

BEAM POWER TETRODE for use as A.F. and R.F. amplifier and oscillator  
 TETRODE A FAISCEAU pour utilisation en amplificatrice B.F. et H.F. et oscillatrice  
 BÜNDEL-TETRODE zur Verwendung als NF- und HF-Verstärker und Oszillator

Cathode : oxide-coated  
 Cathode : oxyde  
 Katode : Oxyd

Heating : indirect  
 Chauffage: indirect  
 Heizung : indirekt

$V_f = 6,3 \text{ V}$

$I_f = 0,9 \text{ A}$

Capacitances  
 Capacités  
 Kapazitäten

$C_a = 7 \text{ pF}$

$C_{g1} = 12 \text{ pF}$

$C_{ag1} < 0,2 \text{ pF}^{1)}$

Typical characteristics  
 Caractéristiques types  
 Kenndaten

$\mu g_{21} = 8$

$S (I_a = 72 \text{ mA}) = 6 \text{ mA/V}$

| $\lambda$ | Freq. | C telegr. |           |      | B teleph. |           |      | Cag2 mod. |           |      |
|-----------|-------|-----------|-----------|------|-----------|-----------|------|-----------|-----------|------|
| m         | Mc/s  | $V_a$     | $W_o$ (W) |      | $V_a$     | $W_o$ (W) |      | $V_a$     | $W_o$ (W) |      |
|           |       | (V)       | CCS       | ICAS | (V)       | CCS       | ICAS | (V)       | CCS       | ICAS |
| 5         | 60    | 600       | 40        | 54   | 600       | 12,5      | 15   | 475       | 28        | 44   |
|           |       | 500       | 32        |      | 500       | 11        |      | 400       | 22        |      |
|           |       | 400       | 25        |      | 400       | 9         |      | 325       | 17        |      |
|           |       | 750       |           |      | 750       |           |      | 600       |           |      |

| AB mod <sup>2)</sup> 3) |  |                  |                  | AB mod <sup>2)</sup> 4) |  |           |      |
|-------------------------|--|------------------|------------------|-------------------------|--|-----------|------|
| $V_a$                   |  | $W_o$ (W)        |                  | $V_a$                   |  | $W_o$ (W) |      |
| (V)                     |  | CCS              | ICAS             | (V)                     |  | CCS       | ICAS |
| 600                     |  | 56               |                  | 600                     |  | 80        |      |
| 500                     |  | 46               |                  | 500                     |  | 75        |      |
| 400                     |  | 36               |                  | 400                     |  | 55        |      |
| 750                     |  |                  | 72 <sup>5)</sup> | 750                     |  |           | 120  |
| 400                     |  | 15 <sup>5)</sup> | 15 <sup>5)</sup> |                         |  |           |      |

1) With external shield connected to cathode  
 Avec blindage extérieur connecté à la cathode  
 Mit äußerer Abschirmung verbunden mit Katode

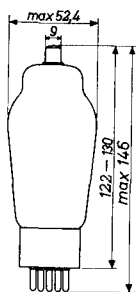
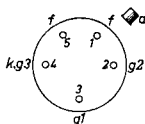
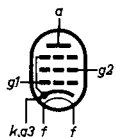
2) Two tubes; deux tubes; zwei Röhren

3) Without grid current  
 Sans courant de grille  
 Ohne Gitterstrom

4) With grid current  
 Avec courant de grille  
 Mit Gitterstrom

5) Two tubes in triode connection  
 Deux tubes en montage triode  
 Zwei Röhren in Triodenschaltung

Dimensions in mm  
 Dimensions en mm  
 Abmessungen in mm



Base, culot, Sockel: Medium 5-pin

Socket, support, Fassung: 40219

Cap, capot, Haube: 28 906 022

Mounting position: arbitrary  
 Montage : arbitrairement  
 Einbau : willkürlich

|              |      |                 |      |
|--------------|------|-----------------|------|
| Net weight   |      | Shipping weight |      |
| Poids net    | 60 g | Poids brut      | 85 g |
| Nettogewicht |      | Bruttogewicht   |      |

<sup>1)</sup> Page 5 and 6; page 5 et 6; Seite 5 und 6

Obtained preferably from a separate source modulated with the plate supply or from the modulated plate supply through a series resistor of

|            |                       |
|------------|-----------------------|
| 12.5 kΩ at | $V_a = 325 \text{ V}$ |
| 25 kΩ at   | $V_a = 400 \text{ V}$ |
| 28 kΩ at   | $V_a = 475 \text{ V}$ |
| 37.5 kΩ at | $V_a = 600 \text{ V}$ |

Obtenu de préférence d'une source séparée modulée avec l'alimentation anodique, ou de l'alimentation anodique modulée à travers une résistance série de

|           |                       |
|-----------|-----------------------|
| 12,5 kΩ à | $V_a = 325 \text{ V}$ |
| 25 kΩ à   | $V_a = 400 \text{ V}$ |
| 28 kΩ à   | $V_a = 475 \text{ V}$ |
| 37,5 kΩ à | $V_a = 600 \text{ V}$ |

Vorzugsweise erhalten von einer separaten Spannungsquelle, moduliert mit der Anodenspeisung oder von der modulierten Anodenspeisung mittels eines Serienwiderstandes von

|             |                       |
|-------------|-----------------------|
| 12,5 kΩ bei | $V_a = 325 \text{ V}$ |
| 25 kΩ bei   | $V_a = 400 \text{ V}$ |
| 28 kΩ bei   | $V_a = 475 \text{ V}$ |
| 37,5 kΩ bei | $V_a = 600 \text{ V}$ |

H.F. class C telegraphy  
H.F. classe C télégraphie  
HF-Klasse C Telegraphie

Limiting values, continuous service  
C.C.S. Caractéristiques limites, service continu  
Grenzdaten, Dauerbetrieb

|                                                 |                                                  |
|-------------------------------------------------|--------------------------------------------------|
| $f_{-} = \max. \underline{\underline{60}}$ Mc/s |                                                  |
| $V_a = \max. 600$ V                             |                                                  |
| $W_{1a} = \max. 60$ W                           | $f_{-} = \max. \underline{\underline{80}}$ Mc/s  |
| $W_a = \max. 25$ W                              | $V_a = \max. 480$ V                              |
| $I_a = \max. 100$ mA                            | $W_{1a} = \max. 48$ W                            |
| $V_{g2} = \max. 300$ V                          |                                                  |
| $W_{g2} = \max. 3,5$ W                          | $f_{-} = \max. \underline{\underline{125}}$ Mc/s |
| $-V_{g1} = \max. 200$ V                         | $V_a = \max. 330$ V                              |
| $I_{g1} = \max. 5$ mA                           | $W_{1a} = \max. 33$ W                            |
| $V_{kf} = \max. 135$ V                          |                                                  |
| $R_{g1} = \max. 30$ k $\Omega$                  |                                                  |

