PENTODE for use as H.F. amplifier
PENTHODE pour utilisation comme amplificatrice H.F.
PENTHODE zur Verwendung als H.F. Verstärker

Filament : thoriated tungsten
Filament : tungstène thorié
Heizfaden: thoriertes Wolfram

Heating : direct
Chauffage: direct
Heizung : direkt

Vf = 12 V
If = 7,3 A

Capacitances
Capacités
Kapazitäten

Ca = 20 pF
Cg1 = 23 pF
Cag1 = 0,2 pF

Typical characteristics
Caractéristiques typiques
Kenndaten

$\mu g2g1$ = 6,2
S (Ia=120 mA)= 6 mA/V

λ	Freq.	C telegr		B teleph.		Cag2 mod.		Cg3 mod.	
m	Mc/s	Va (V)	Wo (W)	Va (V)	Wo (W)	Va (V)	Wo (W)	Va (V)	Wo (W)
>30	<10	2500	600			2000	325		
>15	<20	2000	550	2000	90	1800	290	2000	100
5[1])	60 [1])	1500	625	1500	100	1200	350	1500	90

Limiting values
Caractéristiques limites
Grenzdaten

Va = max. 2500 V
Wa = max. 250 W
Vg2 = max. 500 V
Wg2 = max. 60 W

R_{g3} = max. 40 kΩ ←
Wg1 = max. 20 W
Rg1 = max. 40 kΩ
Ik = max. 600 mA
Ikp = max. 2400 mA

temperature of pin seals
température des points de scellement des broches
Temperatur der Stiftenverschlüsse
= max. 200 °C

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

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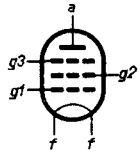
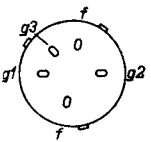
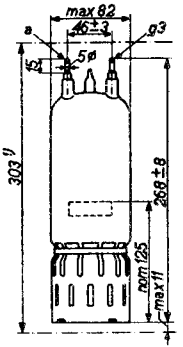
Dimensions in mm
Dimensions en mm
Abmessungen in mm







Socket
Support
Fassung 40200

Clips
Bornes de connexion 40600
Anschlussklemmen

Mounting position : vertical with base up[2]) or down
Montage : vertical avec culot en haut[2]) ou en bas
Einbau : senkrecht mit Sockel oben[2]) oder unten

Net weight		Shipping weight	
Poids net	0,63 kg	Poids brut	2,3 kg
Nettogewicht		Bruttogewicht	

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[1]) Required height in apparatus
Hauteur nécessaire dans l'appareil
Benötigte Höhe im Gerät

[2]) In that case it is recommended to support the tube
Dans ce cas il est recommandé de supporter le tube
In diesem Fall empfiehlt es sich die Röhre zu stützen

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

λ	=	>30	>15	5[1])	m
Va	=	2500	2000	1500	V
Vg1	=	-150	-150	-150	V
Vg2	=	400	400	450	V
Vg3	=	0	0	0	V
Ia	=	340	400	750	mA
Ig1	=	20	20	30	mA
Ig2	=	150	150	260	mA
Vg1p	=	270	320	420	V
Wig1	=	5,4	6,4	14	W
Wg2	=	60	60	117	W
Wia	=	850	800	1125	W
Wa	=	250	250	500	W
Wo	=	600	550	625	W
η	=	70,5	69	55	%

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

λ	=	>15	5[1])	m
Va	=	2000	1500	V
Vg1	=	-50	-50	V
Vg2	=	350	260	V
Vg3	=	0	0	V
Ia	=	170	300	mA
Ig2	=	12	40	mA
Vg1p	=	60	80	V
Wg2	=	4,2	11	W
Wia	=	340	450	W
Wa	=	250	350	W
Wo	=	90	100	W
η	=	26,5	22	%
m	=	100	100	%
Ig1	=	6	30	mA
Wig1	=	0,7	5	W

