

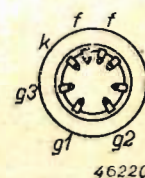
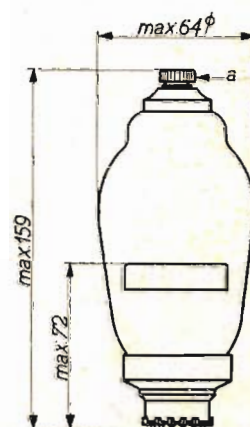


Use : H.F. amplifier  
Empleo : amplificador de R.F.  
Utilisation : amplificateur H.F.  
Toepassing : H.F. versterker  
Verwendung : H.F. Verstärker

Cathode : oxide coated, directly heated  
Cátodo : óxido, caldeo directo  
Cathode : oxyde, à chauffage direct  
Kathode : oxyde, direct verhit  
Kathode : Oxyd, direkt geheizt

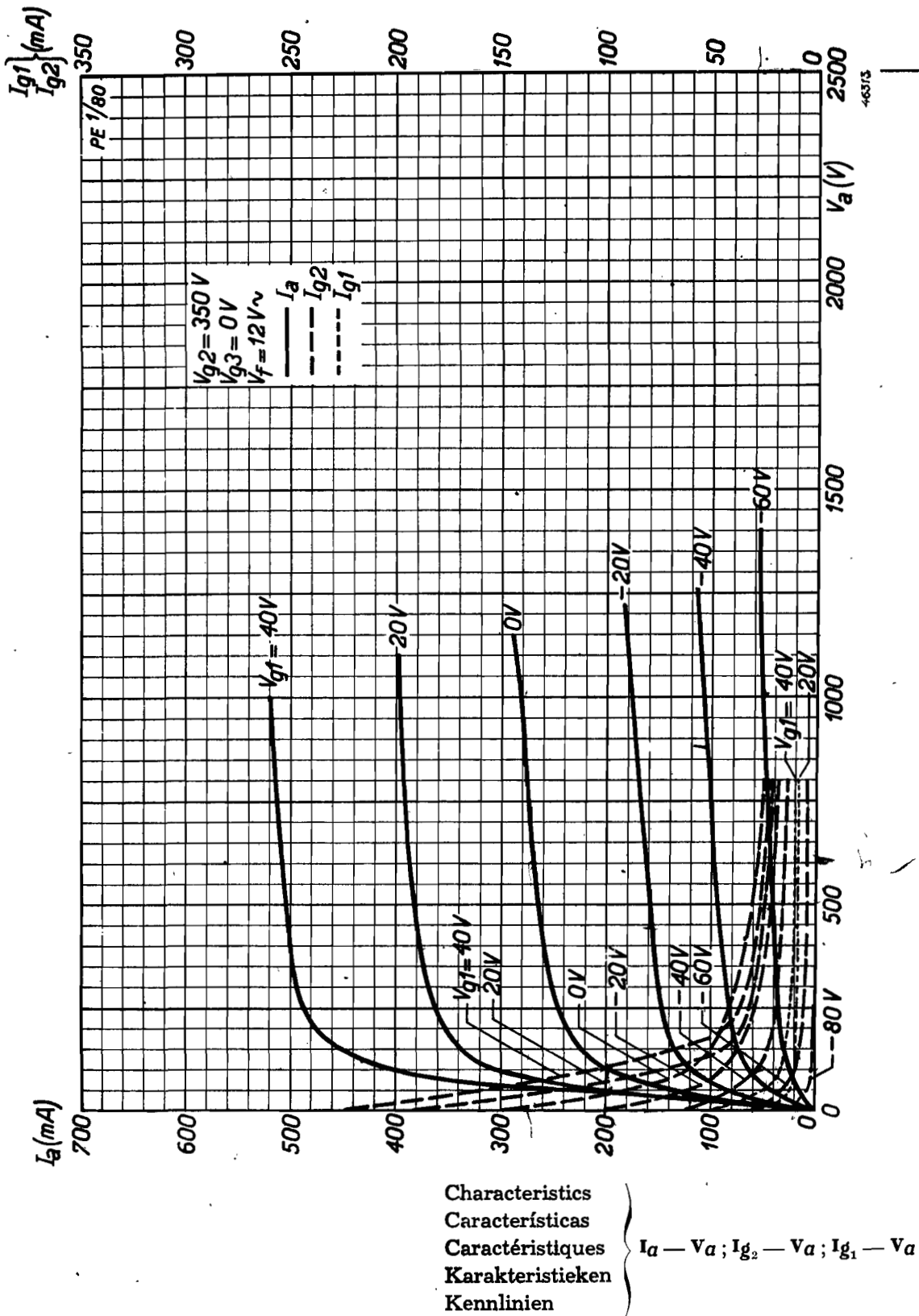
$V_f$  ..... = 12,0 V  
 $I_f$  .....  $\approx$  0,9 A  
 $W_a$  ..... = max. 35 W  
 $V_{g_2}$  ..... = max. 500 V  
 $W_{g_2}$  ..... = max. 6 W  
 $I_k$  ..... = max. 160 mA  
 $\mu_{g_2g_1}$  .....  $\approx$  3,9  
 $S_{ag_1}$  ( $V_a = 1000$  V;  $V_{g_2} = 200$  V;  
 $I_a = 40$  A) .....  $\approx$  2,5 mA/V  
 $I_{sat}$  .....  $\approx$  1,0 A  
 $C_{ak}$  .....  $\approx$  12 pF  
 $C_{gk}$  .....  $\approx$  15 pF  
 $C_{ag_1}$  .....  $\approx$  0,1 pF  
 $V_{kf}$  ..... = max. 170 V

