

Batterieröhre indirekt geheizt
Parallelspeisung
oder 2 Röhren in Serie

Battery tube indirectly heated
connected in parallel
or 2 tubes in serie

TELEFUNKEN

EF 97

Regelbare Pentode
HF/ZF-Verstärker / Mischer

Variable mu pentode
RF/IF-amplifier, mixer

Vorläufige technische Daten · Tentative data

Röhre für Autoempfänger, deren Betriebsspannungen unmittelbar der 6,3 Volt- bzw. 12,6 Volt-Autobatterie entnommen werden können.

Tube for car-radios operating with 6.3/12.6 B+ supply.

U_f	6,3	V
I_f	300	mA

Betriebswerte · Typical operation

HF/ZF-Verstärker · RF/IF-amplifier

U_a	6,3	6,3	12,6	12,6	V
U_{g3}	0	0	0	0	V
U_{g2}	3,2	1,6	6,3	3,2	V
$U_{g1}^1)$	-0,7	-0,7	-0,7	-0,7	V
I_a	1	0,4	3	1	mA
I_{g2}	0,4	0,15	1,1	0,35	mA
S	1	0,5	1,9	1,1	mA/V
R_i	70	200	150	200	k Ω
U_{g1} für S = 0,1	-2,5	-2,5	-3,5	-2,6	V
für S = 0,05	-4	-3,5	-5	-4	V
r_{aeq}	8	15	5,5	7	k Ω

Wegen kleinerer R_i -Streuungen wird empfohlen, die Einstellung $U_{g2} = 0,25 \cdot U_a$ vorzuziehen. Auch ist die erreichbare Verstärkung als Folge von R_i und S in diesem Falle am größten.

In order to limit the R_i stray range it is recommended to prefer the setting $U_{g2} = 0.25 \cdot U_a$. In this case the maximum of amplification as result of R_i and S will be obtained.

Als Mischröhre, HF an g_1 , Oszillator an g_3 · As mixer, RF to g_1 , oscillator to g_3

U_a	6,3		12,6	V			
R_{g3}	0,1		0,1	M Ω			
U_{g2}	3,2		6,3	V			
U_{osz}	5		10	V _{eff}			
U_{g1}	1) -2,5	-3,5	1) -3,5	-5,0	V		
I_a	0,45		1,3	mA			
I_{g2}	0,6		1,7	mA			
S_c	300	30	15	550	55	27,5	μ A/V
R_{ic}	30		25	k Ω			
r_{aeq}	55		40	k Ω			

1) U_{g1} nur durch $R_{g1} = 10$ M Ω erzeugt · U_{g1} produced by voltage drop across $R_{g1} = 10$ M Ω only



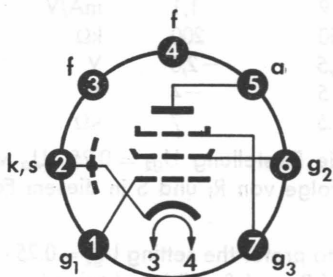
Grenzwerte · Maximum ratings

U_a	30	V
N_a	0,5	W
U_{g2}	30	V
N_{g2}	0,5	W
U_{g3}	30	V
I_k	15	mA
R_{g1}	22	M Ω
R_{g3}	5	M Ω
U_{fk}	30	V

