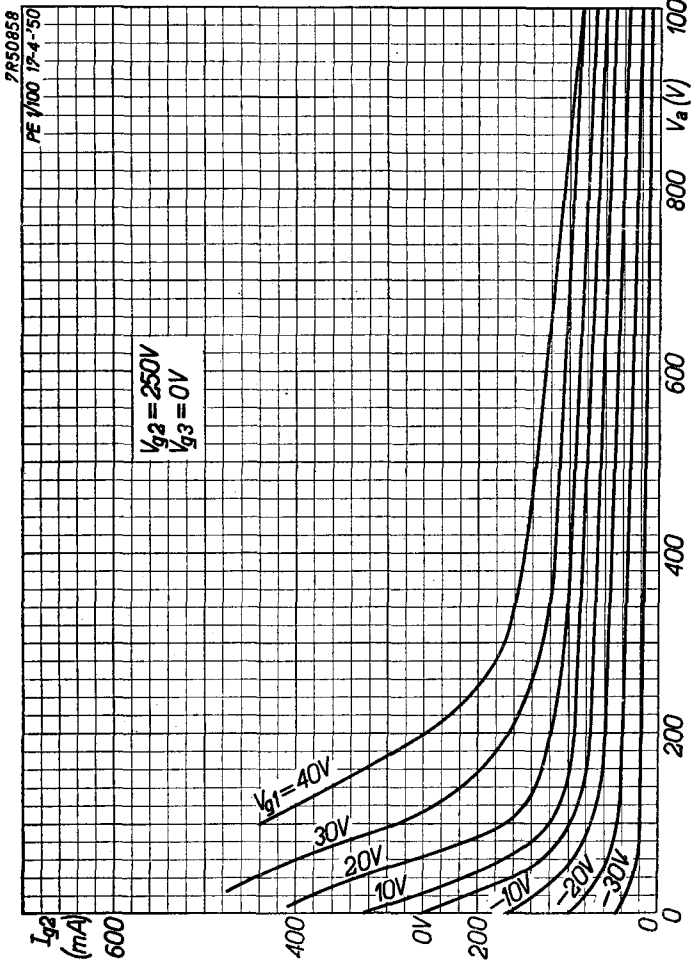
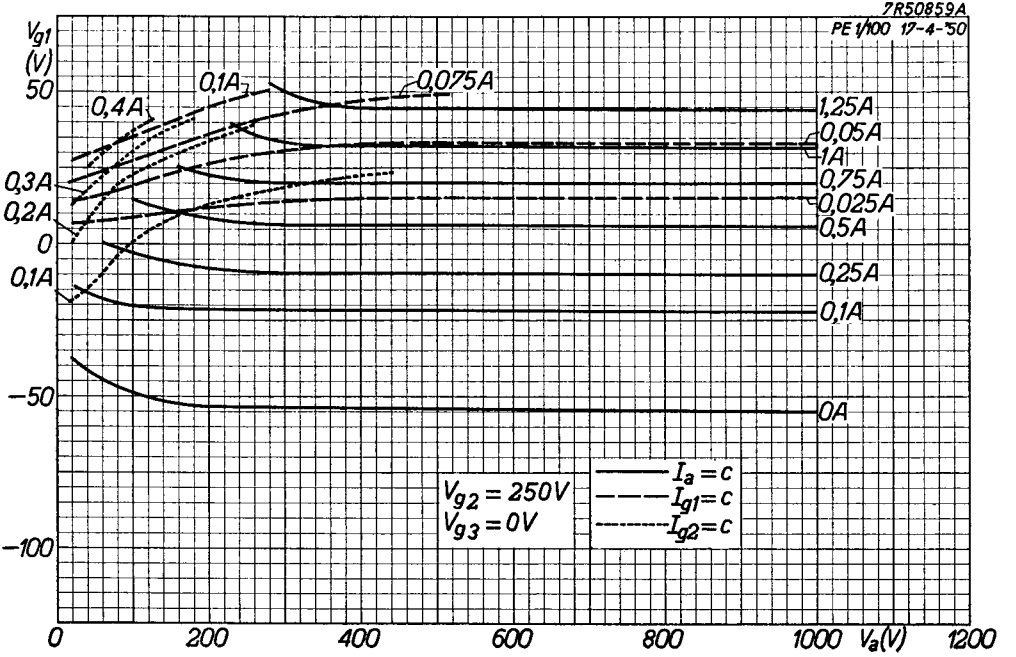