Operating conditions, continuous service  
C.C.S. Caractéristiques d'utilisation, service continu  
Betriebsdaten, Dauerbetrieb

|           |   |      |     |      |    |
|-----------|---|------|-----|------|----|
| $V_a$     | = | 600  | 500 | 400  | V  |
| $V_{g1}$  | = | -45  | -45 | -45  | V  |
| $V_{g2}$  | = | 250  | 250 | 250  | V  |
| $I_a$     | = | 100  | 100 | 100  | mA |
| $I_{g1}$  | = | 4    | 4   | 4    | mA |
| $I_{g2}$  | = | 8    | 8   | 8    | mA |
| $V_{g1p}$ | = | 65   | 65  | 65   | V  |
| $W_{1g1}$ | = | 0,3  | 0,3 | 0,3  | W  |
| $W_{g2}$  | = | 2    | 2   | 2    | W  |
| $W_{1a}$  | = | 60   | 50  | 40   | W  |
| $W_a$     | = | 20   | 18  | 15   | W  |
| $W_o$     | = | 40   | 32  | 25   | W  |
| $\eta$    | = | 66,5 | 64  | 62,5 | %  |

H.F. class C telegraphy  
 H.F. classe C télégraphie  
 HF-Klasse C Telegraphie

Limiting values, intermittent service

I.C.A.S. Caractéristiques limites, service intermittent  
 Grenzdaten, aussetzender Betrieb

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| $f_{-} = \max. \_ 60 \text{ Mc/s}$    |                                     |
| $V_a = \max. \ 750 \text{ V}$         |                                     |
| $W_{ia} = \max. \ 75 \text{ W}$       | $f_{-} = \max. \_ 80 \text{ Mc/s}$  |
| $W_a = \max. \ 30 \text{ W}$          | $V_a = \max. \ 600 \text{ V}$       |
| $I_a = \max. \ 100 \text{ mA}$        | $W_{ia} = \max. \ 60 \text{ W}$     |
| $V_{g2} = \max. \ 300 \text{ V}$      |                                     |
| $W_{g2} = \max. \ 3,5 \text{ W}$      |                                     |
| $-V_{g1} = \max. \ 200 \text{ V}$     | $f_{-} = \max. \_ 125 \text{ Mc/s}$ |
| $I_{g1} = \max. \ 5 \text{ mA}$       | $V_a = \max. \ 415 \text{ V}$       |
| $V_{kf} = \max. \ 135 \text{ V}$      | $W_{ia} = \max. \ 41,5 \text{ W}$   |
| $R_{g1} = \max. \ 30 \text{ k}\Omega$ |                                     |

Operating conditions, intermittent service

I.C.A.S. Caractéristiques d'utilisation, service intermittent  
 Grenzdaten, aussetzender Betrieb

|           |   |        |
|-----------|---|--------|
| $V_a$     | = | 750 V  |
| $V_{g1}$  | = | -45 V  |
| $V_{g2}$  | = | 250 V  |
| $I_a$     | = | 100 mA |
| $I_{g1}$  | = | 4 mA   |
| $I_{g2}$  | = | 8 mA   |
| $V_{g1p}$ | = | 65 V   |
| $W_{ig1}$ | = | 0,3 W  |
| $W_{g2}$  | = | 2 W    |
| $W_{ia}$  | = | 75 W   |
| $W_a$     | = | 21 W   |
| $W_o$     | = | 54 W   |
| $\eta$    | = | 72 %   |

H.F. classe C anode and screen grid modulation  
H.F. classe C modulation d'anode et de grille écran  
HF-Klasse C Anoden- und Schirmgittermodulation

Limiting values, continuous service  
C.C.S. Caractéristiques limites, service continu  
Grenzdaten, Dauerbetrieb

|                                                    |                                                 |
|----------------------------------------------------|-------------------------------------------------|
| $f_{-} = \text{max.} \text{ } 60 \text{ Mc/s}$     |                                                 |
| $V_a = \text{max.} \text{ } 475 \text{ V}$         |                                                 |
| $W_{1a} = \text{max.} \text{ } 40 \text{ W}$       | $f_{-} = \text{max.} \text{ } 80 \text{ Mc/s}$  |
| $W_a = \text{max.} \text{ } 16,5 \text{ W}$        | $V_a = \text{max.} \text{ } 380 \text{ V}$      |
| $I_a = \text{max.} \text{ } 83 \text{ mA}$         | $W_{1a} = \text{max.} \text{ } 32 \text{ W}$    |
| $V_{g2} = \text{max.} \text{ } 300 \text{ V}$      |                                                 |
| $W_{g2} = \text{max.} \text{ } 2,5 \text{ W}$      |                                                 |
| $-V_{g1} = \text{max.} \text{ } 200 \text{ V}$     | $f_{-} = \text{max.} \text{ } 125 \text{ Mc/s}$ |
| $I_{g1} = \text{max.} \text{ } 5 \text{ mA}$       | $V_a = \text{max.} \text{ } 260 \text{ V}$      |
| $V_{kf} = \text{max.} \text{ } 135 \text{ V}$      | $W_{1a} = \text{max.} \text{ } 22 \text{ W}$    |
| $R_{g1} = \text{max.} \text{ } 30 \text{ k}\Omega$ |                                                 |

Operating conditions, continuous service  
C.C.S. Caractéristiques d'utilisation, service continu  
Betriebsdaten, Dauerbetrieb

|               |   |      |     |        |
|---------------|---|------|-----|--------|
| $V_a$         | = | 475  | 400 | 325 V  |
| $V_{g1}$      | = | -85  | -75 | -75 V  |
| $V_{g2}^{1)}$ | = | 250  | 250 | 250 V  |
| $I_a$         | = | 83   | 80  | 80 mA  |
| $I_{g1}$      | = | 4    | 3,5 | 3,5 mA |
| $I_{g2}$      | = | 8    | 6   | 6 mA   |
| $V_{g1p}$     | = | 108  | 95  | 95 V   |
| $W_{1g1}$     | = | 0,4  | 0,3 | 0,3 W  |
| $W_{g2}$      | = | 2    | 1,5 | 1,5 W  |
| $W_{1a}$      | = | 39,5 | 32  | 26 W   |
| $W_a$         | = | 11,5 | 10  | 9 W    |
| $W_o$         | = | 28   | 22  | 17 W   |
| $\eta$        | = | 71   | 69  | 65,5 % |
| <hr/>         |   |      |     |        |
| $m$           | = | 100  | 100 | 100 %  |
| $W_{mod}$     | = | 20   | 16  | 13 W   |

