**Batterieröhre indirekt geheizt**
**Parallelspeisung**
**oder 2 Röhren in Serie**

**Battery tube indirectly heated**
**connected in parallel**
**or 2 tubes in series**

# TELEFUNKEN

**EF 98**

**Pentode**

**Pentode**

**Pentode für ZF/NF-Verstärker und Oszillator für Autoempfänger $U_b$ = 6,3 oder 12,6 Volt.**

Pentode for IF/AF-amplifier and oscillator for car-sets operating with 6.3 or 12.6 volts B + supply.

| | | |
|---|---|---|
| $U_f$ | **6,3** | V |
| $I_f$ | 300 | mA |

## Betriebswerte · Typical operation

ZF-Verstärker · IF-amplifier

| | | | |
|---|---|---|---|
| $U_a$ | **6,3** | **12,6** | V |
| $U_{g3}$ | **0** | **0** | V |
| $U_{g2}$ | **3,2** | **6,3** | V |
| $U_{g1}$ [1] | −0,8 | −0,75 | V |
| $I_a$ | **0,6** | **2,0** | mA |
| $I_{g2}$ | 0,2 | 0,7 | mA |
| S | 1 | 2 | mA/V |
| $R_i$ | 100 | 200 | kΩ |
| $\mu_{g2g1}$ | 3,2 | 4,1 | |

[1] $U_{g1}$ nur durch $R_{g1}$ = 10 MΩ erzeugt.
$U_{g1}$ produced by voltage drop across $R_{g1}$ = 10 MΩ only.

NF-Treiberstufe ($g_3$ an a) · AF-driver stage ($g_3$ to a)

| | | | | | |
|---|---|---|---|---|---|
| $U_{ag3}$ | **6,3** | **7** [2] | **12,6** | **14** [2] | V |
| $U_{g2}$ | **6,3** | **7** | **12,6** | **14** | V |
| $U_{g1}$ [3] | −1,2 | −1,3 | −2,3 | −2,4 | V |
| $I_{a+g3}$ | **1,1** | **1,2** | **2,1** | **2,5** | mA |
| $R_a$ | 5,8 | 5,8 | 6 | 6 | kΩ |
| $U_{g1\sim}$ | 0,4 | 0,4 | 1 | 1 | $V_{eff}$ |
| N (10%) | 1,2 | 1,6 | 11 | 14 | mW |

[2] Meist vorhandene Betriebsspannung bei fahrenden Wagen.
Most existing operating voltage at driving car.

[3] Bei $U_{g1}$ nur durch $R_{g1}$ erzeugt, etwa gleiche Ausgangsleistung.
At $U_{g1}$ produced by voltage drop across $R_{g1}$ only, nearly the same output power.

# TELEFUNKEN

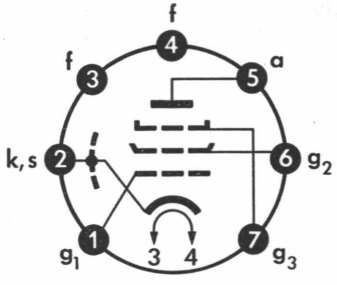
**Grenzwerte** · Maximum ratings

| | | |
|---|---|---|
| $U_a$ | **30** | V |
| $N_a$ | **0,5** | W |
| $U_{g3}$ | **30** | V |
| $N_{g2}$ | **0,5** | W |
| $U_{g2}$ | **30** | V |
| $I_k$ | **15** | mA |
| $R_{g1}$ | **22** | MΩ |
| $R_{g3}$ | **0,1** | MΩ |
| $U_{fk}$ | **30** | V |

**Kapazitäten** · Capacitances

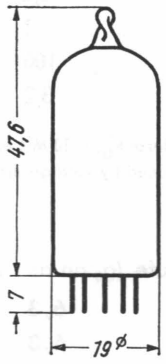
| | | |
|---|---|---|
| $c_{g1}$ | 6,7 | pF |
| $c_a$ | 4,0 | pF |
| $c_{g1a}$ | 0,015 (< 0,02) | pF |
| $c_{g1g2}$ | 3,0 | pF |

