

Netzröhre für W-Heizung
indirekt geheizt
Parallelspeisung
AC-Heating
indirectly heated
connected in parallel

TELEFUNKEN

EF 89

Regelbare HF- und ZF-Pentode
mittelsteil
Remote cutoff
RF-pentode

U_f 6,3 V
 I_f 200 mA

Meßwerte · Measuring values

U_a	170	250	250	V
U_{g3}	0	0	0	V
U_{g2}	100	85	100	V
U_{g1}	-1,2	-1,2	-2	V
I_a	12	9	9	mA
I_{g2}	4,4	3,2	3	mA
S	4,4	4	3,6	mA/V
R_i	0,4	0,75	0,9	M Ω
$\mu_{g2/g1}$	21	21	21	

Betriebswerte · Typical operation

als HF- oder ZF-Verstärker · as RF or IF amplifier

Es wird ein Betrieb mit Kathodenwiderstand empfohlen

Operation with a cathode resistor is recommended

$U_a = U_b$	200	250		V	
U_{g3}	0	0		V	
R_{g2}	24	51		k Ω	
R_k	130	160		Ω	
U_{g1}	-1,95	-20	-1,95	-20	V
I_a	11,1	—	9	—	mA
I_{g2}	3,8	—	3	—	mA
S	3,85	0,16	3,5	0,24	mA/V
R_i	0,55	—	0,9	—	M Ω
r_{aeq}	4,2	—	4,2	—	k Ω



Betriebswerte · Typical operation

als HF- oder ZF-Verstärker · as RF or IF amplifier

Es wird ein Betrieb mit Gitterableitwiderstand empfohlen

Operation with a grid resistor is recommended

$U_a = U_b$	200		250		V
U_{g3}	0		0		V
R_{g2}	33		62		k Ω
R_k	0		0		Ω
R_{g1}	10		10		M Ω
U_{g1}	0	-20	0	-20	V
I_a	11,3	—	9	—	mA
I_{g2}	3,9	—	2,9	—	mA
S	5,15	0,15	4,7	0,22	mA/V
R_i	0,55	—	0,82	—	M Ω
r_{aeq}	2,5	—	2,4	—	k Ω

Grenzwerte · Maximum ratings

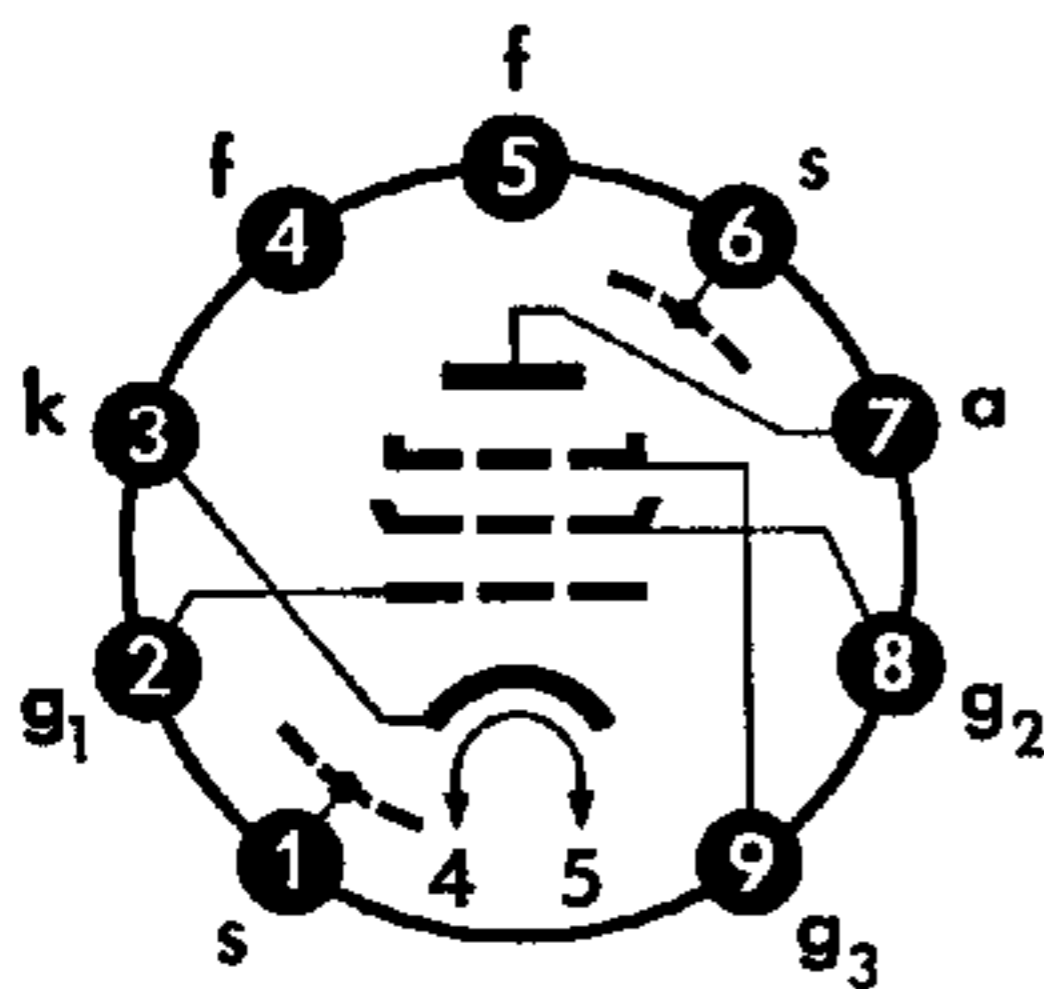
U_{ao}	550		V
U_a	300		V
N_a	2,25		W
U_{g2o}	550		V
U_{g2}	300		V
N_{g2}	0,45		W
I_k	16,5		mA
R_{g1}	3		M Ω
$R_{g1}^{1)}$	22		M Ω
R_{g3}	10		k Ω
$U_{g1e} (I_{g1} \leq \pm 0,3 \mu A)$	-1,3		V
$R_{f/k}$	20		k Ω
$U_{f/k}$	100		V