<sup>1)</sup> See page 2; voir page 2; siehe Seite 2

H.F. class C anode and screen grid modulation  
 H.F. classe C modulation d'anode et de grille écran  
 HF-Klasse C Anoden- und Schirmgittermodulation

Limiting values, intermittent service  
 I.C.A.S. Caractéristiques limites, service intermittent  
 Grenzdaten, aussetzender Betrieb

$f_{max} = 60 \text{ Mc/s}$

$V_a = \text{max. } 600 \text{ V}$

$W_{ia} = \text{max. } 60 \text{ W}$

$W_a = \text{max. } 25 \text{ W}$

$I_a = \text{max. } 100 \text{ mA}$

$V_{g2} = \text{max. } 300 \text{ V}$

$W_{g2} = \text{max. } 2,5 \text{ W}$

$V_{g1} = \text{max. } 200 \text{ V}$

$I_{g1} = \text{max. } 5 \text{ mA}$

$V_{kf} = \text{max. } 135 \text{ V}$

$R_{g1} = \text{max. } 30 \text{ k}\Omega$

$f_{max} = 80 \text{ Mc/s}$

$V_a = \text{max. } 480 \text{ V}$

$W_{ia} = \text{max. } 48 \text{ W}$

$f_{max} = 125 \text{ Mc/s}$

$V_a = \text{max. } 330 \text{ V}$

$W_{ia} = \text{max. } 33 \text{ W}$

Operating conditions, intermittent service  
 I.C.A.S. Caractéristiques d'utilisation, service intermittent  
 Betriebsdaten, aussetzender Betrieb

|               |   |        |
|---------------|---|--------|
| $V_a$         | = | 600 V  |
| $V_{g1}$      | = | -85 V  |
| $V_{g2}^{1)}$ | = | 300 V  |
| $I_a$         | = | 100 mA |
| $I_{g1}$      | = | 4 mA   |
| $I_{g2}$      | = | 8 mA   |
| $V_{g1p}$     | = | 107 V  |
| $W_{ig1}$     | = | 0,4 W  |
| $W_{g2}$      | = | 2,4 W  |
| $W_{ia}$      | = | 60 W   |
| $W_a$         | = | 16 W   |
| $W_o$         | = | 44 W   |
| $\eta$        | = | 73 %   |
| $m$           | = | 100 %  |
| $W_{mod}$     | = | 30 W   |

<sup>1)</sup> See page 2; voir page 2; siehe Seite 2

H.F. class B telephony  
H.F. classe B téléphonie  
HF-Klasse B Telefonie

Limiting values, continuous service  
C.C.S. Caractéristiques limites; service continu  
Grenzdaten, Dauerbetrieb

$$f_{-} = \max. \quad 60 \text{ Mc/s}$$

$$V_a = \max. \quad 600 \text{ V}$$

$$W_{1a} = \max. \quad 37,5 \text{ W}$$

$$W_a = \max. \quad 25 \text{ W}$$

$$I_a = \max. \quad 80 \text{ mA}$$

$$V_{g2} = \max. \quad 300 \text{ V}$$

$$W_{g2} = \max. \quad 2,5 \text{ W}$$

$$V_{kf} = \max. \quad 135 \text{ V}$$

$$R_{g1} = \max. \quad 30 \text{ k}\Omega$$

$$f_{-} = \max. \quad 80 \text{ Mc/s}$$

$$V_a = \max. \quad 540 \text{ V}$$

$$W_{1a} = \max. \quad 34 \text{ W}$$

$$f_{-} = \max. \quad 125 \text{ Mc/s}$$

$$V_a = \max. \quad 450 \text{ V}$$

$$W_{1a} = \max. \quad 28 \text{ W}$$

Operating conditions, continuous service  
C.C.S. Caractéristiques d'utilisation, service continu  
Betriebsdaten, Dauerbetrieb

|           |   |      |      |       |
|-----------|---|------|------|-------|
| $V_a$     | = | 600  | 500  | 400 V |
| $V_{g1}$  | = | -40  | -40  | -40 V |
| $V_{g2}$  | = | 300  | 300  | 300 V |
| $I_a$     | = | 62,5 | 70   | 75 mA |
| $I_{g2}$  | = | 4    | 4    | 5 mA  |
| $V_{g1p}$ | = | 36   | 38   | 40 V  |
| $W_{g2}$  | = | 1,2  | 1,2  | 1,5 W |
| $W_{1a}$  | = | 37,5 | 35   | 30 W  |
| $W_a$     | = | 25   | 24   | 21 W  |
| $W_o$     | = | 12,5 | 11   | 9 W   |
| $\eta$    | = | 33   | 31,5 | 30 %  |
| $m$       | = | 100  | 100  | 100 % |
| $W_{ig1}$ | = | 0,2  | 0,3  | 0,4 W |

H.F. class B telephony  
H.F. classe B téléphonie  
HF-Klasse B Telefonie

Limiting values, intermittent service  
I.C.A.S. Caractéristiques limites, service intermittent  
Grenzdaten, aussetzender Betrieb

$f_{-} \equiv \max. \underline{60 \text{ Mc/s}}$

$V_a = \max. 750 \text{ V}$

$W_{1a} = \max. 45 \text{ W}$

$W_a = \max. 30 \text{ W}$

$I_a = \max. 90 \text{ mA}$

$V_{g2} = \max. 300 \text{ V}$

$W_{g2} = \max. 2,5 \text{ W}$

$V_{kf} = \max. 135 \text{ V}$

$R_{g1} = \max. 30 \text{ k}\Omega$

$f_{-} \equiv \max. \underline{80 \text{ Mc/s}}$

$V_a = \max. 675 \text{ V}$

$W_{1a} = \max. 40,5 \text{ W}$

$f_{-} \equiv \max. \underline{125 \text{ Mc/s}}$

$V_a = \max. 562 \text{ V}$

$W_{1a} = \max. 34 \text{ W}$

Operating conditions, intermittent service  
I.C.A.S. Caractéristiques d'utilisation, service intermittent  
Betriebsdaten, aussetzender Betrieb

|           |   |       |
|-----------|---|-------|
| $V_a$     | = | 750 V |
| $V_{g1}$  | = | -40 V |
| $V_{g2}$  | = | 300 V |
| $I_a$     | = | 60 mA |
| $I_{g2}$  | = | 3 mA  |
| $V_{g1p}$ | = | 35 V  |
| $W_{g2}$  | = | 0,9 W |
| $W_{1a}$  | = | 45 W  |
| $W_a$     | = | 30 W  |
| $W_o$     | = | 15 W  |
| $\eta$    | = | 33 %  |
| $m$       | = | 100 % |
| $W_{1g1}$ | = | 0,2 W |