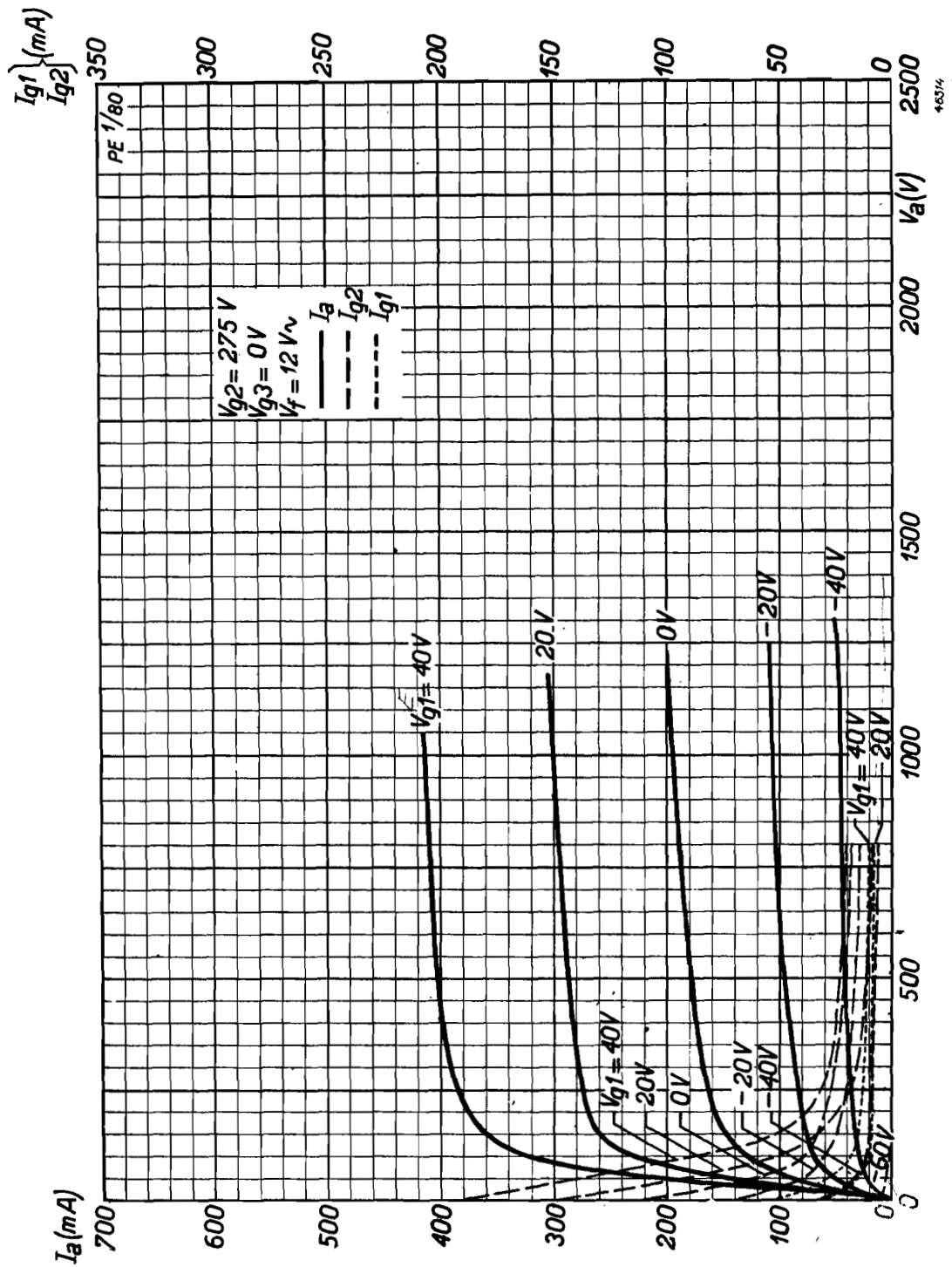
| $\lambda$ |        | C teleg.     |              | B teleph.    |              | Can. mod.    |              |
|-----------|--------|--------------|--------------|--------------|--------------|--------------|--------------|
| m         | Mc     | $V_a$<br>(V) | $W_o$<br>(W) | $V_a$<br>(V) | $W_o$<br>(W) | $V_a$<br>(V) | $W_o$<br>(W) |
|           |        | max.         |              | max.         |              | max.         |              |
| $> 20$    | $< 15$ | 1000         | 85           | 1000         | 13           | 1000         | 26           |
| 5         | 60     | 625          | 32,5         | 625          | 12           |              |              |