1) U_{g1} nur durch R_{g1} erzeugt. U_{g1} with R_{g1} .

Kapazitäten · Capacitances

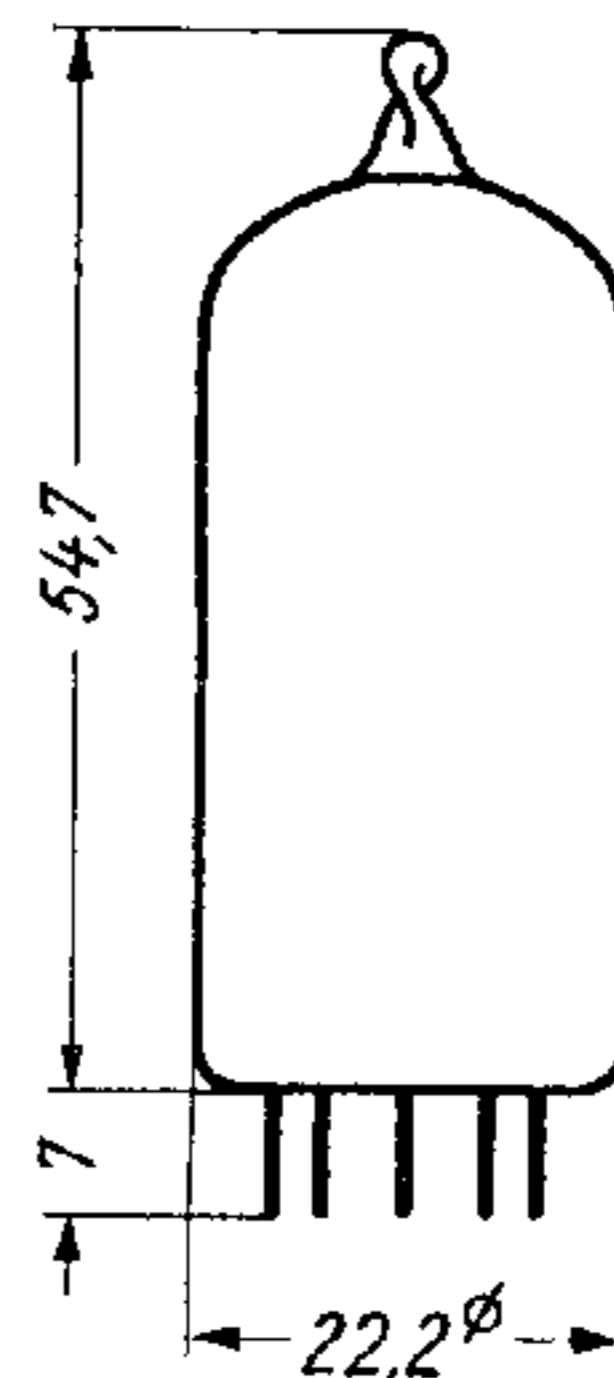
C_e	5,5	pF
C_a	5,1	pF
$C_{g1/a}$	< 0,002	pF
$C_{g1/f}$	0,05	pF