A.F. class AB amplifier and modulator ( $I_{g1} > 0$ )  
 Amplificatrice et modulatrice B.F. classe AB ( $I_{g1} > 0$ )  
 NF-Klasse AB Verstärker und Modulator ( $I_{g1} > 0$ )

Limiting values, continuous service

C.C.S. Caractéristiques limites, service continu  
 Grenzdaten, Dauerbetrieb

|          |               |          |                                    |
|----------|---------------|----------|------------------------------------|
| $V_a$    | = max. 600 V  | $V_{g2}$ | = max. 300 V                       |
| $W_{1a}$ | = max. 60 W   | $W_{g2}$ | = max. 3,5 W                       |
| $W_a$    | = max. 25 W   | $V_{kf}$ | = max. 135 V                       |
| $I_a$    | = max. 120 mA | $R_{g1}$ | = max. 30 k $\Omega$ <sup>1)</sup> |

Operating conditions, continuous service; two tubes

C.C.S. Caractéristiques d'utilisation, service continu;  
 deux tubes

Betriebsdaten, Dauerbetrieb; zwei Röhren

|             |   |              |             |                 |
|-------------|---|--------------|-------------|-----------------|
| $V_a$       | = | 600          | 500         | V               |
| $V_{g2}$    | = | 300          | 300         | V               |
| $V_{g1}$    | = | -32          | -30         | V               |
| $R_{aa}$    | = | 6900         | 4600        | $\Omega$        |
| $V_{g1g1p}$ | = | 0 90         | 0 86        | V               |
| $I_a$       | = | 2x24 2x100   | 2x30 2x120  | mA              |
| $I_{g2}$    | = | 2x0,35 2x9   | 2x0,45 2x10 | mA              |
| $W_{1g1}$   | = | 0 0,1        | 0 0,2       | W               |
| $W_{g2}$    | = | 2x0,11 2x2,7 | 2x0,14 2x3  | W               |
| $W_{1a}$    | = | 2x14,4 2x60  | 2x15 2x60   | W               |
| $W_a$       | = | 2x14,4 2x20  | 2x15 2x22,5 | W               |
| $W_o$       | = | 0 80         | 0 75        | W               |
| $\eta$      | = | - 66,5       | - 62,5      | %               |
| $d$         | = | - 2          | - 2         | % <sup>2)</sup> |

|             |   |               |                 |
|-------------|---|---------------|-----------------|
| $V_a$       | = | 400           | V               |
| $V_{g2}$    | = | 300           | V               |
| $V_{g1}$    | = | -28           | V               |
| $R_{aa}$    | = | 3700          | $\Omega$        |
| $V_{g1g1p}$ | = | 0 80          | V               |
| $I_a$       | = | 2x36 2x120    | mA              |
| $I_{g2}$    | = | 2x1 2x10      | mA              |
| $W_{1g1}$   | = | 0 0,2         | W               |
| $W_{g2}$    | = | 2x0,3 2x3     | W               |
| $W_{1a}$    | = | 2x14,4 2x48   | W               |
| $W_a$       | = | 2x14,4 2x20,5 | W               |
| $W_o$       | = | 0 55          | W               |
| $\eta$      | = | - 57          | %               |
| $d$         | = | - 2           | % <sup>2)</sup> |

<sup>1) 2)</sup> See page 10, voir page 10, siehe Seite 10

A.F. class AB amplifier and modulator ( $I_{g1} > 0$ )  
 Amplificatrice et modulatrice B.F. classe AB ( $I_{g1} > 0$ )  
 NF-Klasse AB Verstärker und modulator ( $I_{g1} > 0$ )

Limiting values, intermittent service

I.C.A.S. Caractéristiques limites, service intermittent  
 Grenzdaten, aussetzender Betrieb

|                      |                                             |
|----------------------|---------------------------------------------|
| $V_a$ = max. 750 V   | $V_{g2}$ = max. 300 V                       |
| $W_{ia}$ = max. 90 W | $W_{g2}$ = max. 3,5 W                       |
| $W_a$ = max. 30 W    | $V_{kf}$ = max. 135 V                       |
| $I_a$ = max. 120 mA  | $R_{g1}$ = max. 30 k $\Omega$ <sup>1)</sup> |

Operating conditions, intermittent service; two tubes

I.C.A.S. Caractéristiques d'utilisation, service intermittent;  
 deux tubes

Betriebsdaten, aussetzender Betrieb; zwei Röhren

|             |   |         |                   |
|-------------|---|---------|-------------------|
| $V_a$       | = | 750     | V                 |
| $V_{g2}$    | = | 300     | V                 |
| $V_{g1}$    | = | -35     | V                 |
| $R_{aa}$    | = | 7300    | $\Omega$          |
| $V_{g1g1p}$ | = | 0       | 96 V              |
| $I_a$       | = | 2x15    | 2x120 mA          |
| $I_{g2}$    | = | 2x0,25  | 2x10 mA           |
| $W_{ig1}$   | = | 0       | 0,2 W             |
| $W_{g2}$    | = | 2x0,08  | 2x3 W             |
| $W_{ia}$    | = | 2x11,25 | 2x90 W            |
| $W_a$       | = | 2x11,25 | 2x30 W            |
| $W_o$       | = | 0       | 120 W             |
| $\eta$      | = | -       | 66,5 %            |
| $d$         | = | -       | 2 % <sup>2)</sup> |

<sup>1)</sup> With fixed bias. Cathode bias is not recommended  
 Avec polarisation fixe. Polarisation de cathode n'est pas recommandée

Mit fester Vorspannung. Vorspannung mittels Katodenwiderstand wird nicht empfohlen