# PHILIPS PENTODE

PE 1/80





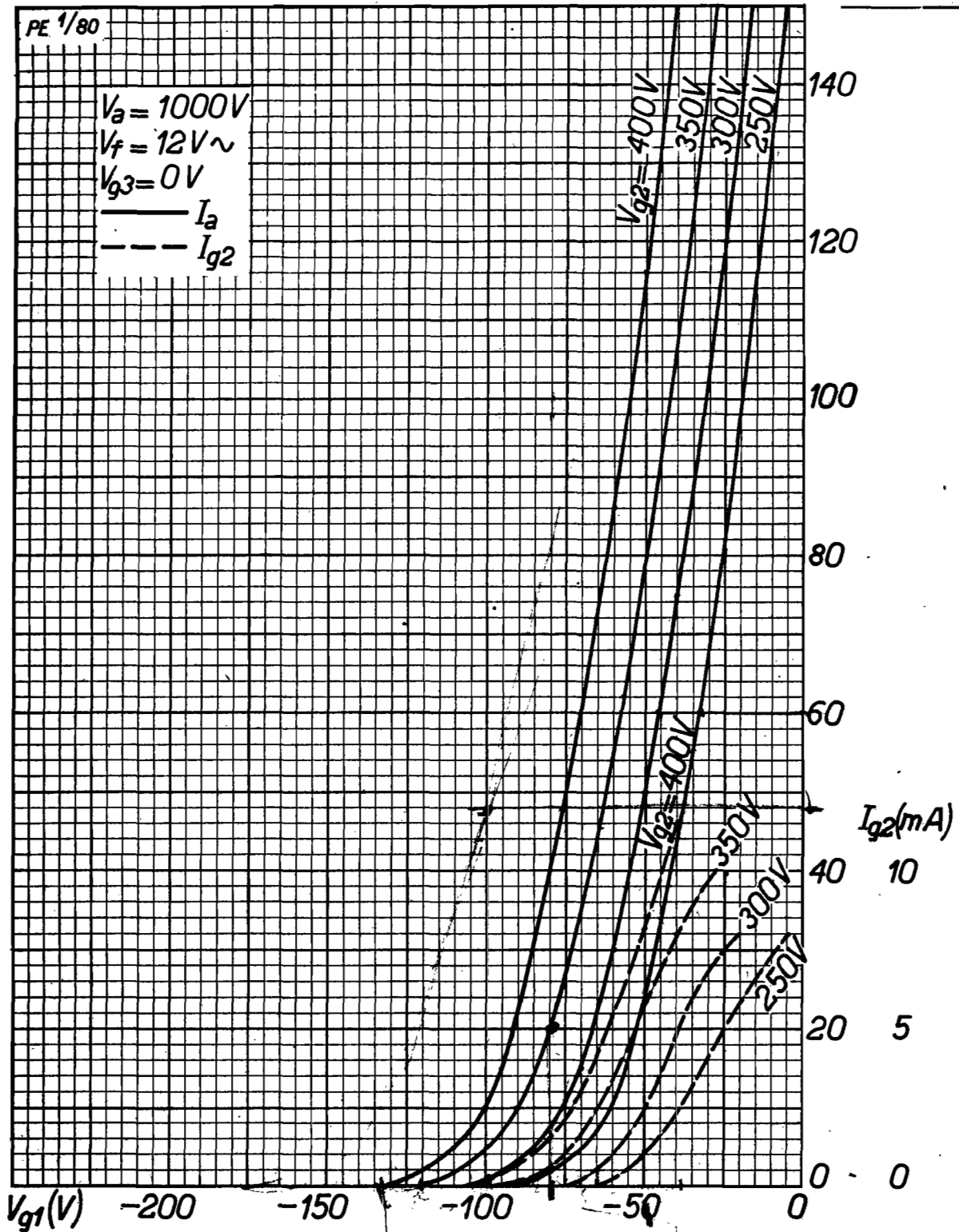
Characteristics  
 Características  
 Caractéristiques  
 Karakteristieken  
 Kennlinien