Sockelschaltbild Base connection



Pico 9 (Noval)

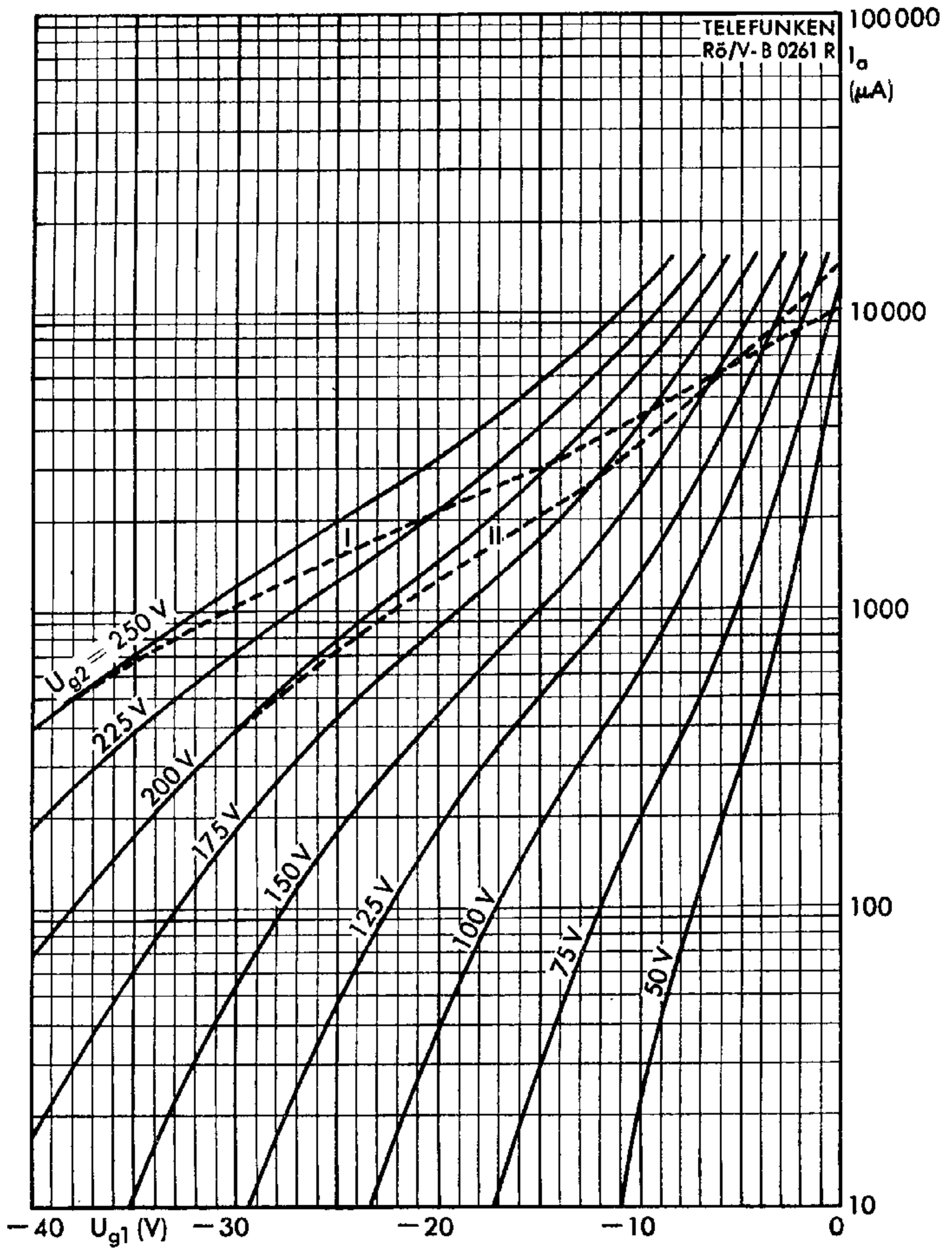
max. Abmessungen max. dimensions



Gewicht · Weight
max. 15 g