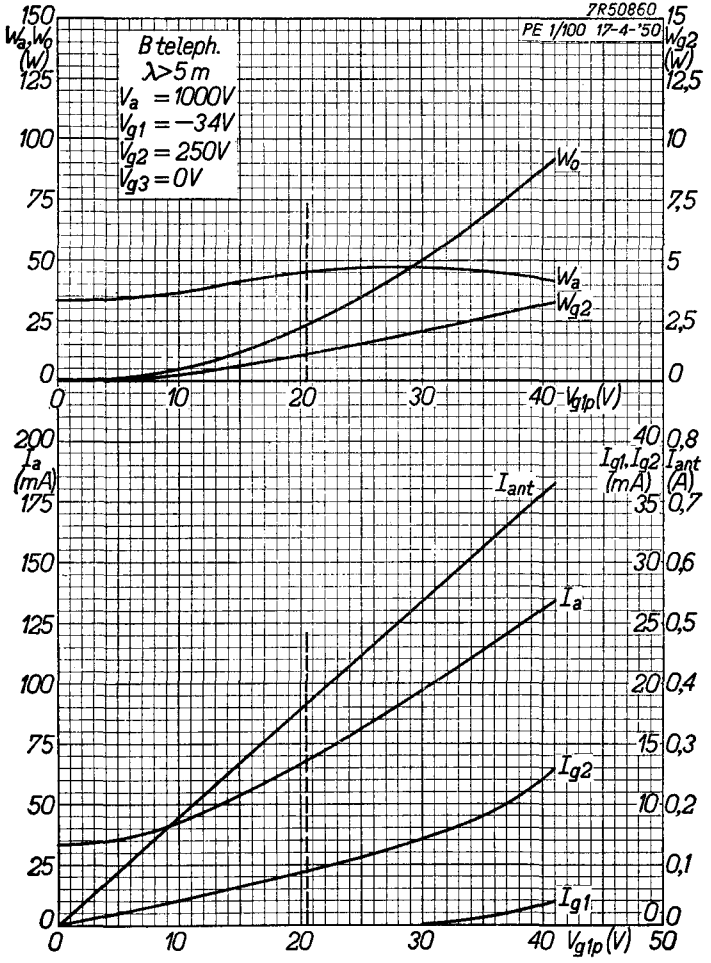