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

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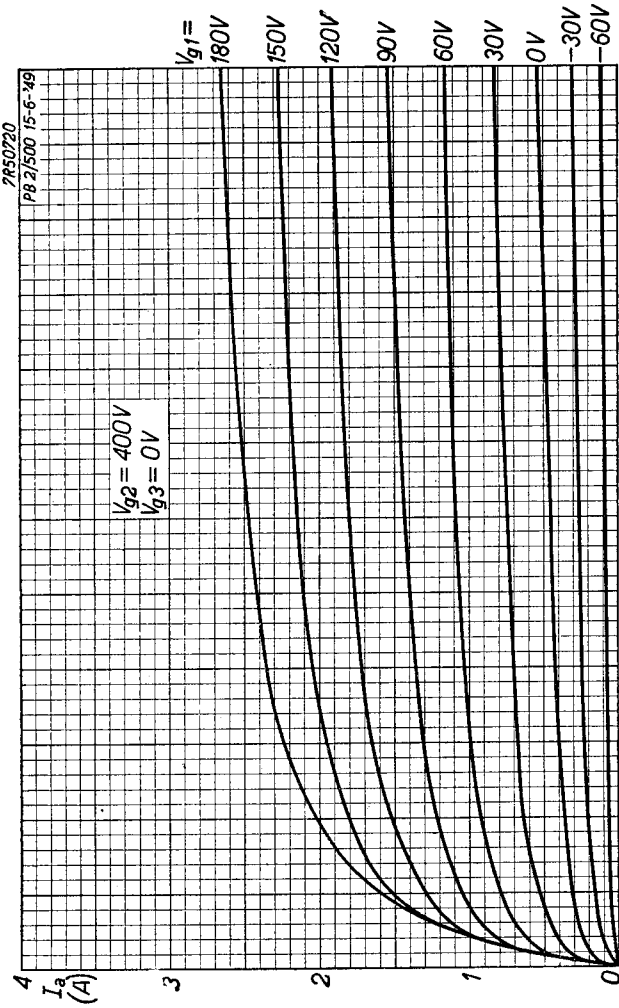
Operating conditions H.F. class C
Caractéristiques d'utilisation H.F. classe C
Betriebsdaten H.F. Klasse C

	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 =	>30	>15	5[1])	>15	5[1])	m
Va =	2000	1800	1200	2000	1500	V
Vg1 =	-150	-150	-150	-150	-150	V
Vg2 =	300	300	400	300	500	V
Vg3 =	0	0	0	-250	-260	V
Ia =	235	235	570	175	270	mA
Ig1 =	25	30	30	24	7	mA
Ig2 =	120	133	220	153	240	mA
Vg1p =	300	270	325	260	190	V
Wig1 =	7,5	8,1	10	6,2	2	W
Wg2 =	36	40	88	46	120	W
Wia =	470	423	685	350	405	W
Wa =	145	133	335	250	315	W
Wo =	325	290	350	100	90	W
η =	69	68,5	51	28,5	22	%
m =	100	100	100	100	90	%
Vg2p =	300	300	400			V
Vg3p =				250	260	V
Wmod =	253	235	390	0	0	W

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

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

Va	=		2500	V
Vg1	=		-90	V
Vg2	=		500	V
Vg3	=		0	V
Raa	=		10	kΩ
Vg1g1p	=	0	290	V
Ia	=	2x50	2x283	mA
Ig1	=	0	2x7	mA
Ig2	=	2x6	2x95	mA
Wig1	=	0	2x1	W
Wg2	=	2x3	2x47,5	W
Wia	=	2x125	2x708	W
Wa	=	2x125	2x208	W
Wo	=	0	1000	W
η	=	-	70	%


2850720
PB 2/500 15-6-'49
V_{g1} =
180V
150V
120V
90V
60V
30V
0V
−30V
−60V
V_{g2} = 400V
V_{g3} = 0V
I_a (A)
V_a (V)
0
1
2
3
4
500
1000
1500
2000
2500
3000