Sockelschaltbild
Base connection



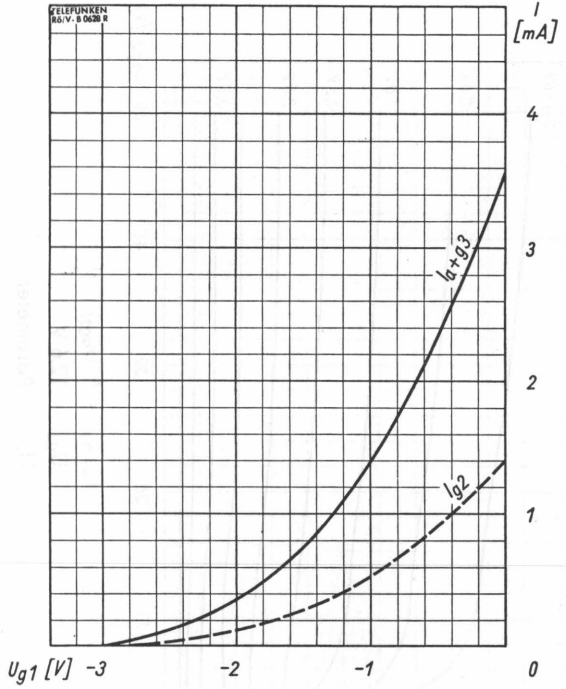

Pico 7 · Miniatur

max. Abmessungen
max. Dimensions
DIN 41537, Nenngröße 38, Form A

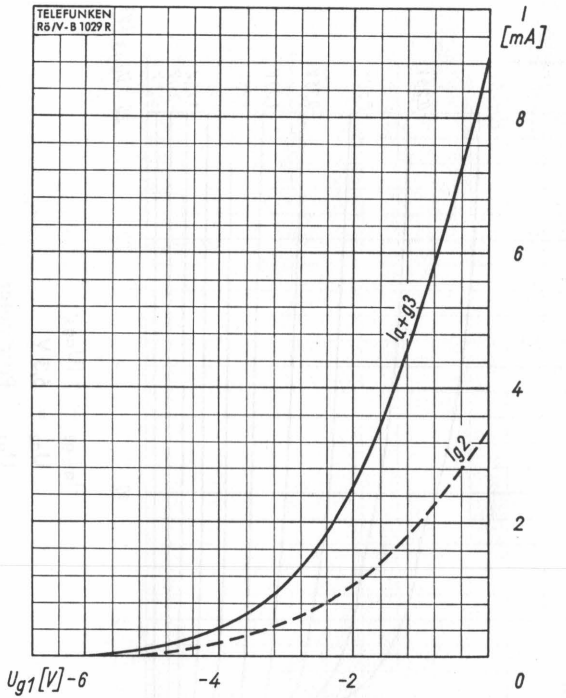



Gewicht · Weight
max. 10 g

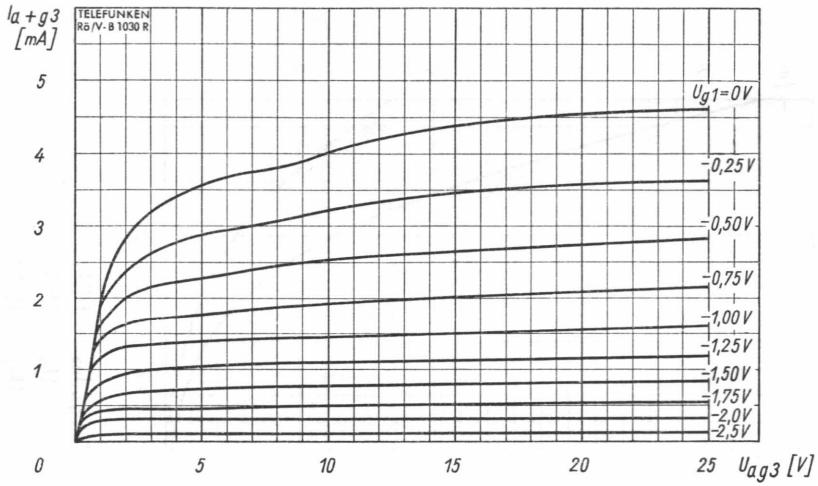
Wenn notwendig, muß gegen Herausfallen der Röhre aus der Fassung Vorsorge getroffen werden.
Special precaution must be taken to prevent the tube from becoming dislodges.



