

PHILIPS „MINIWATT“ KCH1

KCH1

Röhrentype: Triode-Hexode, Mischröhre für Überlagerungs-empfänger.

Type de tube: triode-hexode, changeuse de fréquence pour superhétérodynes.

Type of tube: triode-hexode, frequency converter for superheterodyne receivers.

Heizung dir., Batteriestrom, Parallelspeisung.

Chauffage dir., courant batterie, alimentation en parallèle.

Heating dir., battery current, parallel filament supply.

Vf 2 V
If 0,18 A

Kapazitäten.

Capacités.

Capacities.

a.) Hexodenteil	Cg1	7	μF
Partie hexode	Ca	16	μF
Hexode section	Cag1	<0,05	μF
b.) Triodenteil	Cgf	13,5	μF
Partie triode	Caf	3,6	μF
Triode section	Cag	3,5	μF
c.) Zwischen Hexoden- und Triodenteil	CgTg1H	<0,4	μF
Entre les parties hexode et triode			
Between hexode and triode sections			

Betriebsdaten des Hexodenteiles als Mischröhre.

Caractéristiques de service de la partie hexode comme changeuse de fréquence.

Operating conditions for use of the hexode section as frequency changer.

- a) Feste Schirmgitterspannung.
Tension de grille-écran fixe.
Fixed screen-grid voltage.

VaH	90	135	V			
Vg2,4	55	55	V			
Rg3	25000	25000	Ω			
Ig3	280	280	μA			
Vg1	-0,5 ¹⁾	-8 ²⁾	-9,5 ³⁾ V			
IaH	1	1	mA			
Ig2+Ig4	1,2	1,2	mA			
Sc	320	325	1 μA/V			
Ri	0,7	>4	>5	>10	>10	MΩ

- b) Schirmgitterspeisung über einen Serienwiderstand.
Alimentation de la grille-écran à travers une résistance série.
Screen-grid supply through a series resistance.

VaH	90	135	V			
Rg2,4	29000	67000	Ω			
Rg3	25000	25000	Ω			
Ig3	380	280	μA			
Vg1	-0,5 ¹⁾	-12 ²⁾	-15 ³⁾	-0,5 ¹⁾	-17 ²⁾	-20 ³⁾ V
Vg2,4	55	90	55	135	V	
IaH	1	-	1	-	mA	

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Ig ² +Ig ⁴	1,2	-	-	1,2	-	-	mA
Sc	320	3	1	325	3	1	µA/V
Ri	0,74)	>0,9	>1	1,55)	>1	>1,5	MΩ

- c) Schirmgitterspeisung über einen Spannungsteiler.
Alimentation de la grille-écran à travers un diviseur de tension.
Screen-grid supply through a voltage divider.

Va	90			90			V
R1	16000			22000			Ω
R2	55000			110000			Ω
Rg ³	25000			25000			Ω
Ig ³	280			280			µA
Vg ¹	-0,5 ¹⁾	-9,5 ²⁾	-11 ³⁾	-0,5 ¹⁾	-10 ²⁾	-12 ³⁾	V
Vg ^{2,4}	55	-	70	55	-	75	V
Ia _H	1	-	-	1	-	-	mA
Ig ² +Ig ⁴	1,2	-	-	1,2	-	-	mA
Sc	320	3	1	320	3	1	µA/V
Ri	0,7	>2	>3	0,7	>1,5	>2,5	MΩ