7R50858
PE 1/100 17-4-'50
V_{g2} = 250V
V_{g3} = 0V
V_{g1} = 40V
30V
20V
10V
0V
-10V
-20V
-30V
I_{g2} (mA)
600
400
200
0
V_a (V)
0
200
400
600
800
1000


7R50859A
PE 1/100 17-4-50
V_{g1} (V)
50
0,4A
0,1A
0,075A
1,25A
0,05A
1A
0,3A
0,75A
0,2A
0,025A
0
0,5A
0,1A
0,25A
0,1A
−50
0A
−100
$V_{g2} = 250V$
$V_{g3} = 0V$
$I_a = c$
$I_{g1} = c$
$I_{g2} = c$
0
200
400
600
800
1000
V_a(V)
1200

PHILIPS

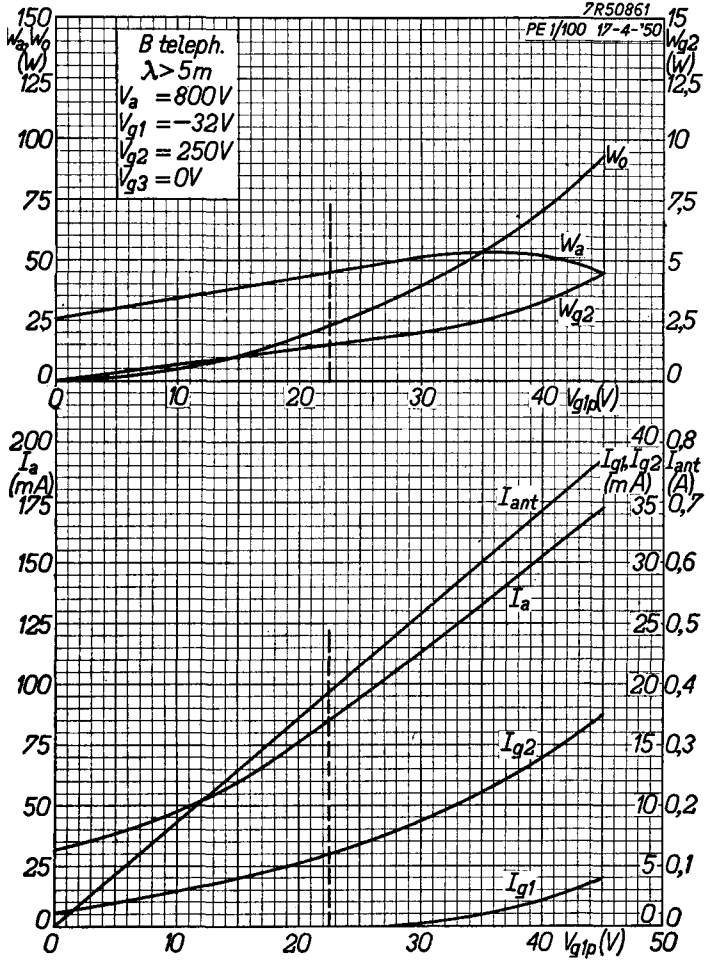

7R50860
PE 1/100 17-4-'50
B teleph.
λ>5 m
Va = 1000V
Vg1 = −34V
Vg2 = 250V
Vg3 = 0V
Wa, Wo (W)
Wg2 (W)
Wo
Wa
Wg2
Vg1p (V)
Ia (mA)
Ig1, Ig2 (mA)
Iant (A)
Iant
Ia
Ig2
Ig1