$I_a - V_a; I_{g2} - V_a; I_{g1} - V_a$

# PHILIPS PENTODE

PE 1/80

$I_a(\text{mA})$



Characteristics  
 Características  
 Caractéristiques  
 Karakteristieken  
 Kennlinien

$I_a - V_{g1}; I_{g2} - V_{g1}$

| $\lambda$  | > 15           | > 15           | 5*             | m  |
|------------|----------------|----------------|----------------|----|
| $V_a$      | 1000           | 750            | 625            | V  |
| $V_{g_1}$  | $\approx -170$ | $\approx -170$ | $\approx -170$ | V  |
| $V_{g_2}$  | 350            | 350            | 350            | V  |
| $V_{g_3}$  | 0              | 0              | 0              | V  |
| $I_a$      | 120            | 120            | 216            | mA |
| $I_{g_1}$  | $\approx 6$    | $\approx 6$    | $\approx 20$   | mA |
| $I_{g_2}$  | $\approx 17$   | $\approx 17$   | $\approx 37,5$ | mA |
| $V_{g_1p}$ | $\approx 250$  | $\approx 250$  | $\approx 190$  | V  |
| $W_{ig_1}$ | $\approx 1,5$  | $\approx 1,5$  | $\approx 4,0$  | W  |
| $W_{ia}$   | 120            | 90             | 135            | W  |
| $W_a$      | 35             | 30             | 70             | W  |
| $W_{g_2}$  | 6              | 6              | 13             | W  |
| $W_o$      | 85             | 60             | 65             | W  |
| $\eta$     | 70,5           | 66,5           | 48,5           | %  |

H.F. class C telegraphy  
 R.F. clase C telegrafia  
 H.F. classe C télégraphie  
 H.F. klasse C telegrafie  
 H.F. Klasse C Telegraphie

| $\lambda$  | > 15          | 5*             | m  |
|------------|---------------|----------------|----|
| $V_a$      | 1000          | 625            | V  |
| $V_{g_1}$  | $\approx -80$ | $\approx -100$ | V  |
| $V_{g_2}$  | 350           | 400            | V  |
| $V_{g_3}$  | 0             | 0              | V  |
| $I_a$      | 48            | 150            | mA |
| $I_{g_1}$  | $\approx 2,5$ | $\approx 20$   | mA |
| $I_{g_2}$  | $\approx 4$   | $\approx 16$   | mA |
| $V_{g_1p}$ | $\approx 60$  | $\approx 95$   | V  |
| $W_{ig_1}$ | < 0,3         | $\approx 5,5$  | W  |
| $W_{ia}$   | 48            | 94             | W  |
| $W_a$      | 35            | 70             | W  |
| $W_{g_2}$  | 1,4           | 6,4            | W  |
| $W_o$      | 13            | 24             | W  |
| $\eta$     | 27            | 25             | %  |
| m          | 100           | 100            | %  |

H.F. class B telephony  
 R.F. clase B telefonía  
 H.F. classe B téléphonie  
 H.F. klasse B telefonie  
 H.F. Klasse B Telephonie

\* two valves — dos válvulas — deux tubes — twee buizen — zwei Röhren

# PHILIPS PENTODE

PE 1/80

| $\lambda$    | $> 15$         | 5*             | m  |
|--------------|----------------|----------------|----|
| $V_a$        | 1000           | 675            | V  |
| $V_{g_1}$    | $\approx -170$ | $\approx -170$ | V  |
| $V_{g_2}$    | 250            | 250            | V  |
| $V_{g_3}$    | 0              | 0              | V  |
| $I_a$        | 53             | 148            | mA |
| $I_{g_1}$    | $\approx 1,5$  | $\approx 15$   | mA |
| $I_{g_2}$    | $\approx 2,5$  | $\approx 10$   | mA |
| $V_{g_1p}$   | $\approx 200$  | $\approx 220$  | V  |
| $V_{g_2p}$   | 250            | 250            | V  |
| $W_{ig_1}$   | $\approx 0,3$  | $\approx 6,5$  | W  |
| $W_{modg_2}$ | 5              | 5,0            | W  |
| $W_{ia}$     | 53             | 93             | W  |
| $W_a$        | 35             | 70             | W  |
| $W_{g_2}$    | 0,6            | 2,5            | W  |
| $W_o$        | 18             | 23             | W  |
| $\eta$       | 34             | 25             | %  |
| m            | 100            | 100            | %  |