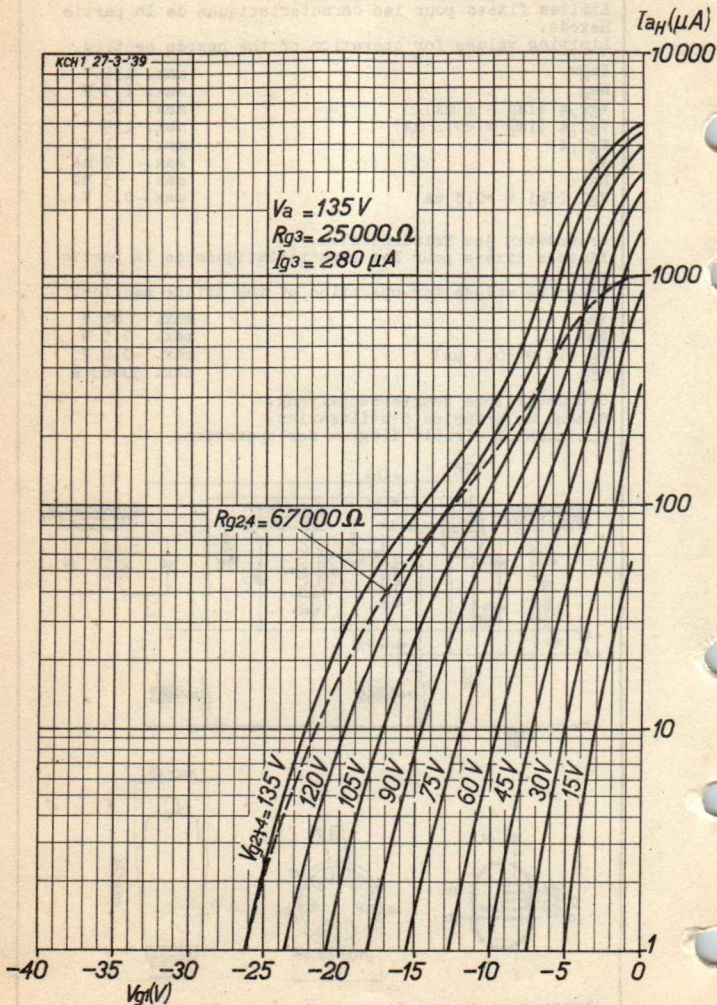
- 1) Im unregelmäßigen Zustand.
Tube non réglée par le C.A.V.
Tube not controlled by A.V.C.
- 2) Für eine Regelung der Mischsteilheit 1:100.
Pour un réglage de la pente de conversion 1:100.
For a control of the conversion conductance of 1:100.
- 3) Grenze des optimalen Regelbereiches.
Limite de la zone de réglage optimum.
Limit of the optimum control range.
- 4) Bei -5 Volt Vorspannung beträgt der Innenwiderstand ca. 100.000 Ω.
A une polarisation de -5 volts la résistance interne vaut 100.000 Ω environ.
At a bias of -5 volts the internal resistance drops to approx. 100.000 Ω
- 5) Bei -6 Volt Vorspannung beträgt der Innenwiderstand ca. 400.000 Ω.