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



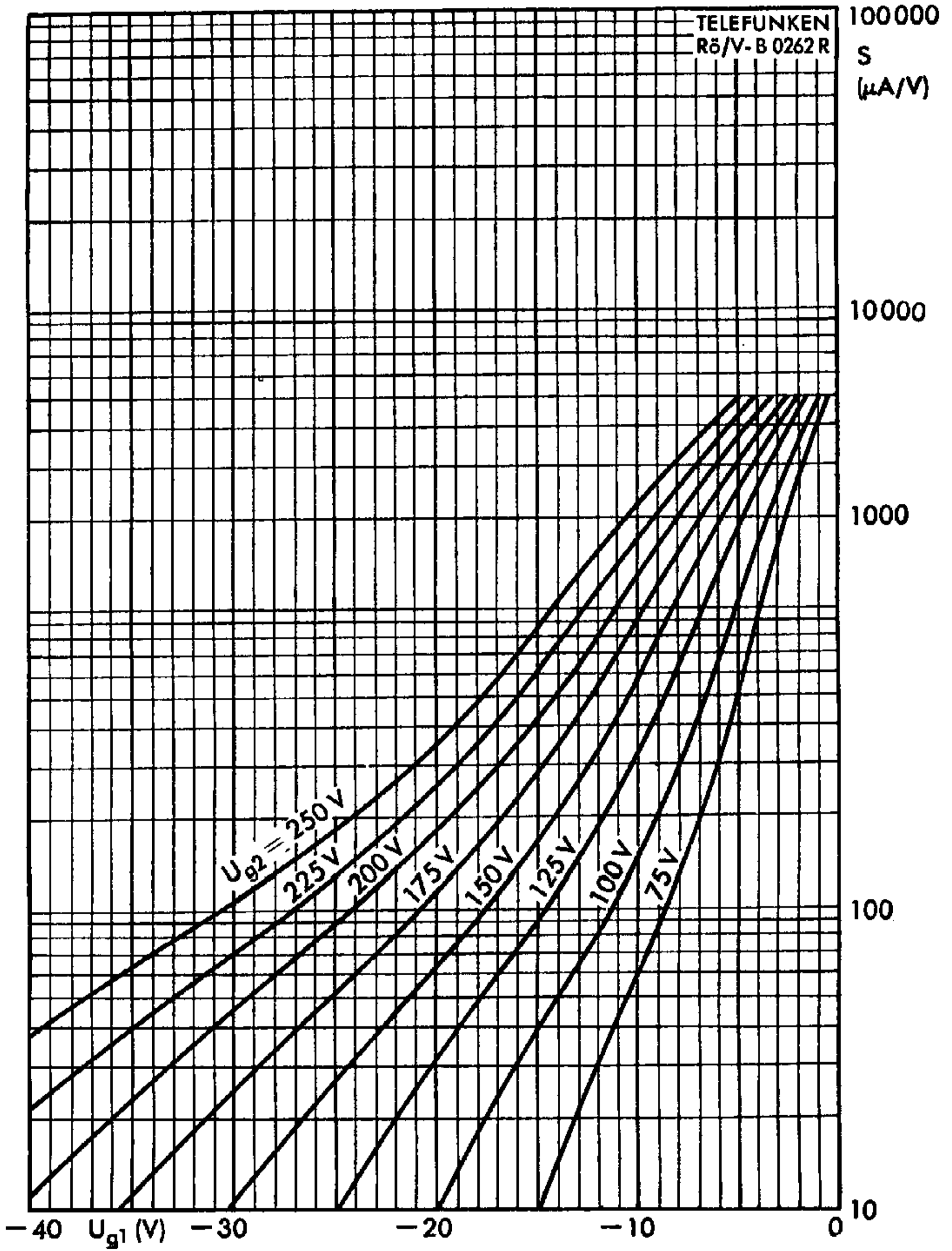


$I_a = f(U_{g1})$
 $U_a = 200 \dots 250 V$
 $U_{g3} = 0 V$
 $U_{g2} = \text{Parameter}$