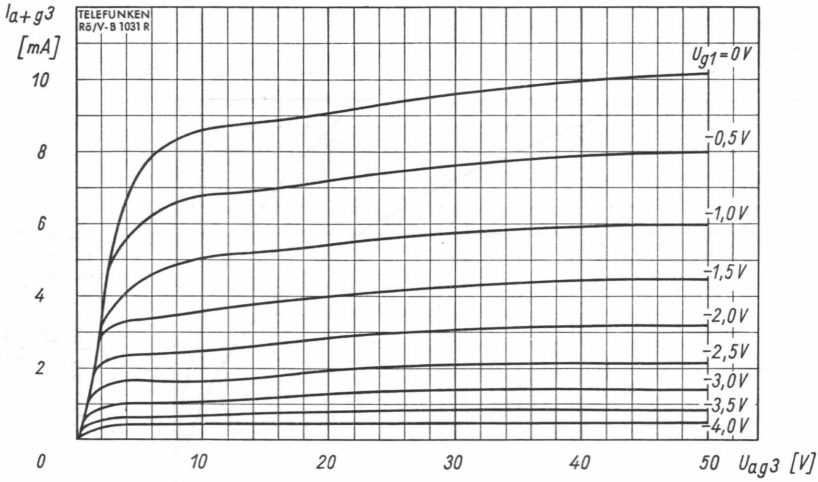

$I_{a+g3}, I_{g2} = f(U_{g1})$
$U_a = 6{,}3$ V
$U_{g2} = 6{,}3$ V
$g_3$ an a



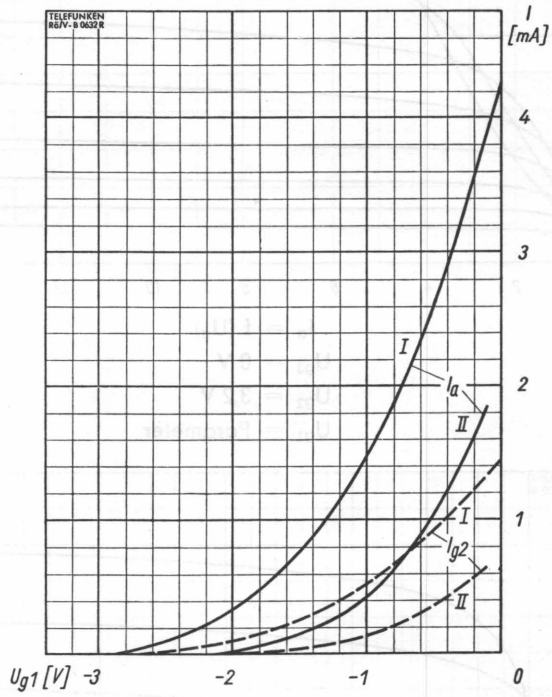

$I_{a+g3}, I_{g2} = f(U_{g1})$
$U_a = 12{,}6$ V
$U_{g2} = 12{,}6$ V
$g_3$ an a




$I_{a+g3} = f(U_{ag3})$
$U_{g2} = 6{,}3$ V
$U_{g1}$ = Parameter
$g_3$ an a



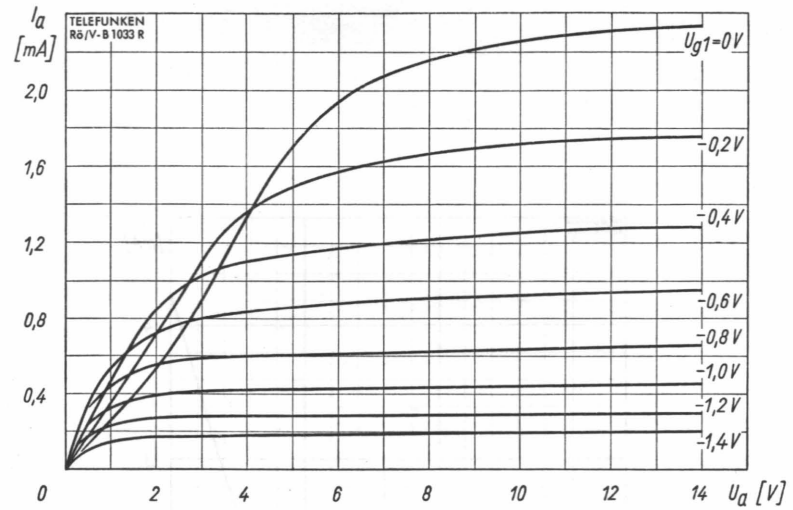

$I_{a+g3} = f(U_{ag3})$
$U_{g2} = 12{,}6$ V
$U_{g1}$ = Parameter
$g_3$ an a



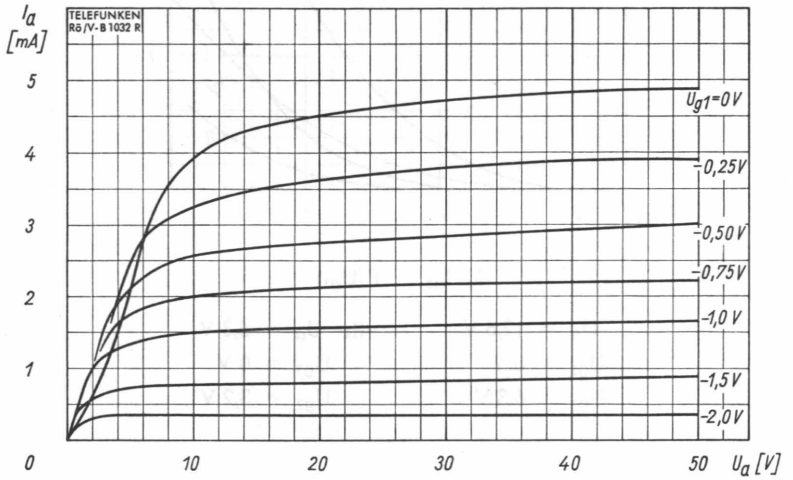

$I_a, I_{g2} = f(U_{g1})$

| | |
|---|---|
| I. $U_a = 12{,}6$ V | II. $U_a = 6{,}3$ V |
| $U_{g3} = 0$ V | $U_{g3} = 0$ V |
| $U_{g2} = 6{,}3$ V | $U_{g2} = 3{,}2$ V |

# TELEFUNKEN




$I_a = f(U_a)$
$U_{g3} = 0$ V
$U_{g2} = 3{,}2$ V
$U_{g1}$ = Parameter




$I_a = f(U_a)$
$U_{g3} = 0$ V
$U_{g2} = 6{,}3$ V
$U_{g1}$ = Parameter