7.7.1954

E

PHILIPS

PE 1/100



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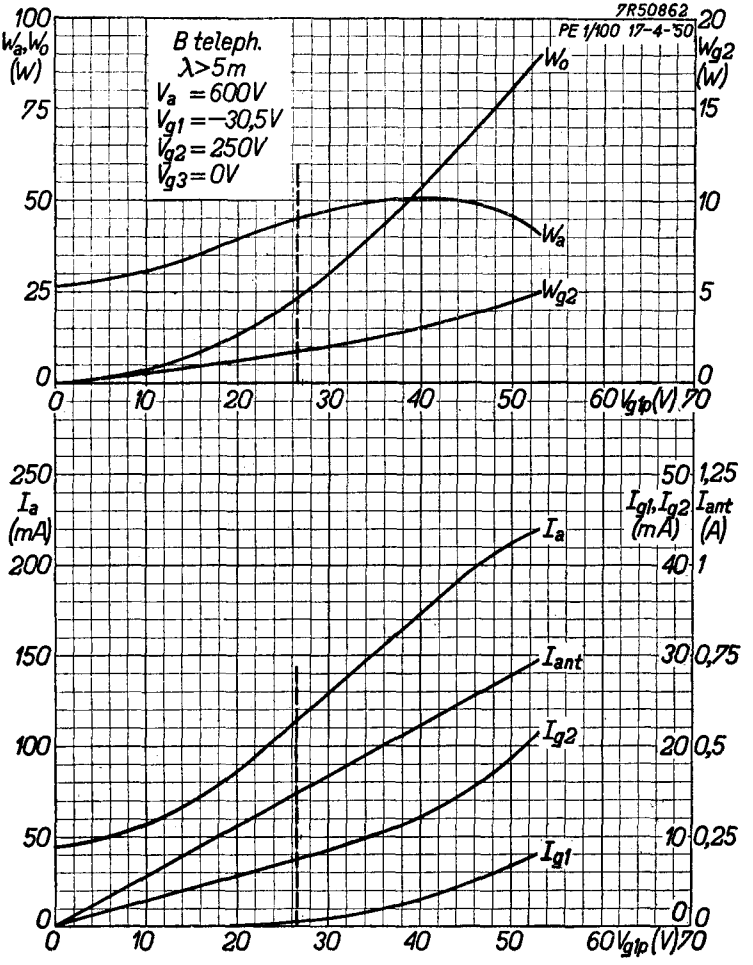
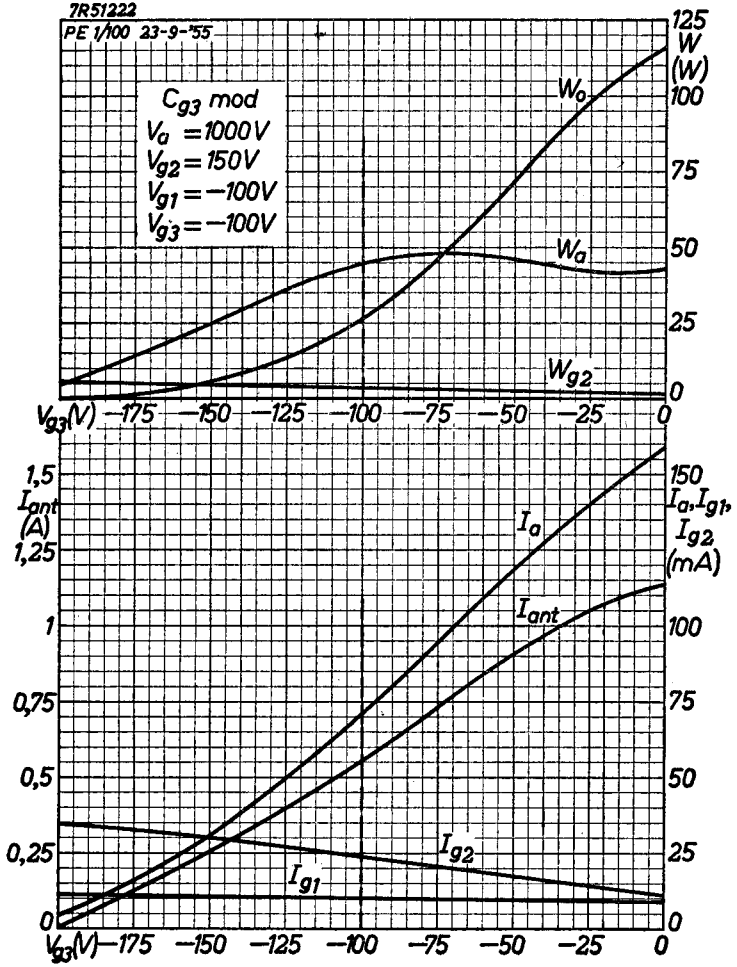

7R50862
PE 1/100 17-4-50
B teleph.
λ>5m
Va = 600V
Vg1 = −30,5V
Vg2 = 250V
Vg3 = 0V
Wa, Wo (W)
Wg2 (W)
Wo
Wa
Wg2
Vg1p (V)
Ia (mA)
Ig1, Ig2 (mA)
Iant (A)
Ia
Iant
Ig2
Ig1