H.F. class C screen grid modulation  
R.F. clase C modulaci3n de rejilla pantalla  
H.F. classe C modulation de grille 6cran  
H.F. klasse C schermroostermodulatie  
H.F. Klasse C Schirmgittermodulation

| $\lambda$    | $> 15$         | 5*             | m  |
|--------------|----------------|----------------|----|
| $V_a$        | 1000           | 675            | V  |
| $V_{g_1}$    | $\approx -170$ | $\approx -100$ | V  |
| $V_{g_2}$    | 300            | 200            | V  |
| $V_{g_3}$    | -140           | -75            | V  |
| $I_a$        | 38             | 112            | mA |
| $I_{g_1}$    | $\approx 2,4$  | $\approx 22$   | mA |
| $I_{g_2}$    | $\approx 20$   | $\approx 57$   | mA |
| $I_{g_3}$    | 0              | 0              | mA |
| $V_{g_1p}$   | $\approx 200$  | $\approx 165$  | V  |
| $V_{g_2p}$   | 280            | 65             | V  |
| $W_{ig_1}$   | $\approx 0,5$  | $\approx 5,0$  | W  |
| $W_{modg_2}$ | 0              | 0              | W  |
| $W_{ia}$     | 38             | 70             | W  |
| $W_a$        | 28             | 54             | W  |
| $W_{g_2}$    | 6              | 11,4           | W  |
| $W_o$        | 10             | 16             | W  |
| $\eta$       | 26,5           | 23             | %  |
| m            | 90             | 80             | %  |

H.F. class C suppressor grid modulation  
R.F. clase C modulaci3n de rejilla supresora  
H.F. classe C modulation de grille d'arr6t  
H.F. klasse C vangroostermodulatie  
H.F. Klasse C Fanggittermodulation

\* two valves — dos v6lvulas — deux tubes — twee buizen — zwei R6hren

| $\lambda$  | $> 15$         | m  |
|------------|----------------|----|
| $V_a$      | 1000           | V  |
| $V_{g_1}$  | $\approx -170$ | V  |
| $V_{g_2}$  | 275            | V  |
| $V_{g_3}$  | 0              | V  |
| $I_a$      | 40             | mA |
| $I_{g_1}$  | $\approx 4,5$  | mA |
| $I_{g_2}$  | $\approx 21$   | mA |
| $V_{g_1p}$ | $\approx 200$  | V  |
| $W_{ig_1}$ | $\approx 0,9$  | W  |
| $W_{mod}$  | $\approx 20$   | W  |
| $W_{ia}$   | 40             | W  |
| $W_a$      | 14             | W  |
| $W_{g_2}$  | 5,8            | W  |
| $W_o$      | 26             | W  |
| $\eta$     | 65             | %  |
| m          | 100            | %  |

H.F. class C anode modulation

R.F. clase C modulaci3n de 3nodo

H.F. classe C modulation d'anode

H.F. klasse C anodemodulatie

H.F. Klasse C Anodenmodulation

| $\lambda$  | $> 15$         | m  |
|------------|----------------|----|
| $V_a$      | 1000           | V  |
| $V_{g_1}$  | $\approx -170$ | V  |
| $V_{g_2}$  | 250 °)         | V  |
| $V_{g_3}$  | 0              | V  |
| $I_a$      | 84             | mA |
| $I_{g_1}$  | $\approx 4$    | mA |
| $I_{g_2}$  | $\approx 15$   | mA |
| $V_{g_1p}$ | $\approx 200$  | V  |
| $V_{g_2p}$ | $\approx 250$  | V  |
| $W_{ig_1}$ | $\approx 0,8$  | W  |
| $W_{mod}$  | $\approx 44$   | W  |
| $W_{ia}$   | 84             | W  |
| $W_a$      | 24             | W  |
| $W_{g_2}$  | 3,8            | W  |
| $W_o$      | 60             | W  |
| $\eta$     | 71,5           | %  |
| m          | 100            | %  |