I $U_b = 250 V$
 $R_{g2} = 51 k\Omega$

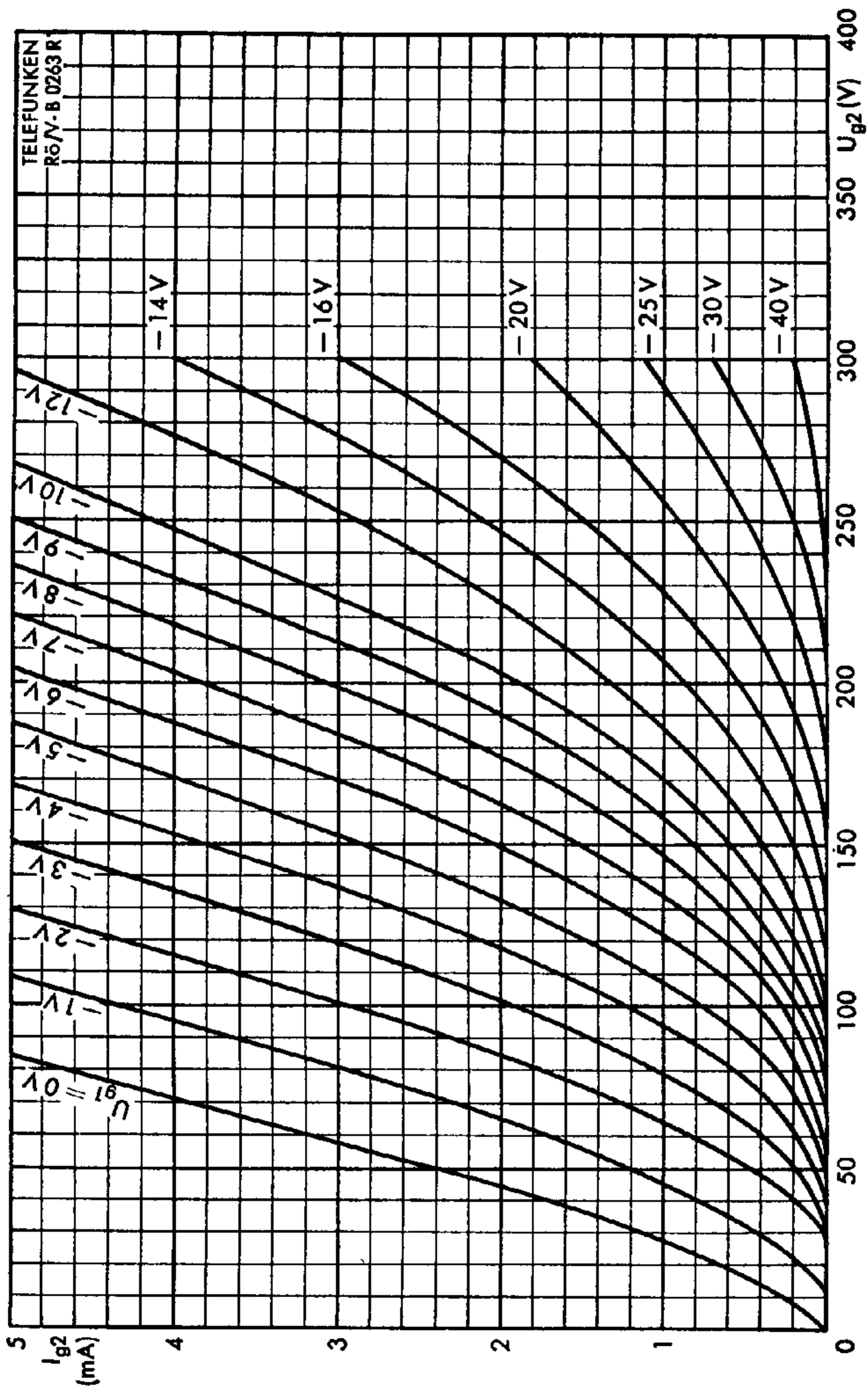
II $U_b = 200 V$
 $R_{g2} = 24 k\Omega$





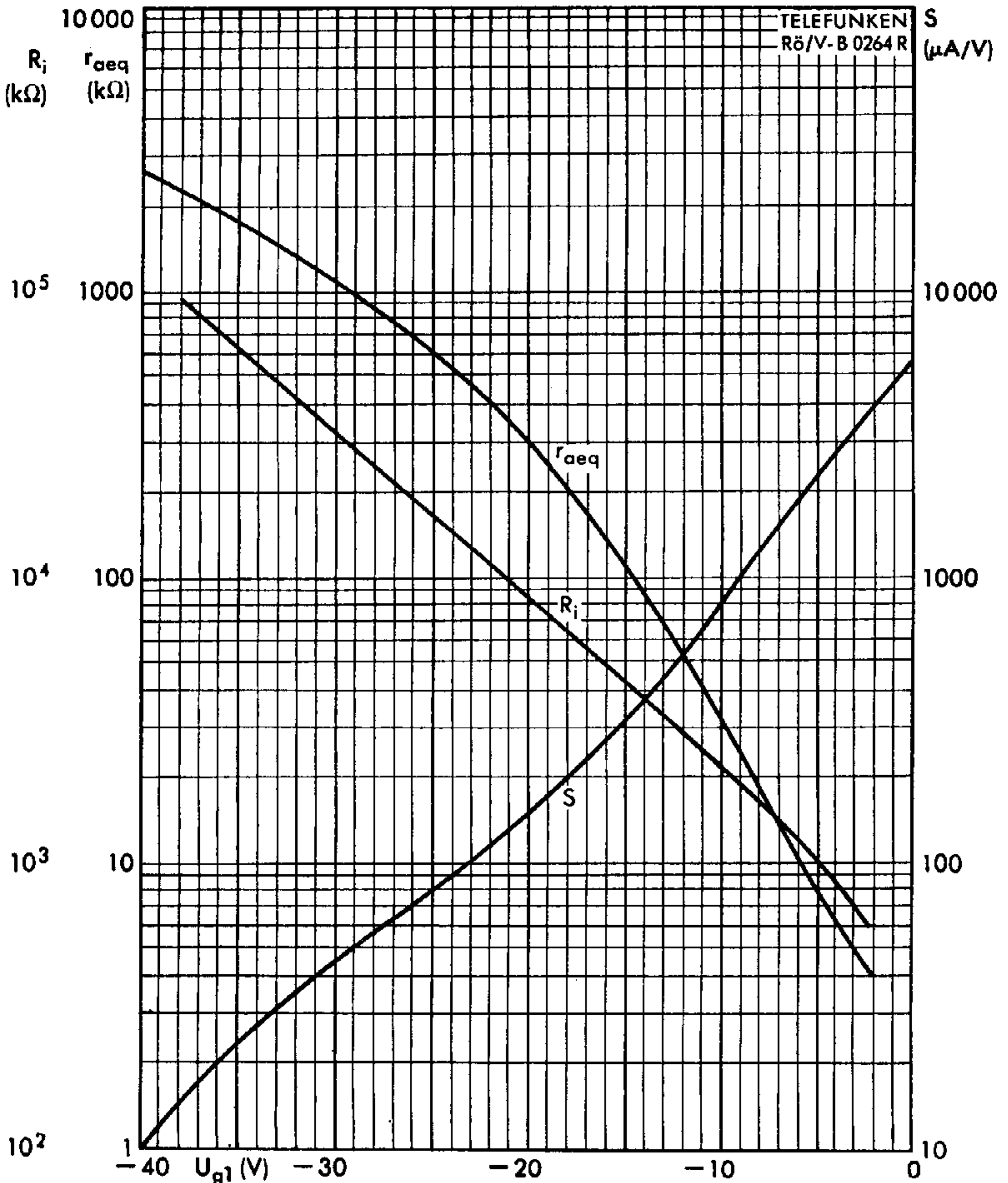
$S = f(U_{g1})$
 $U_a = 250\text{ V}$
 $U_{g3} = 0\text{ V}$
 $U_{g2} = \text{Parameter}$





$I_{g2} = f(U_{g2})$
 $U_a = 250 \text{ V}$
 $U_{g3} = 0 \text{ V}$
 $U_{g1} = \text{Parameter}$