A une polarisation de -6 volts la résistance interne vaut 400.000 Ω environ.
At a bias of -6 volts the internal resistance drops to approx. 400.000 Ω.

Betriebsdaten des Triodenteiles als Oszillator.
Caractéristiques de service de la partie triode comme oscillatrice.

Operating conditions for use of the triode section as oscillator.

Va _T	7)	70	90	135 V
Ra _T		-	7000	22000 Ω
Ia _T	(I _g = 280 µA; R _g = 25000 Ω)	3	3	3 mA
Ia _T	(V _g = 0 V; I _g = 0)	4,5	-	- mA
S	(V _g = 0 V; I _g = 0)	1,7	1,7	1,7 mA/V
µ	(V _g = 0 V; I _g = 0)	18	18	18

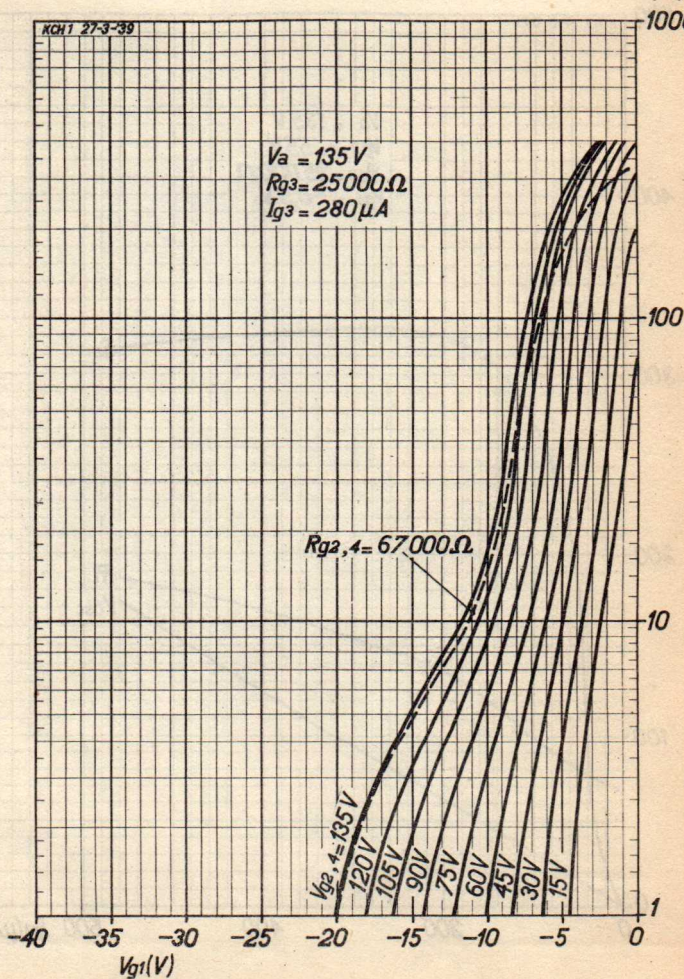
- 7) Anodensp. oder Speisesp. am Anodenwiderstand.
Tens. d'an. ou tens. d'aliment. de la résist. d'anode.
anode volt. or supply volt. of the anode series resist.