H.F. class C anode- and screen grid modulation

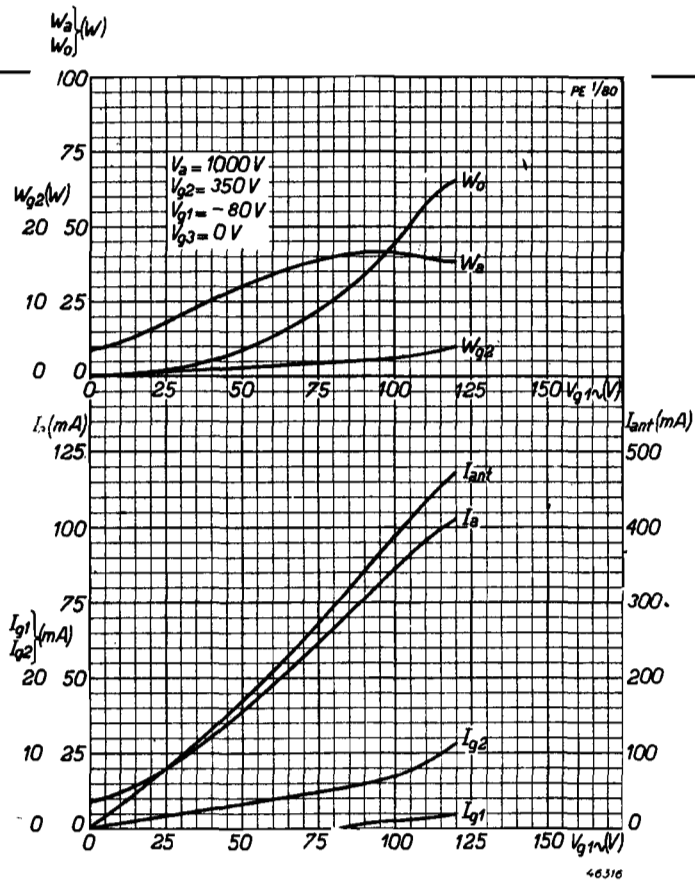
R.F. clase C modulaci3n de 3nodo y de rejilla pantalla

H.F. classe C modulation d'anode et de grille 3cran

H.F. klasse C anode- en schermroostermodulatie

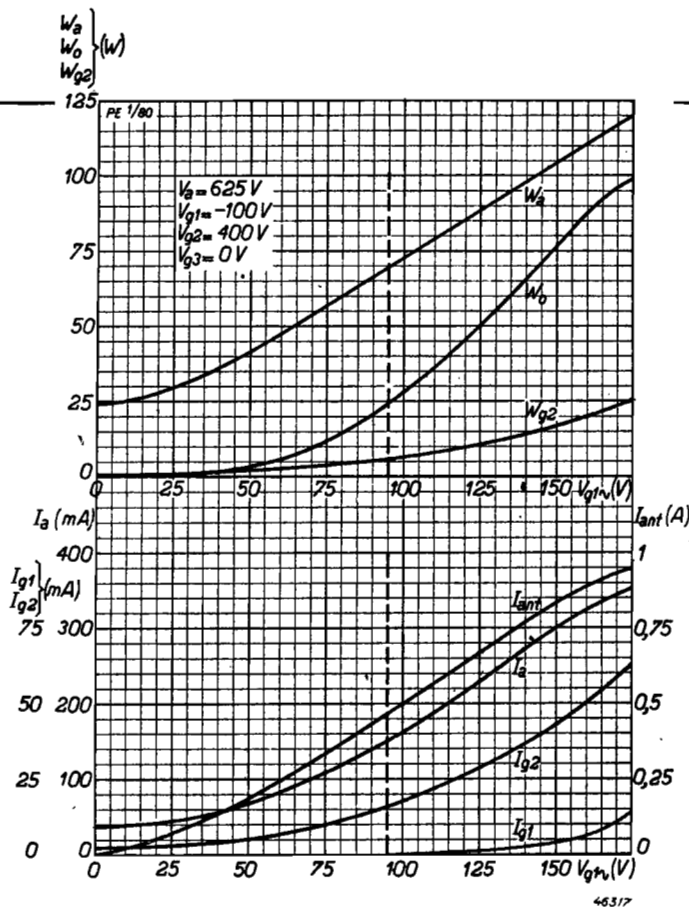
H.F. Klasse C Anoden- und Schirmgittermodulation

°)  $R_{g_2} = 50000 \text{ ohm}$



Characteristics : H.F. class B telephony  
 Características : R.F. clase B telefonía  
 Caractéristiques : H.F. classe B téléphonie  
 Karakteristieken : H.F. klasse B telefonie  
 Kennlinien : H.F. Klasse B Telephonie

$$\lambda > 15 \text{ m}$$



Characteristics :

H.F. class B telephony, two valves

Características :

R.F. clase B telefonía, dos válvulas

Caractéristiques :