PE 1/100

PHILIPS



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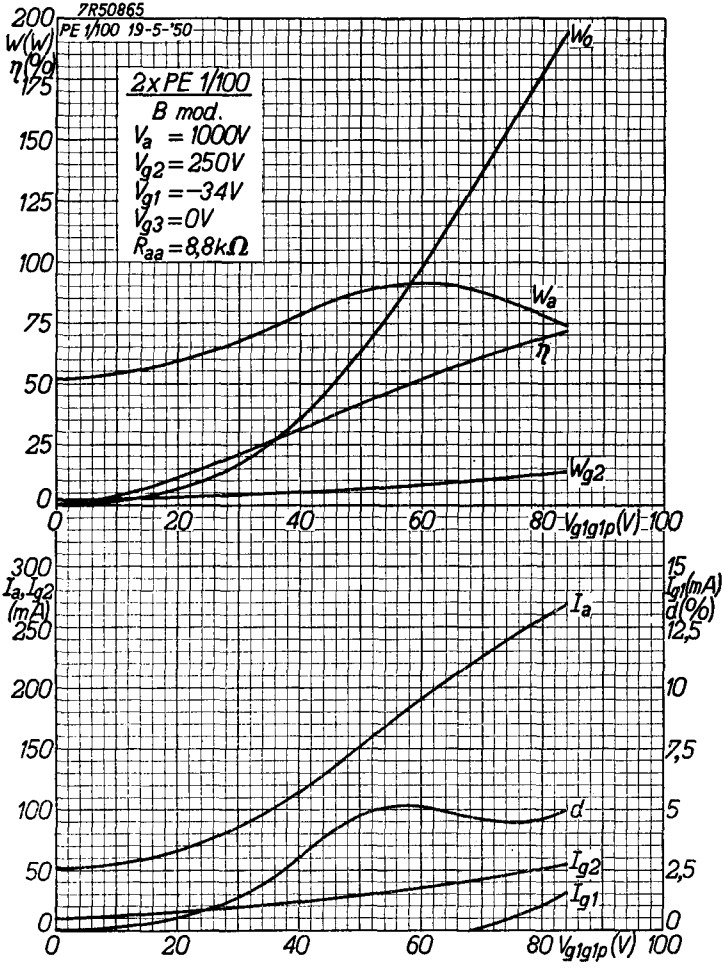
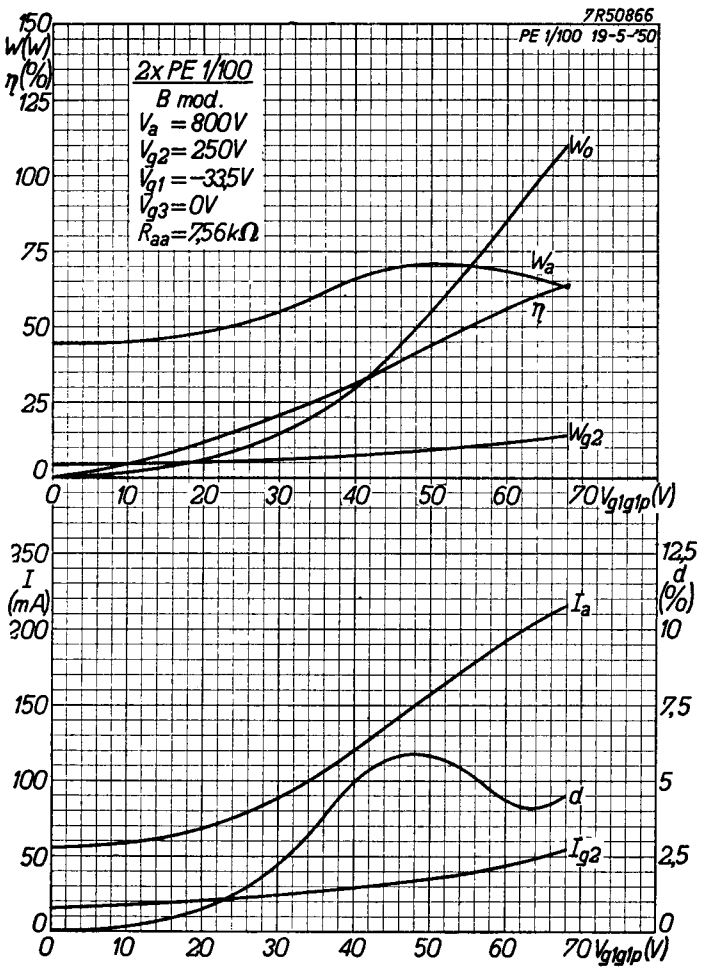