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$S_c(\mu A/V)$



KCH1**PHILIPS „MINIWATT“****KCH1** $S_c(\mu A/V)$ $R_i(M\Omega)$

500

5

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 $V_a = 135 V$
 $V_{g2,4} = 55 V$
 $R_{g3} = 25.000 \Omega$
 $V_{g1} = -0,5 V$

400

4

 $V_{osc}(V_{eff})$

300

3

30

200

2

20

100

1

10

0

0

0

200

400

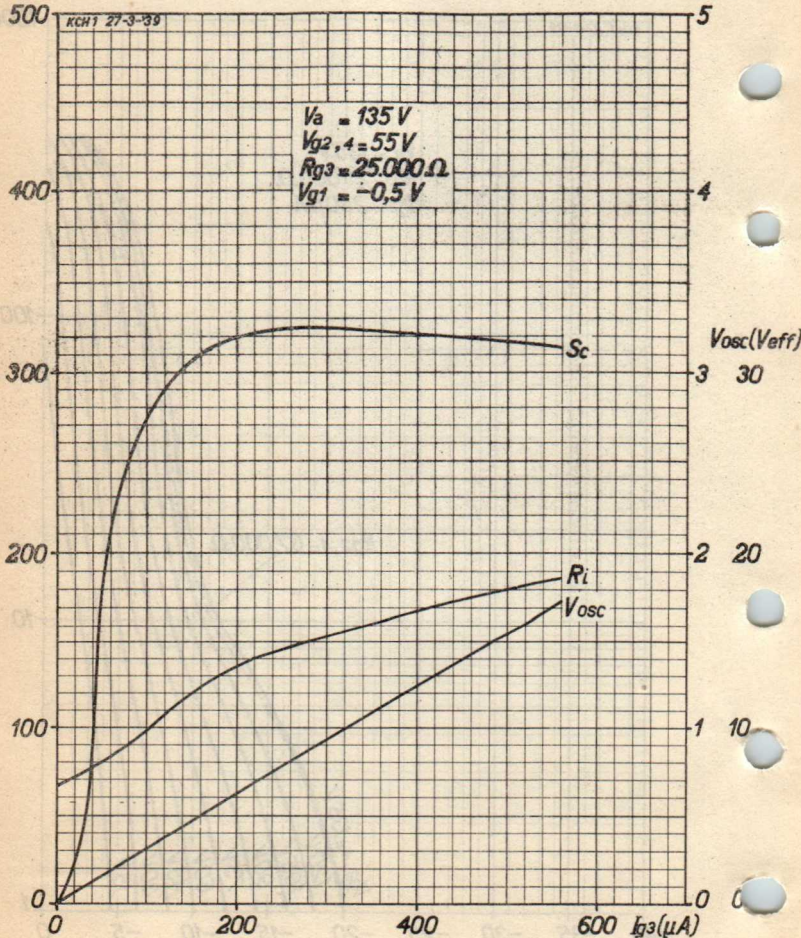
600

 $I_{g3}(\mu A)$

0

27-3-39

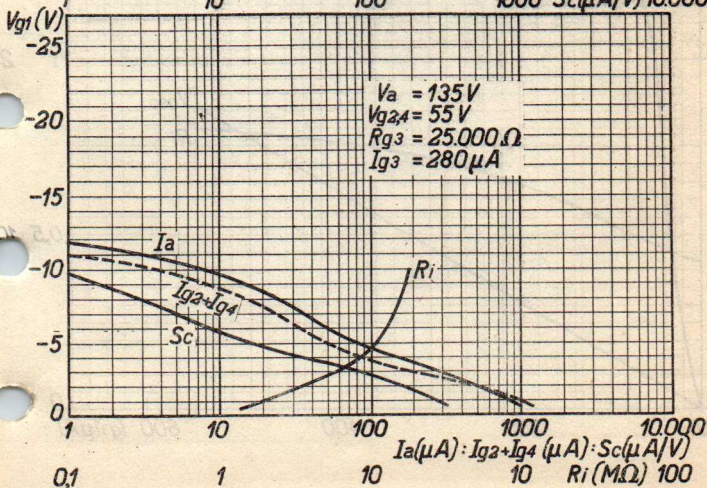
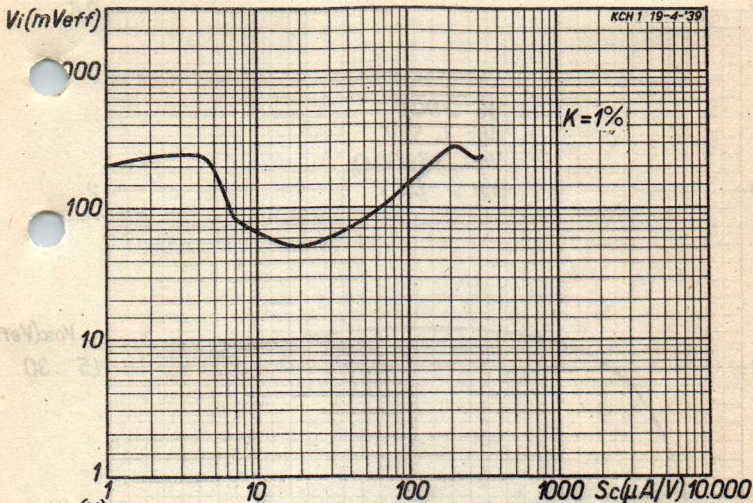
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KCH1**PHILIPS „MINIWATT“****KCH1** $S_c (\mu A/V)$ $R_i (M\Omega)$

500

2,5

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 $V_a = 90V$
 $V_{g2,4} = 55V$
 $R_{g3} = 25.000\Omega$
 $V_{g1} = -0,5V$