H.F. classe B téléphonie, deux tubes

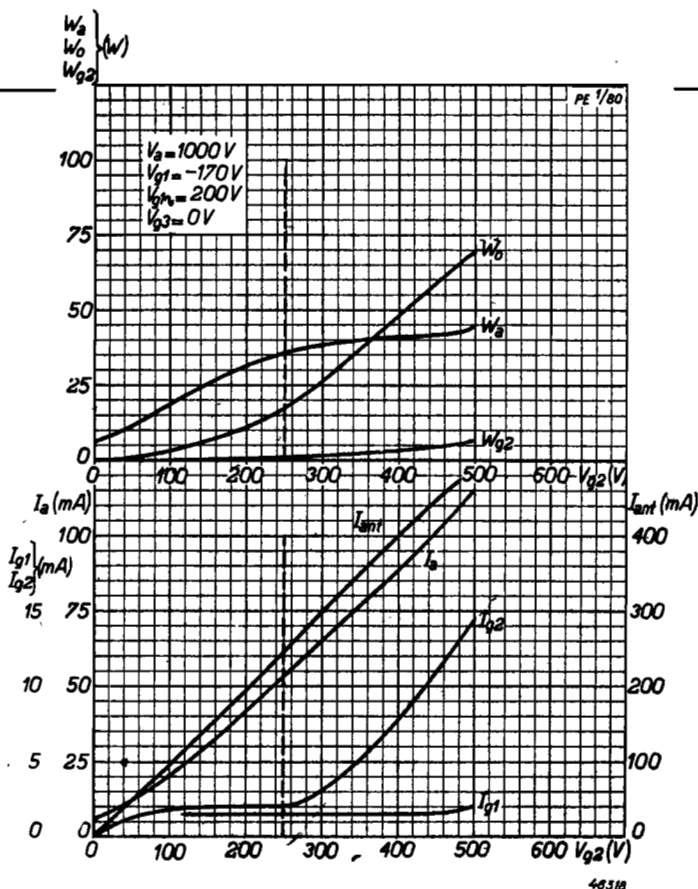
Karakteristieken :

H.F. klasse B telefonie, twee buizen

Kennlinien :

H.F. Klasse B Telephonie, zwei Röhren

$$\lambda = 15 \text{ m}$$



Characteristics :

H.F. class C screen grid modulation

Características :

R.F. clase C modulación de rejilla pantalla

Caractéristiques :

H.F. classe C modulation de grille écran

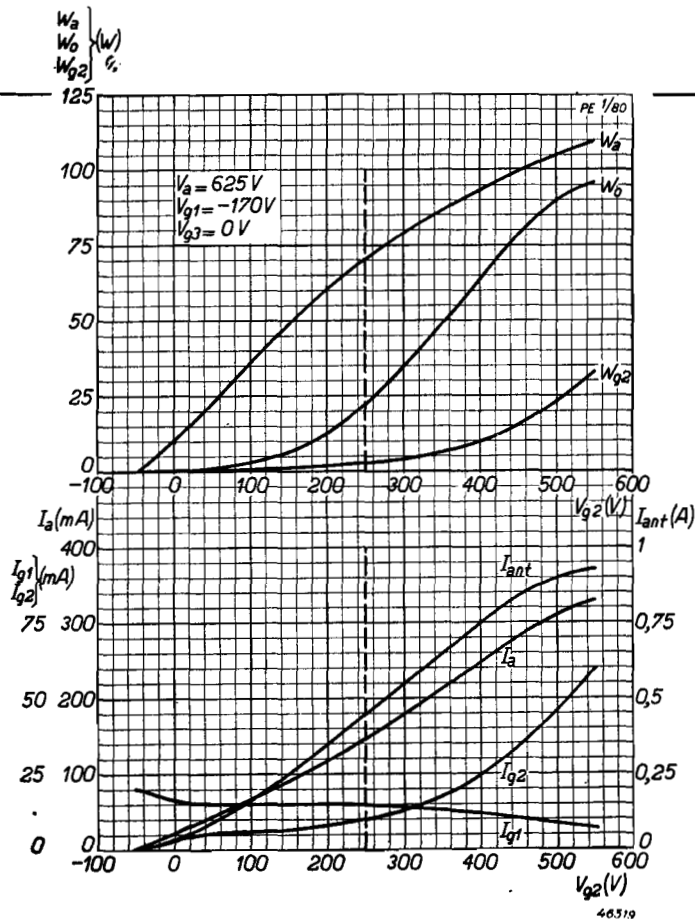
Karakteristieken :

H.F. klasse C schermroostermodulatie

Kennlinien :