<sup>2)</sup> Distortion with zero-impedance driver  
 Distorsion avec un pré-amplificateur sans résistance interne

Verzerrung bei Verwendung eines Vorverstärkers ohne inneren Widerstand

A.F. class AB amplifier and modulator ( $I_{g1} = 0$ )  
 Amplificatrice et modulatrice B.F. classe AB ( $I_{g1} = 0$ )  
 NF-Klasse AB Verstärker und Modulator ( $I_{g1} = 0$ )

Limiting values, continuous service

C.C.S. Caractéristiques limites, service continu  
 Grenzdaten, Dauerbetrieb

|                        |        |                        |                              |
|------------------------|--------|------------------------|------------------------------|
| $V_a = \text{max.}$    | 600 V  | $V_{g2} = \text{max.}$ | 300 V                        |
| $W_{1a} = \text{max.}$ | 60 W   | $W_{g2} = \text{max.}$ | 3,5 W                        |
| $W_a = \text{max.}$    | 25 W   | $V_{kf} = \text{max.}$ | 135 V                        |
| $I_a = \text{max.}$    | 120 mA | $R_{g1} = \text{max.}$ | 100 k $\Omega$ <sup>1)</sup> |

Operating conditions, continuous service; two tubes

C.C.S. Caractéristiques d'utilisation, service continu; deux tubes

Betriebsdaten, Dauerbetrieb; zwei Röhren

|               |               |               |          |
|---------------|---------------|---------------|----------|
| $V_a =$       | 600           | 500           | V        |
| $V_{g2} =$    | 300           | 300           | V        |
| $V_{g1} =$    | -34           | -32           | V        |
| $R_{aa} =$    | 10000         | 8200          | $\Omega$ |
| $V_{g1g1p} =$ | 0 68          | 0 64          | V        |
| $I_a =$       | 2x18 2x69,5   | 2x22 2x70,5   | mA       |
| $I_{g2} =$    | 2x0,3 2x7,5   | 2x0,5 2x7,5   | mA       |
| $W_{1g1} =$   | 0 0           | 0 0           | W        |
| $W_{g2} =$    | 2x0,09 2x2,25 | 2x0,15 2x2,25 | W        |
| $W_{1a} =$    | 2x10,8 2x41,7 | 2x11 2x35,3   | W        |
| $W_a =$       | 2x10,8 2x13,7 | 2x11 2x12,3   | W        |
| $W_o =$       | 0 56          | 0 46          | W        |
| $\eta =$      | - 67          | - 65          | %        |

|               |               |          |
|---------------|---------------|----------|
| $V_a =$       | 400           | V        |
| $V_{g2} =$    | 300           | V        |
| $V_{g1} =$    | -30           | V        |
| $R_{aa} =$    | 6800          | $\Omega$ |
| $V_{g1g1p} =$ | 0 60          | V        |
| $I_a =$       | 2x28 2x71,5   | mA       |
| $I_{g2} =$    | 2x1 2x8       | mA       |
| $W_{1g1} =$   | 0 0           | W        |
| $W_{g2} =$    | 2x0,3 2x2,4   | W        |
| $W_{1a} =$    | 2x11,2 2x28,6 | W        |
| $W_a =$       | 2x11,2 2x10,6 | W        |
| $W_o =$       | 0 36          | W        |
| $\eta =$      | - 63          | %        |

<sup>1)</sup> See page 10; voir page 10; siehe Seite 10

A.F. class AB amplifier and modulator ( $I_{g1} = 0$ )  
 Amplificatrice et modulatrice B.F. classe AB ( $I_{g1} = 0$ )  
 NF-Klasse AB Verstärker und Modulator ( $I_{g1} = 0$ )

Limiting values, intermittent service

I.C.A.S. Caractéristiques limites, service intermittent  
 Grenzdaten, aussetzender Betrieb

|          |        |        |          |        |                              |
|----------|--------|--------|----------|--------|------------------------------|
| $V_a$    | = max. | 750 V  | $V_{g2}$ | = max. | 300 V                        |
| $W_{1a}$ | = max. | 90 W   | $W_{g2}$ | = max. | 3,5 W                        |
| $W_a$    | = max. | 30 W   | $V_{kf}$ | = max. | 135 V                        |
| $I_a$    | = max. | 120 mA | $R_{g1}$ | = max. | 100 k $\Omega$ <sup>1)</sup> |

Operating conditions, intermittent service; two tubes

I.C.A.S. Caractéristiques d'utilisation, service intermittent;  
 deux tubes

Betriebsdaten, aussetzender Betrieb; zwei Röhren

|             |   |         |           |
|-------------|---|---------|-----------|
| $V_a$       | = | 750     | V         |
| $V_{g2}$    | = | 300     | V         |
| $V_{g1}$    | = | -35     | V         |
| $R_{aa}$    | = | 12000   | $\Omega$  |
| $V_{g1g1p}$ | = | 0       | 70 V      |
| $I_a$       | = | 2x15    | 2x69,5 mA |
| $I_{g2}$    | = | 2x0,25  | 2x8 mA    |
| $W_{1g1}$   | = | 0       | 0 W       |
| $W_{g2}$    | = | 2x0,075 | 2x2,4 W   |
| $W_{1a}$    | = | 2x11,25 | 2x52 W    |
| $W_a$       | = | 2x11,25 | 2x16 W    |
| $W_o$       | = | 0       | 72 W      |
| $\eta$      | = | -       | 69 %      |

<sup>1)</sup> With fixed bias. Cathode bias is not recommended  
 Avec polarisation fixe. Polarisation de cathode n'est pas recommandée  
 Mit fester Vorspannung. Vorspannung mittels Katodenwiderstand wird nicht empfohlen

A.F. class AB amplifier and modulator in triode connection  
(g2 connected to a;  $I_{g1} = 0$ )  
Amplificatrice et modulatrice B.F. classe AB en montage  
triode (g2 connecté à a;  $I_{g1} = 0$ )  
NF-Klasse AB Verstärker und Modulator in Triodenschaltung  
(g2 verbunden mit a;  $I_{g1} = 0$ )

Limiting values, continuous service

C.C.S. Caractéristiques limites, service continu  
Grenzdaten, Dauerbetrieb

|          |        |                      |
|----------|--------|----------------------|
| $V_a$    | = max. | 400 V                |
| $I_a$    | = max. | 125 mA               |
| $W_{1a}$ | = max. | 50 W                 |
| $W_a$    | = max. | 25 W                 |
| $V_{kf}$ | = max. | 135 V                |
| $R_{g1}$ | = max. | 0,1 MΩ <sup>1)</sup> |
| $R_{g1}$ | = max. | 0,5 MΩ <sup>2)</sup> |