400

2

300

1,5 30

200

1 20

100

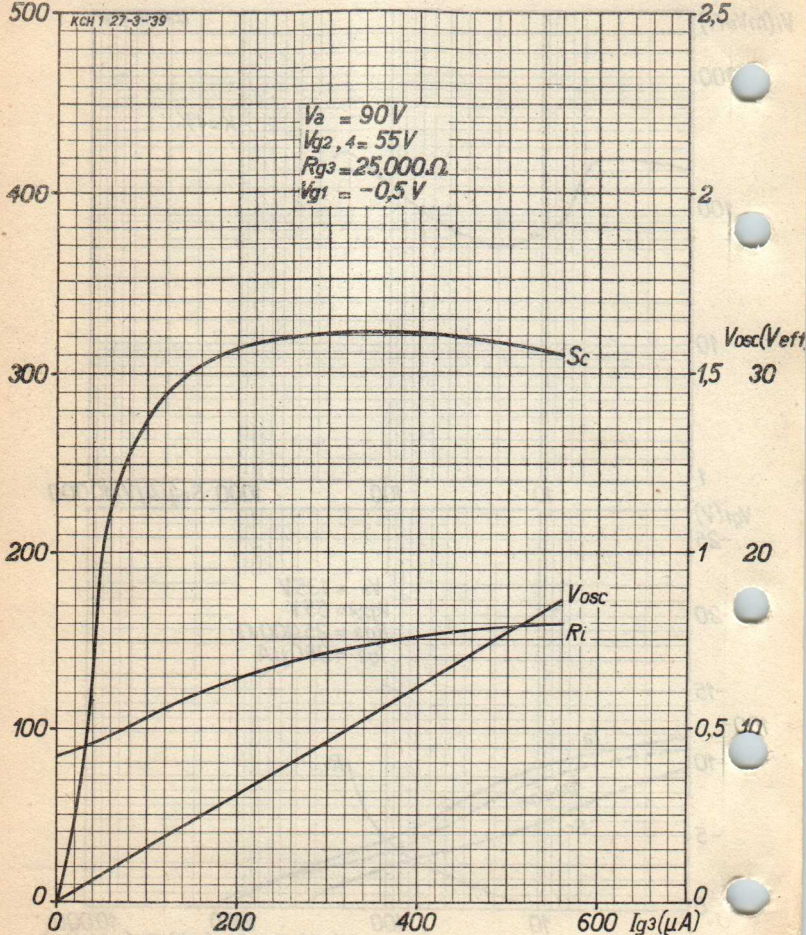
0,5 10

0

0

200

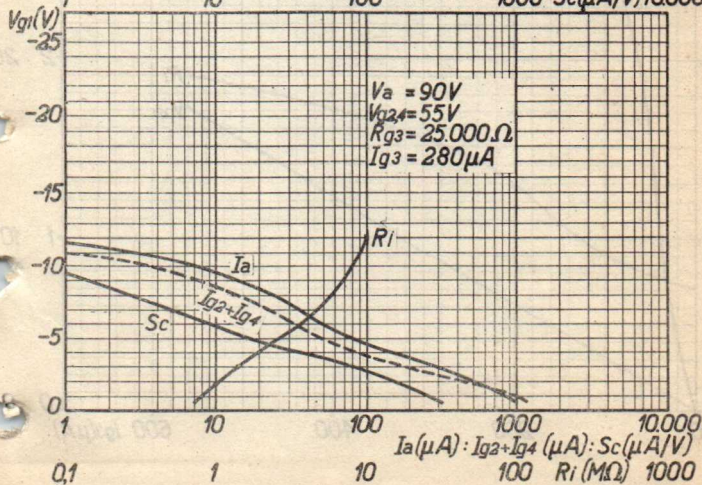
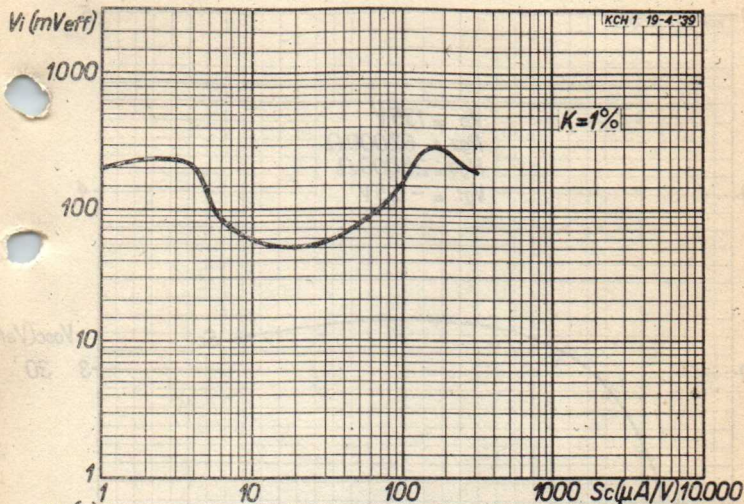
400