H.F. Klasse C Schirmgittermodulation

$$\lambda \geq 5 \text{ m}$$



Characteristics :  
H.F. class C screen grid modulation,  
two valves

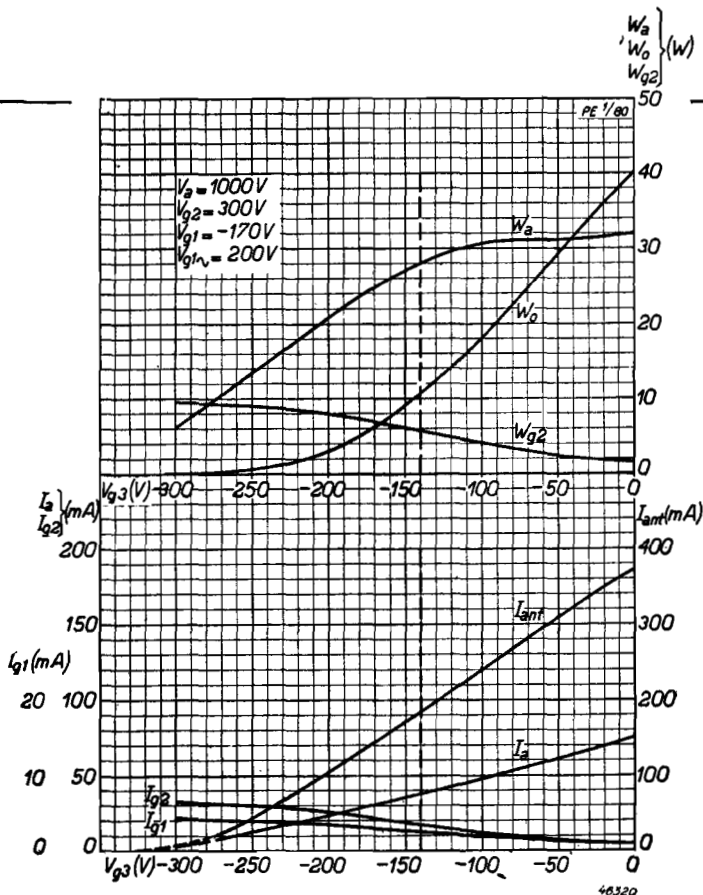
Características :  
R.F. clase C modulación de rejilla pantalla,  
dos válvulas

Caractéristiques :  
H.F. classe C modulation de grille écran,  
deux tubes

Karakteristieken :  
H.F. klasse C schermroostermodulatie,  
twee buizen

Kennlinien :  
H.F. Klasse C Schirmgittermodulation,  
zwei Röhren

$$\lambda = 5 \text{ m}$$



Characteristics :  
H.F. class C suppressor grid modulation

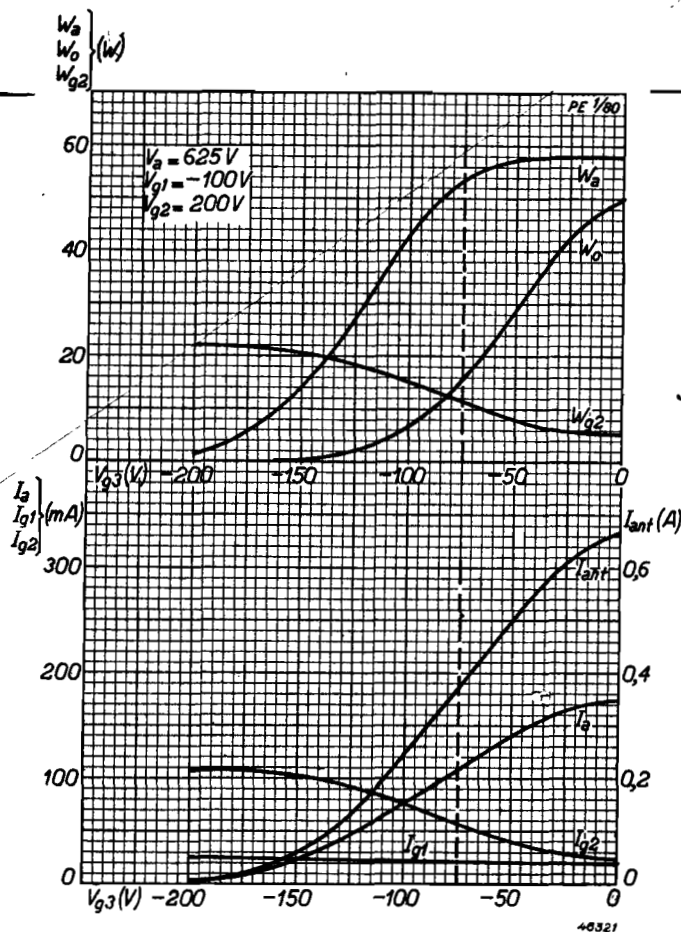
Características :  
R.F. clase C modulación de rejilla supresora

Caractéristiques :  
H.F. classe C modulation de grille d'arrêt

Karakteristieken :  
H.F. klasse C vangroostermodulatie

Kennlinien :  
H.F. Klasse C Fanggittermodulation

$$\lambda > 15 \text{ m}$$



Characteristics :

H.F. class C suppressor grid modulation, two valves

Características :

R.F. clase C modulación de rejilla supresora, dos válvulas

Caractéristiques :

H.F. classe C modulation de grille d'arrêt, deux tubes

Karakteristieken :

H.F. klasse C vangroostermodulatie

Kennlinien :

H.F. Klasse C Fanggittermodulation, zwei Röhren

$$\lambda = 5 \text{ m}$$