Operating conditions, continuous service; two tubes

C.C.S. Caractéristiques d'utilisation, service continu;  
deux tubes

Betriebsdaten, Dauerbetrieb; zwei Röhren

|           |   |        |          |
|-----------|---|--------|----------|
| $V_a$     | = | 400    | V        |
| $V_{g1}$  | = | -45    | V        |
| $R_{aa}$  | = | 3      | kΩ       |
| $V_{ggp}$ | = | 0 — 90 | V        |
| $I_a$     | = | 2x32   | 2x70 mA  |
| $W_{1a}$  | = | 2x12,8 | 2x28 W   |
| $W_a$     | = | 2x12,8 | 2x20,5 W |
| $W_o$     | = | 0      | 15 W     |
| $\eta$    | = | -      | 27 %     |

<sup>1)</sup> With fixed bias  
Avec polarisation fixe  
Mit fester Gittervorspannung

<sup>2)</sup> With cathode bias  
Avec polarisation de cathode  
Mit Vorspannung mittels Katodenwiderstand

A.F. class AB amplifier and modulator in triode connection  
(g2 connected to a;  $I_{g1} = 0$ )  
 Amplificatrice et modulatrice B.F. classe AB en montage  
 triode (g2 connecté à a;  $I_{g1} = 0$ )  
 NF-Klasse AB Verstärker und Modulator in Triodenschaltung  
 (g2 verbunden mit a;  $I_{g1} = 0$ )

## Limiting values, intermittent service

I.C.A.S. Caractéristiques limites, service intermittent  
 Grenzdaten, aussetzender Betrieb

|          |        |                              |
|----------|--------|------------------------------|
| $V_a$    | = max. | 400 V                        |
| $I_a$    | = max. | 125 mA                       |
| $W_{1a}$ | = max. | 50 W                         |
| $W_a$    | = max. | 30 W                         |
| $V_{kf}$ | = max. | 135 V                        |
| $R_{g1}$ | = max. | 0,1 M $\Omega$ <sup>1)</sup> |
| $R_{g1}$ | = max. | 0,5 M $\Omega$ <sup>2)</sup> |

## Operating conditions, intermittent service; two tubes

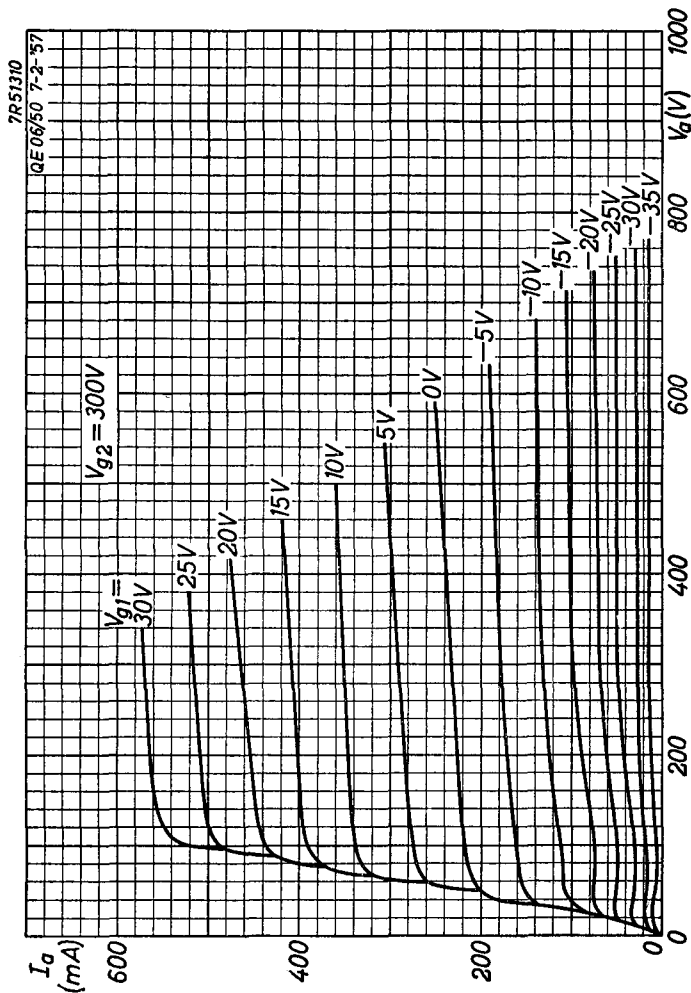
I.C.A.S. Caractéristiques d'utilisation, service intermittent;  
 deux tubes

Betriebsdaten, aussetzender Betrieb; zwei Röhren

|           |   |        |            |
|-----------|---|--------|------------|
| $V_a$     | = | 400    | V          |
| $V_{g1}$  | = | -45    | V          |
| $R_{aa}$  | = | 3      | k $\Omega$ |
| $V_{ggp}$ | = | 0      | 90 V       |
| $I_a$     | = | 2x32   | 2x70 mA    |
| $W_{1a}$  | = | 2x12,8 | 2x28 W     |
| $W_a$     | = | 2x12,8 | 2x20,5 W   |
| $W_o$     | = | 0      | 15 W       |
| $\eta$    | = | -      | 27 %       |