7R50865
PE 1/100 19-5-'50
2x PE 1/100
B mod.
V_a = 1000V
V_{g2} = 250V
V_{g1} = −34V
V_{g3} = 0V
R_{aa} = 8,8kΩ
W_o
W_a
η
W_{g2}
W(W) η(%)
200
175
150
125
100
75
50
25
0
0
20
40
60
80
V_{g1g1p}(V)
100
I_a, I_{g2} (mA)
300
250
200
150
100
50
0
I_{g1}(mA) d(%)
15
12,5
10
7,5
5
2,5
0
I_a
d
I_{g2}
I_{g1}

PE 1/100

PHILIPS



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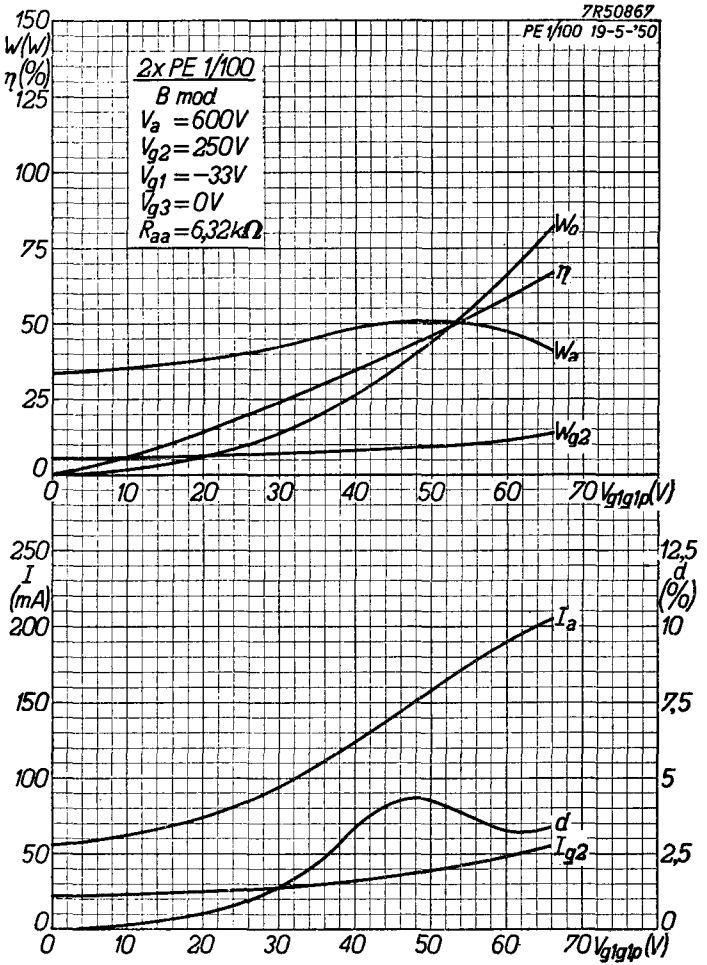
7R50867
PE 1/100 19-5-'50
2x PE 1/100
B mod
V_a = 600V
V_{g2} = 250V
V_{g1} = −33V
V_{g3} = 0V
R_{aa} = 6,32kΩ
W(W)
η(%)
W_o
η
W_a
W_{g2}
V_{g1g1p}(V)
I (mA)
d (%)
I_a
d
I_{g2}
V_{g1g1p}(V)

PE1/100

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5	5	1954.07.07
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