PB 2/500

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B

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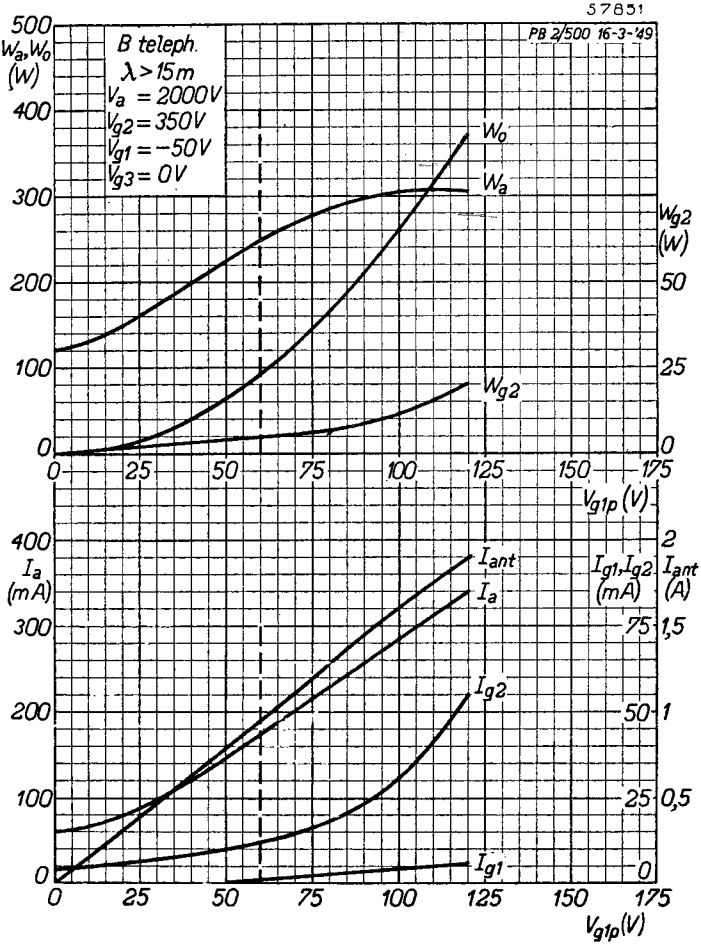
PB 2/500



18.3.1949

C

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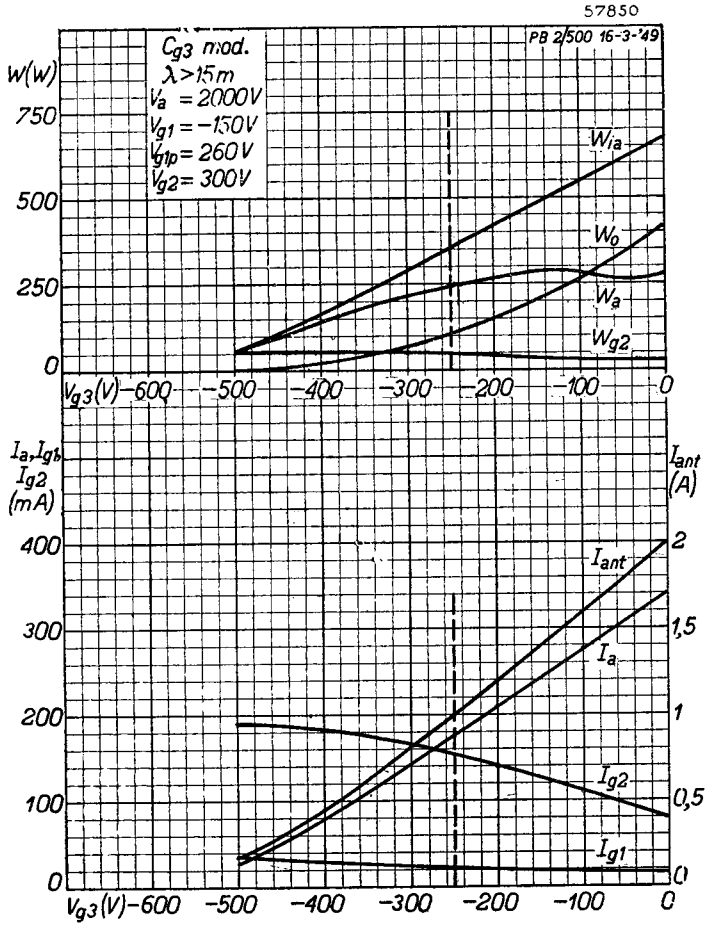
57850
PB 2/500 16-3-'49
C_{g3} mod.
λ > 15m
V_a = 2000V
V_{g1} = −150V
V_{g1p} = 260V
V_{g2} = 300V
W(W)
750
500
250
0
W_{ia}
W_o
W_a
W_{g2}
V_{g3}(V) −600 −500 −400 −300 −200 −100 0
I_a, I_{g1}, I_{g2} (mA)
400
300
200
100
0
I_{ant} (A)
2
1,5
1
0,5
0
I_{ant}
I_a
I_{g2}
I_{g1}
V_{g3}(V) −600 −500 −400 −300 −200 −100 0

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Electronic Tube

HANDBOOK

PB2/500

page	sheet	date
1	1	1954.07.07
2	2	1954.07.07
3	3	1949.03.03
4	4	1949.03.03
5	5	1949.03.03
6	A	1949.07.07
7	B	1949.07.07
8	C	1949.03.18
9	D	1949.03.18
10	FP	2000.04.04