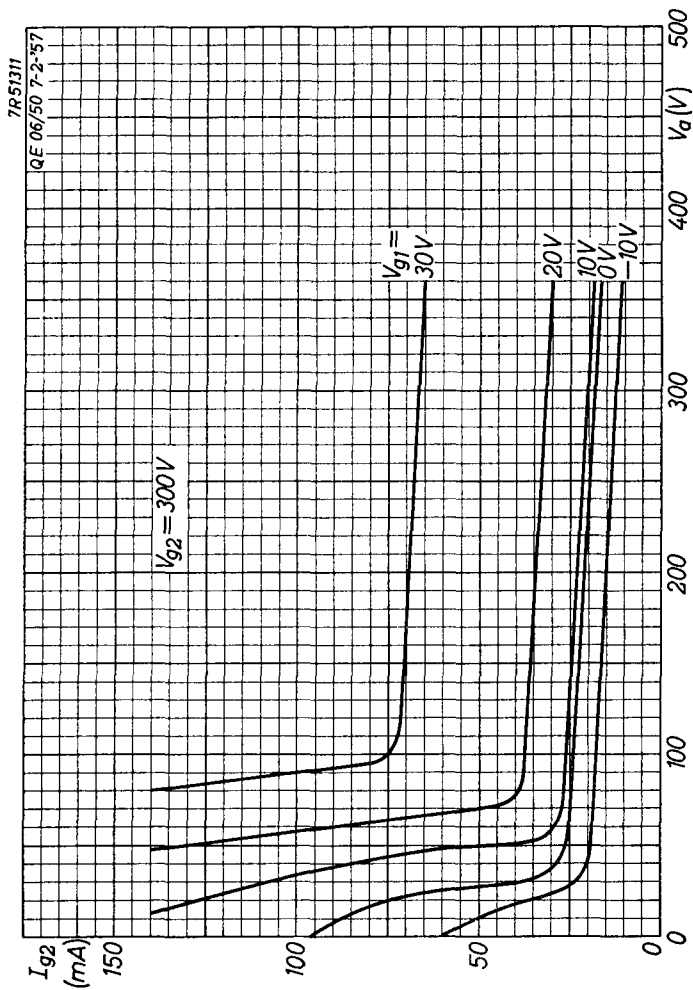
<sup>1)</sup> With fixed bias  
 Avec polarisation fixe  
 Mit fester Vorspannung

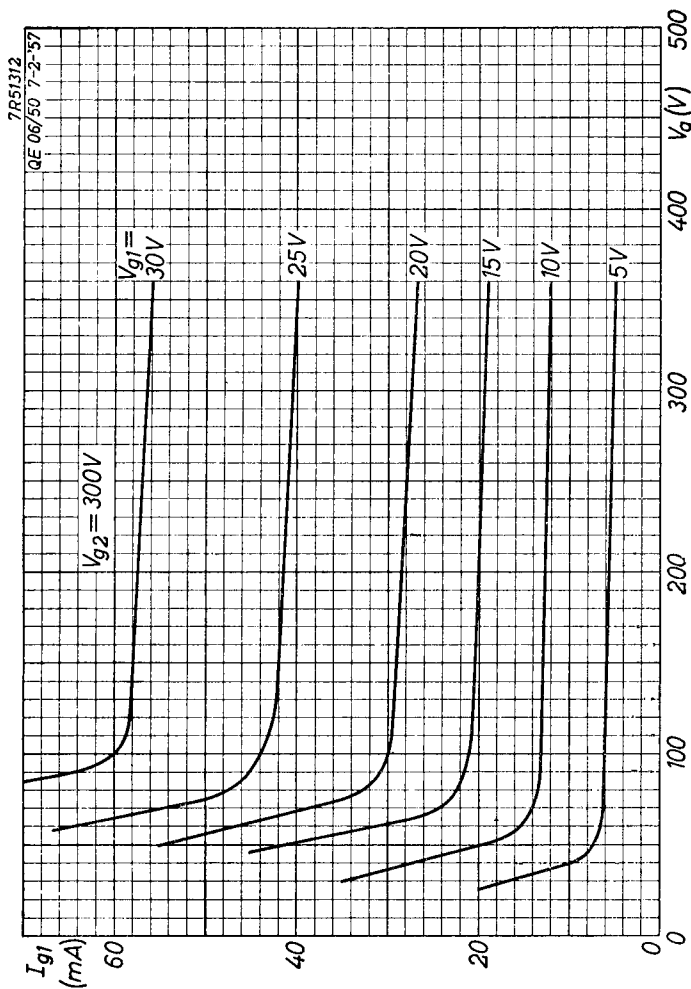
<sup>2)</sup> With cathode bias  
 Avec polarisation de cathode  
 Mit Vorspannung mittels Katodenwiderstand