Kapazitäten · Capacitances

C_e	6,5	pF
C_a	4,0	pF
C_{g1a}	0,015	pF
	(< 0,02)	
C_{g1g2}	3,0	pF

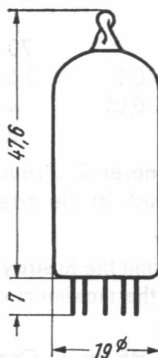
Sockelschaltbild
Base connection



Pico 7 · Miniatur

max. Abmessungen
max. dimensions

DIN 41 537, Nenngröße 38, Form A

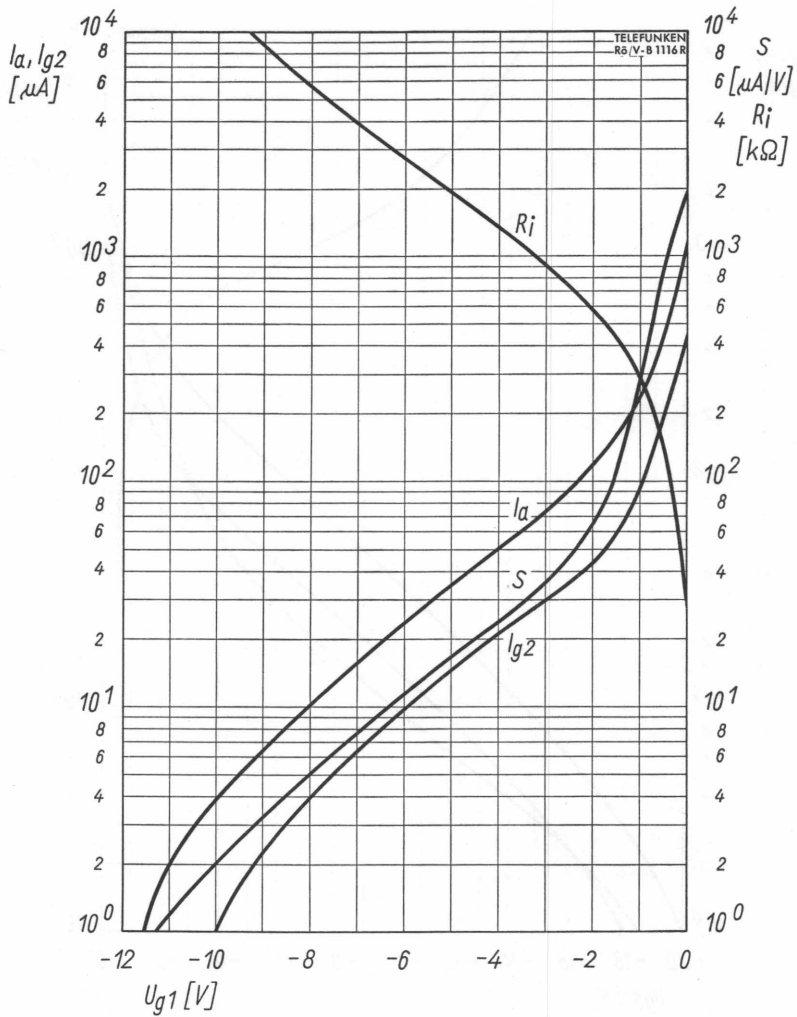


Gewicht · Weight
max. 10 g

Wenn notwendig, muß gegen Herausfallen der Röhre aus der Fassung Vorsorge getroffen werden.

Special precaution must be taken to prevent the tube from becoming dislodged.