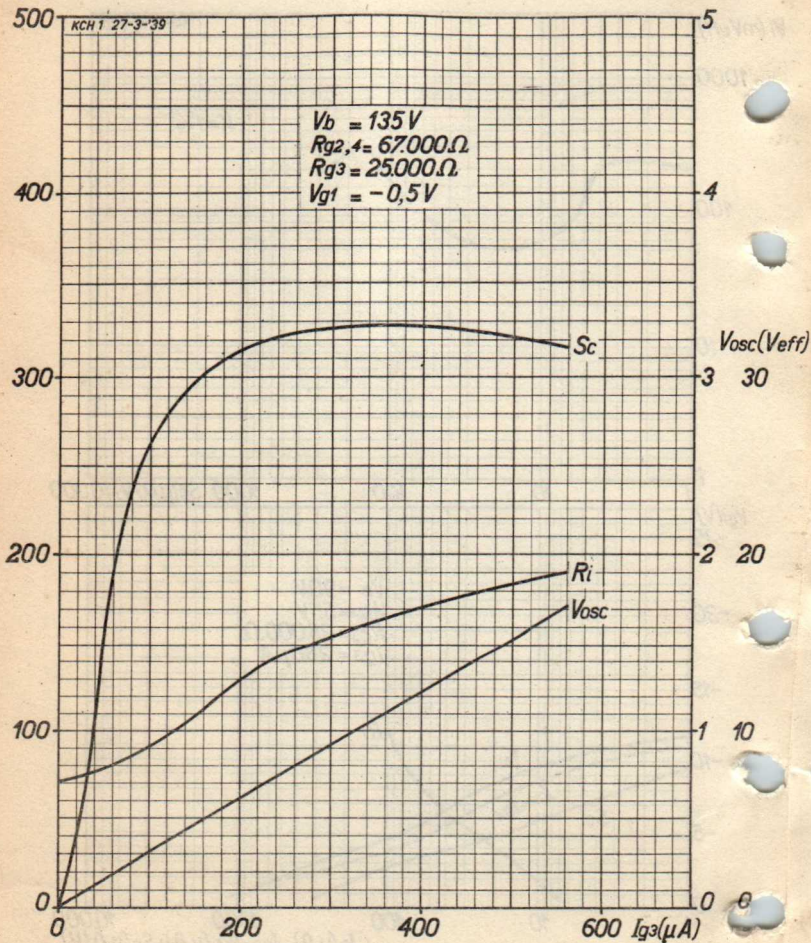
600 $I_{g3} (\mu A)$ 

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KCH1**PHILIPS „MINIWATT“****KCH1** $S_c(\mu A/V)$ $R_i(M\Omega)$ 

KCH1**PHILIPS „MINIWATT“****KCH1** $S_c (\mu A/V)$ $R_i (M\Omega)$

500

2,5

400

300

200

100

0

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 $V_b = 90V$
 $R_{g2,4} = 29.000\Omega$
 $R_{g3} = 25.000\Omega$
 $V_{g1} = -0,5V$ $V_{osc}(V_{eff})$

1,5 30

1 20

0,5 10

0 0

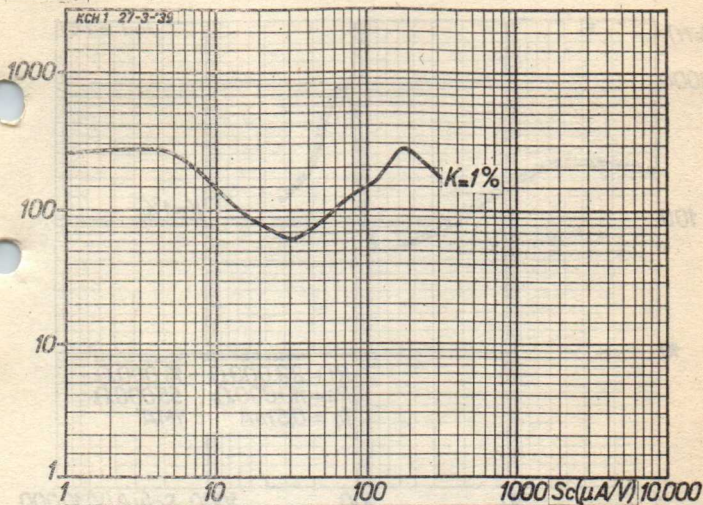
0

200

400

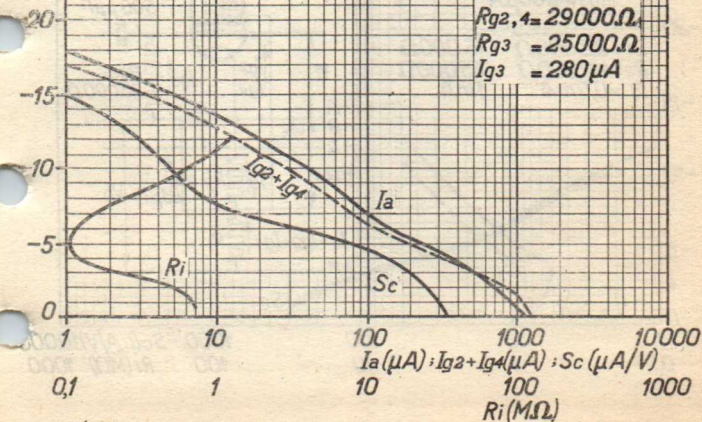
600 $I_{g3} (\mu A)$ R_i V_{osc} S_c

V_i (mV_{eff})



V_{g1} (V)