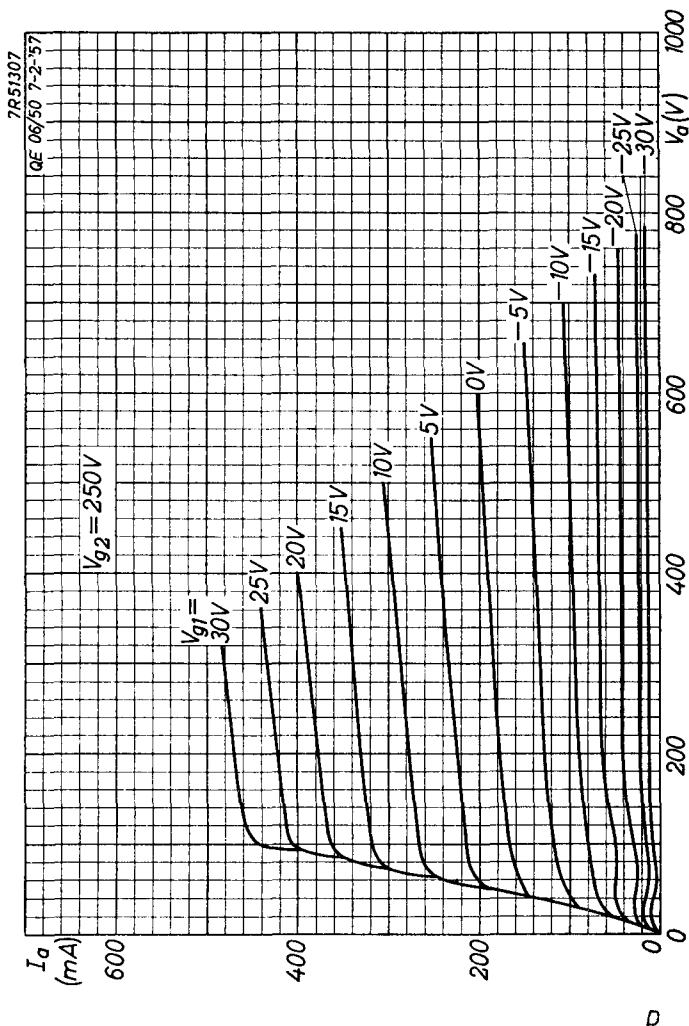


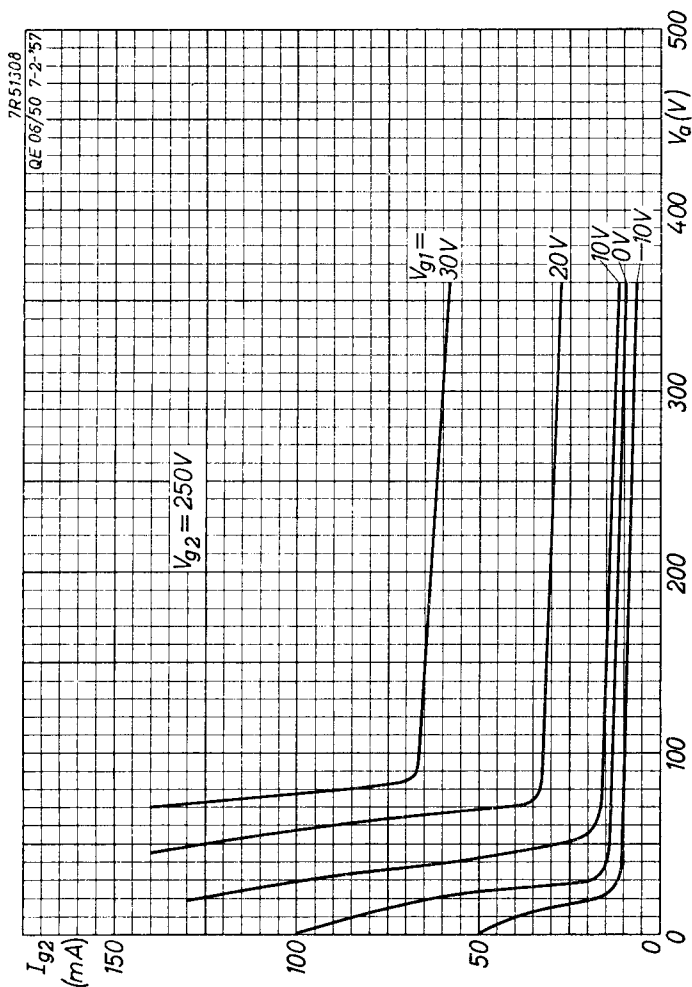
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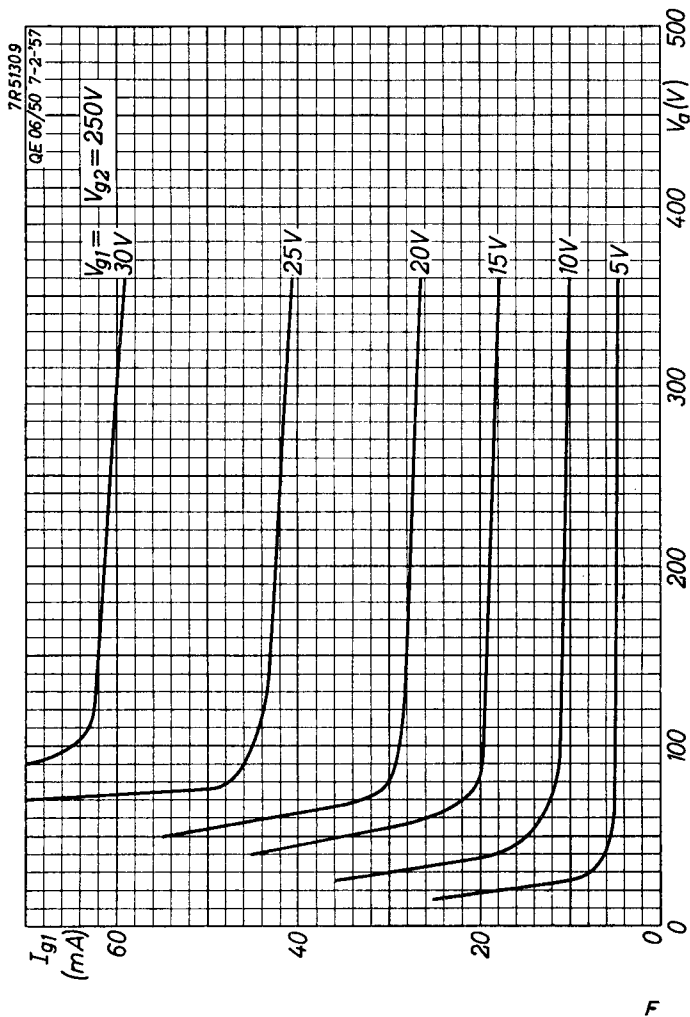


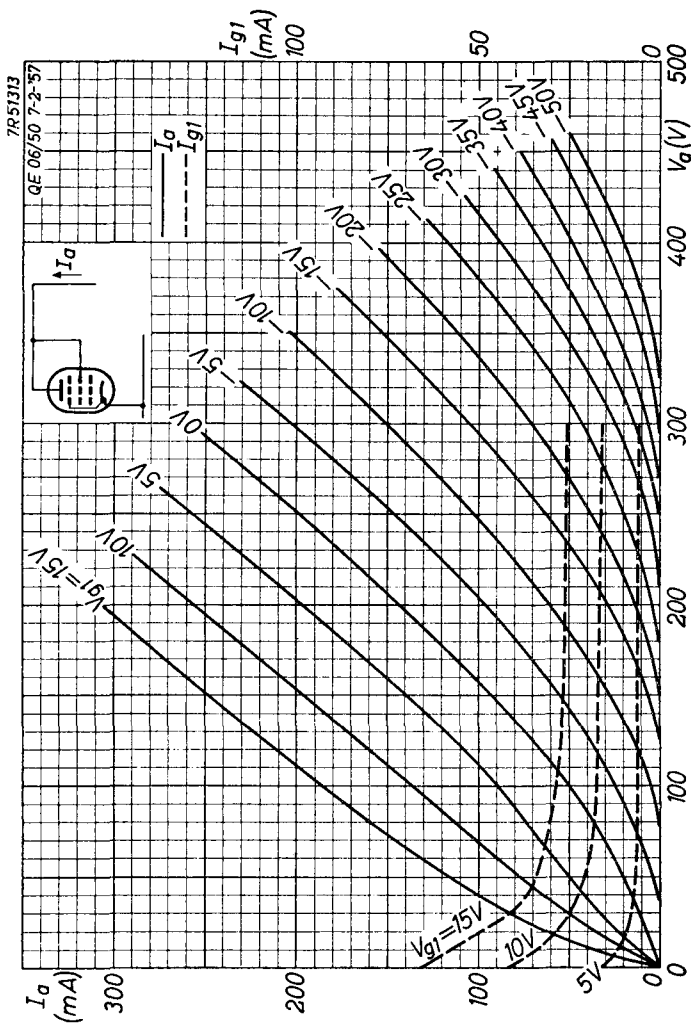




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