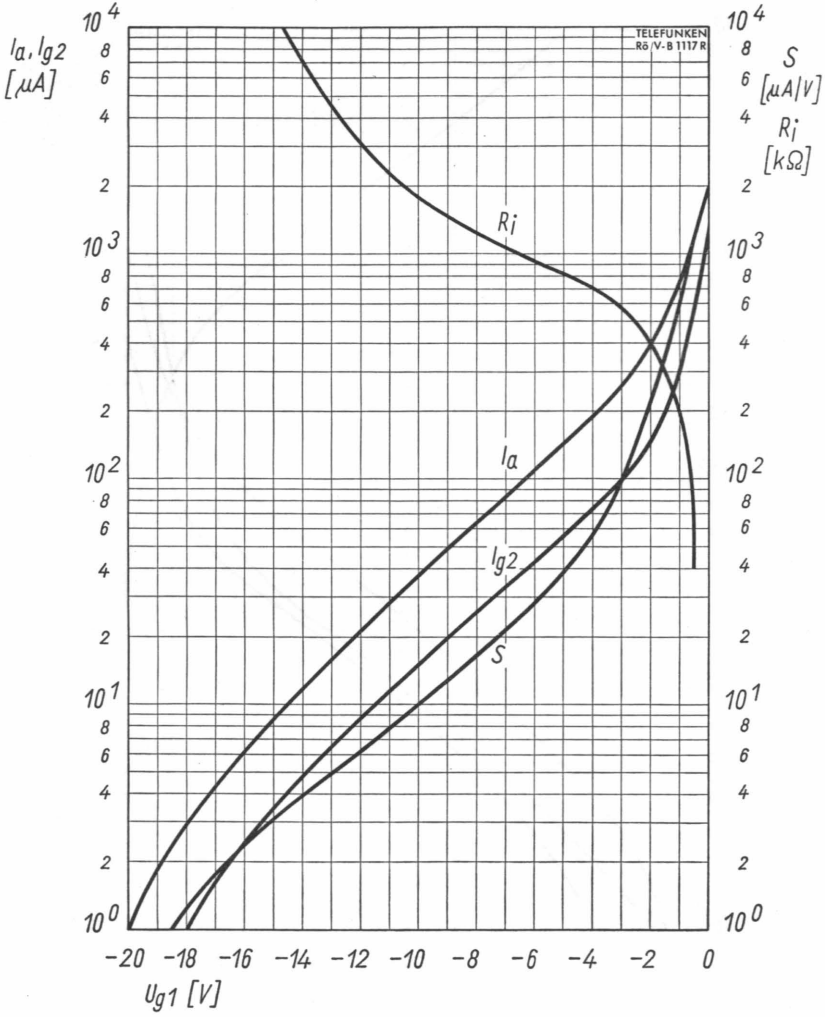
$$I_a, I_{g2}, S, R_i = f(U_{g1})$$

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

$$U_{g3} = 0 \text{ V}$$

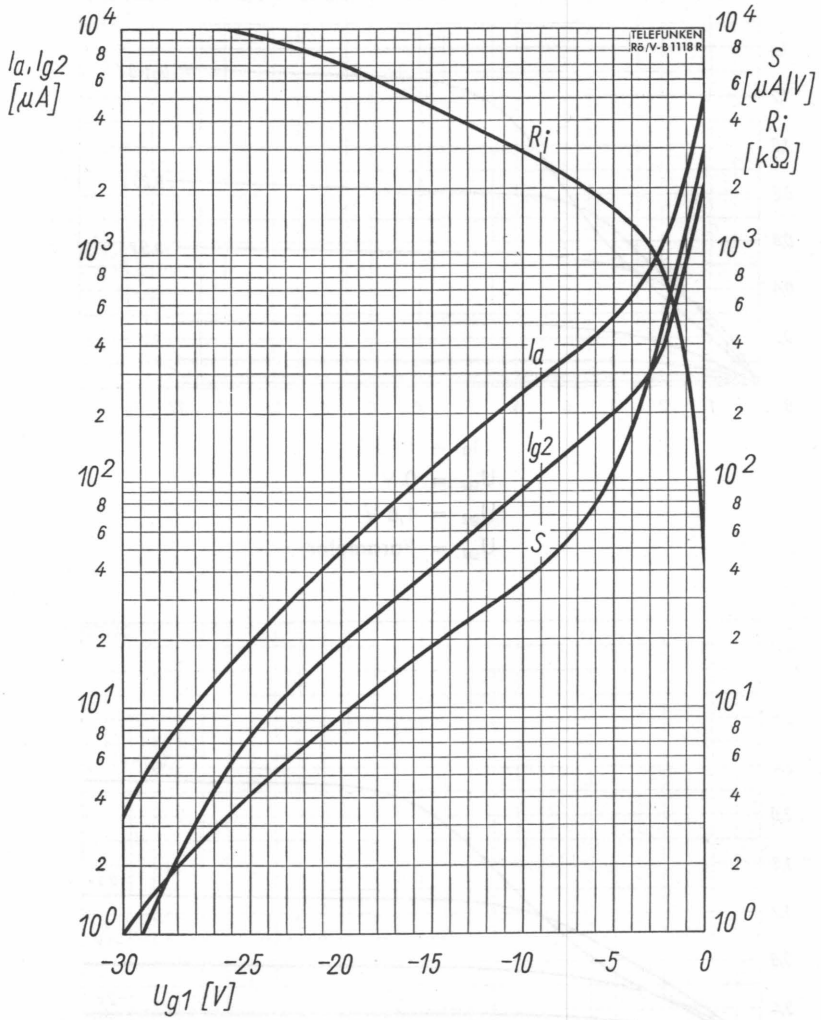
$$U_{g2} = 1,6 \text{ V}$$





$I_a, I_{g2}, S, R_i = f(U_{g1})$
 $U_a = 6,3 \text{ V}$
 $U_{g3} = 0 \text{ V}$
 $U_{g2} = 3,2 \text{ V}$