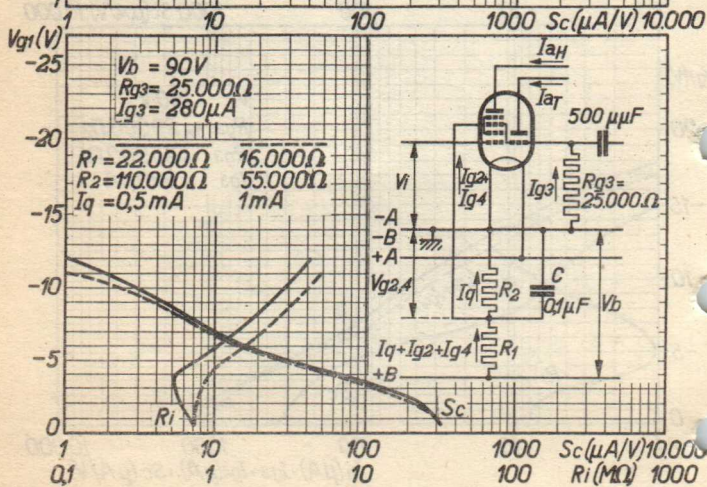
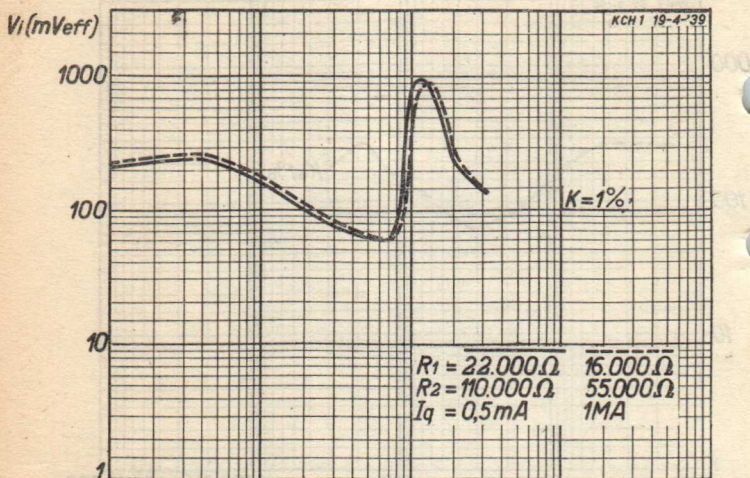
$V_b = 90 V$
 $R_{g2,4} = 29000 \Omega$
 $R_{g3} = 25000 \Omega$
 $I_{g3} = 280 \mu A$



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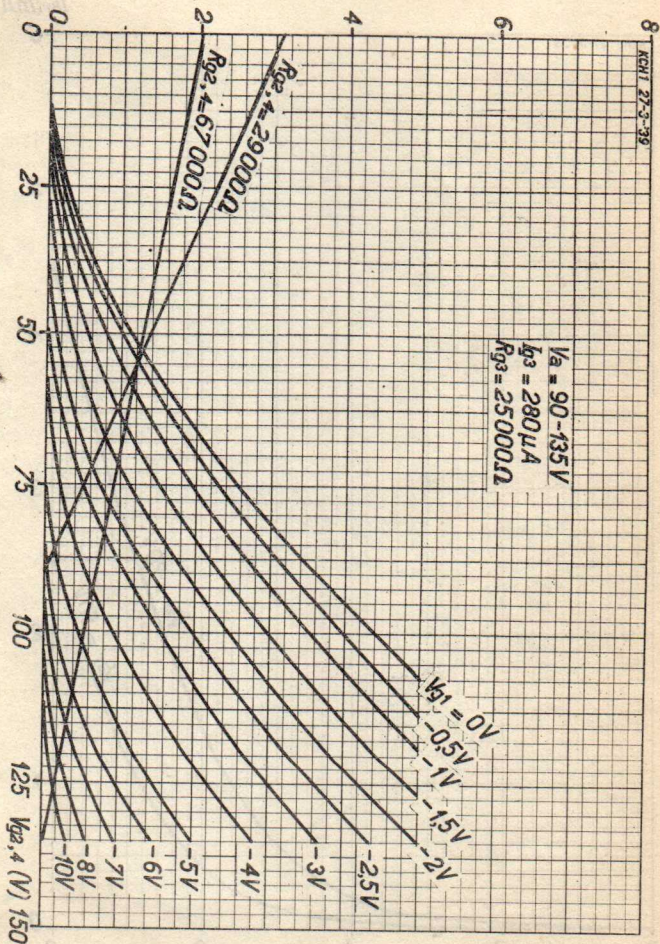


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$I_{g2-I_{g4}}$ (mA)



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