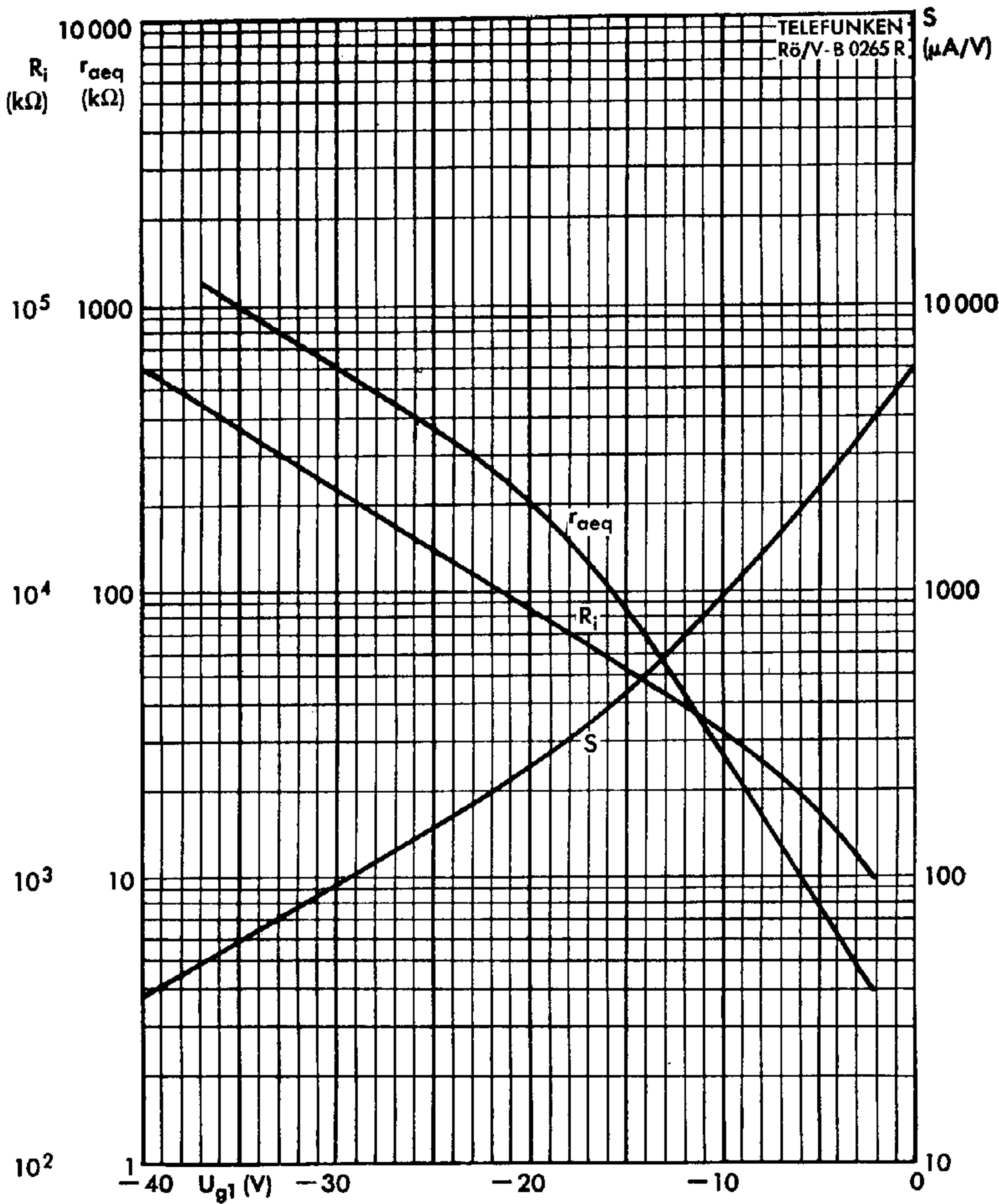


$$S, R_i, r_{aeq} = f(U_{g1})$$

$$U_b = 200 \text{ V}$$

$$R_{g2} = 24 \text{ k}\Omega$$





$S, R_i, r_{aeq} = f(U_{g1})$

$U_b = 250 V$

$R_{g2} = 51 k\Omega$