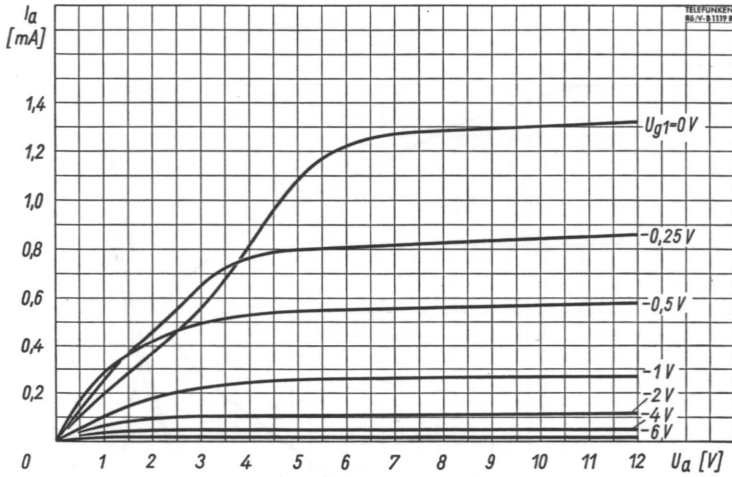


$$I_a, I_{g2}, S, R_i = f(U_{g1})$$

$$U_a = 12,6 \text{ V}$$

$$U_{g3} = 0 \text{ V}$$

$$U_{g2} = 6,3 \text{ V}$$

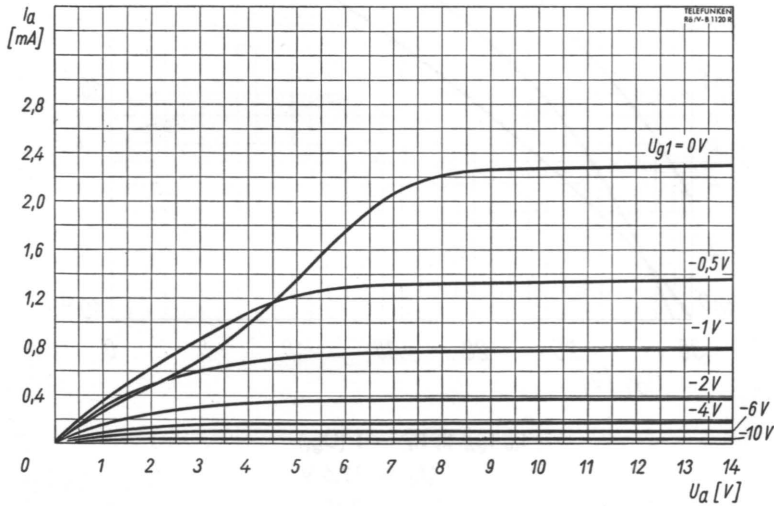


$$I_a = f(U_a)$$

$$U_{g3} = 0V$$

$$U_{g2} = 1,6V$$

$$U_{g1} = \text{Parameter}$$



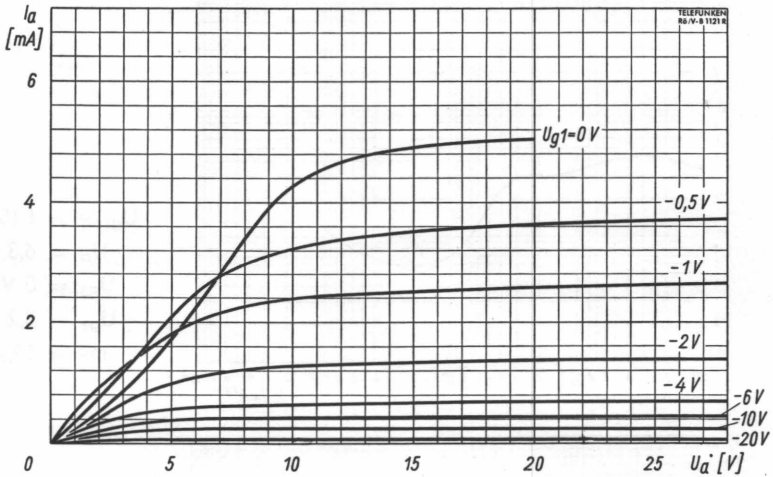
$$I_a = f(U_a)$$

$$U_{g3} = 0V$$

$$U_{g2} = 3,2V$$

$$U_{g1} = \text{Parameter}$$



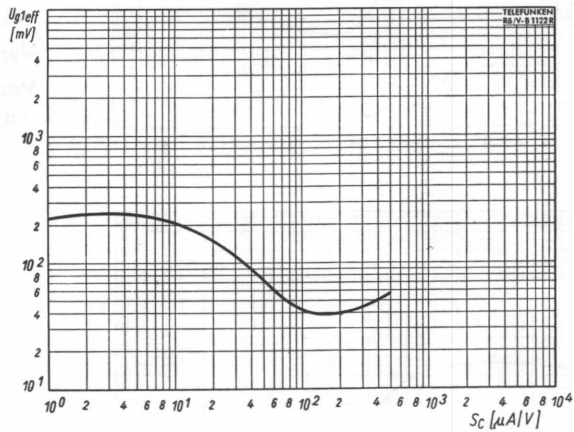


$$I_a = f(U_a)$$

$$U_{g3} = 0 \text{ V}$$

$$U_{g2} = 6,3 \text{ V}$$

$$U_{g1} = \text{Parameter}$$



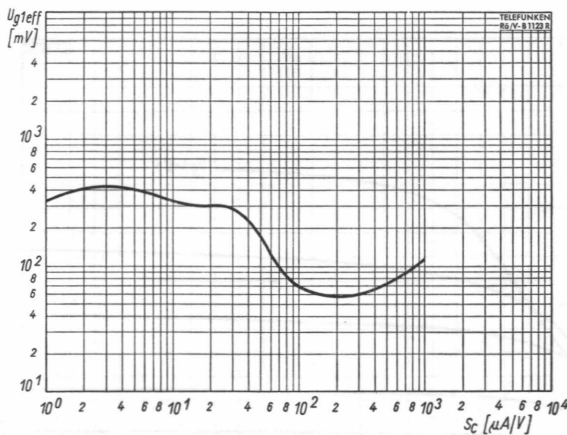
$$U_{g1\text{eff}} = f(S_c)$$

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

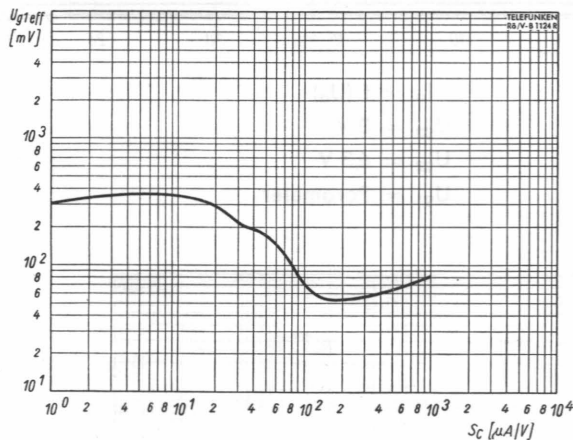
$$U_{g3} = 0 \text{ V}$$

$$U_{g2} = 1,6 \text{ V}$$

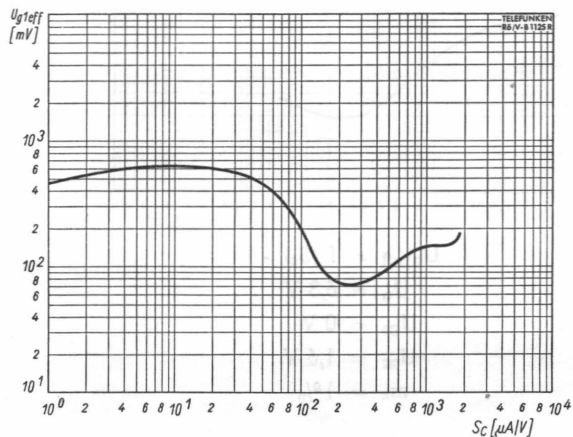
$$m_k = 1\%$$



$U_{g1\text{eff}} = f(S_c)$
 $U_a = 6,3 \text{ V}$
 $U_{g3} = 0 \text{ V}$
 $U_{g2} = 3,2 \text{ V}$
 $m_k = 1\%$



$U_{g1\text{eff}} = f(S_c)$
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