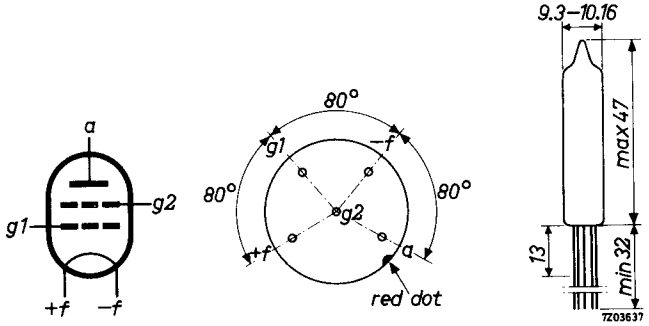
ELECTROMETER TUBE

Subminiature electrometer tetrode

QUICK REFERENCE DATA			
Filament voltage	V_f	1.25	V
Anode voltage	V_a	4.5	V
Grid No.2 voltage	V_{g_2}	-3.2	V
Anode current	I_a	20	μA
Grid No.2 current	I_{g_2}	$< 6 \times 10^{-15}$	A

DIMENSIONS AND CONNECTIONS Dimensions in mm

Base: Subminiature



Directly soldered connections to the leads of this tube must be at least 13 mm from the seal and any bending of the leads must be at least 1.5 mm from the seal.

HEATING: Direct by D.C.

Filament voltage	V_f	1.25	V
Filament current	I_f	13	mA

CHARACTERISTICS AND RANGE VALUES

Anode voltage	V_a	4.5		V
Grid No.2 voltage	V_{g_2}	-3.2	-2 to -4.5	V
Grid No.1 voltage	V_{g_1}	3.0	2 to 4	V
Anode current	I_a	20		μA
Grid No.2 current	$-I_{g_2}$	2.5×10^{-15}	$< 6 \times 10^{-15}$	A
Transconductance	$S_{a_{g2}}$	17	10 to 24	μA/V
Grid No.1 current [1]	I_{g_1}	250		μA
Grid No.2 voltage at crossover point [2]	V_{g_2}	-1.75		V

LIMITING VALUES (Absolute max. rating system)

Anode voltage	V_a	max.	10	V
Cathode current	I_k	max.	300	μA
Filament voltage	V_f	max.	1.5	V
		min.	1.1	V

REMARKS

1. In order to avoid excessive drift of the characteristics the filament voltage must be applied before the anode and grid No.1 voltages.
2. To avoid contamination of the glass, the tube should not be removed from its protective envelope until it is mounted into the equipment.

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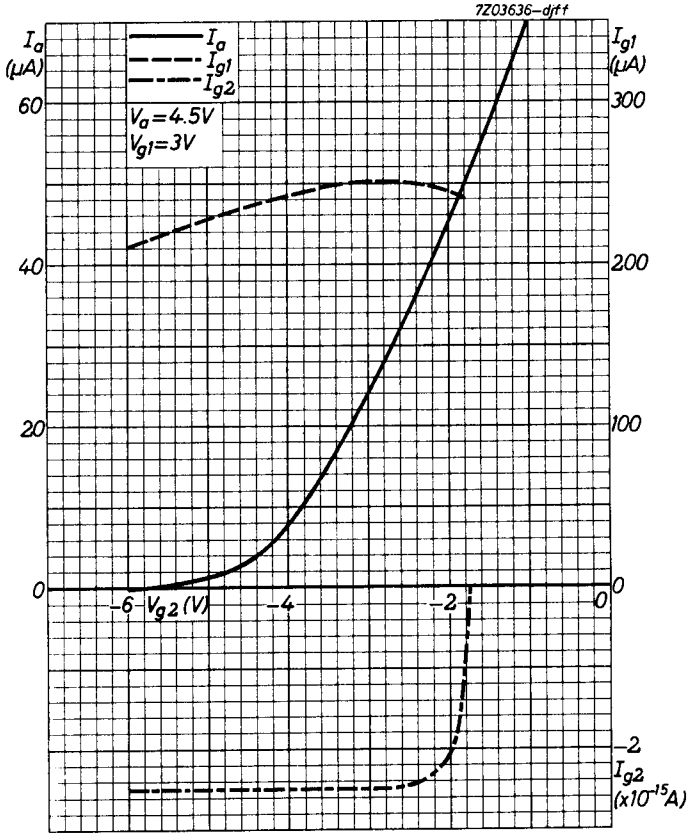
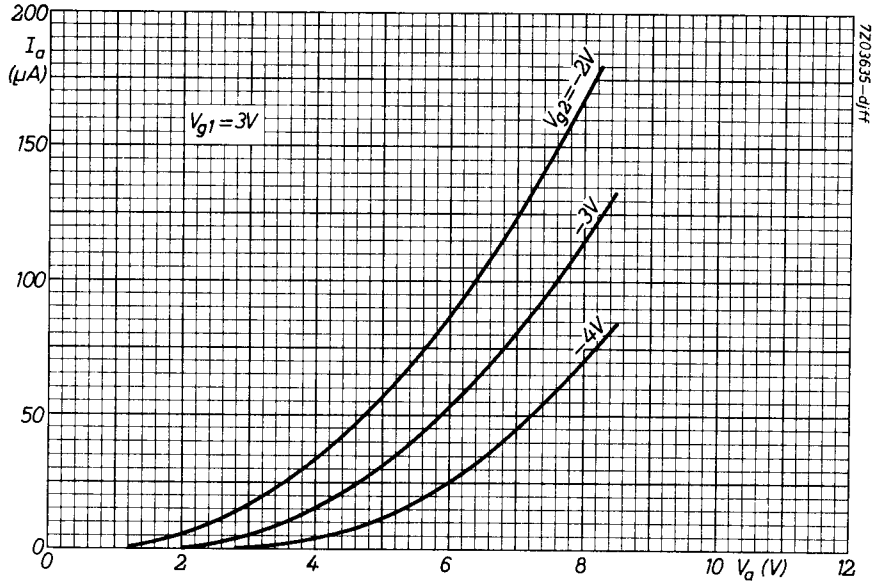
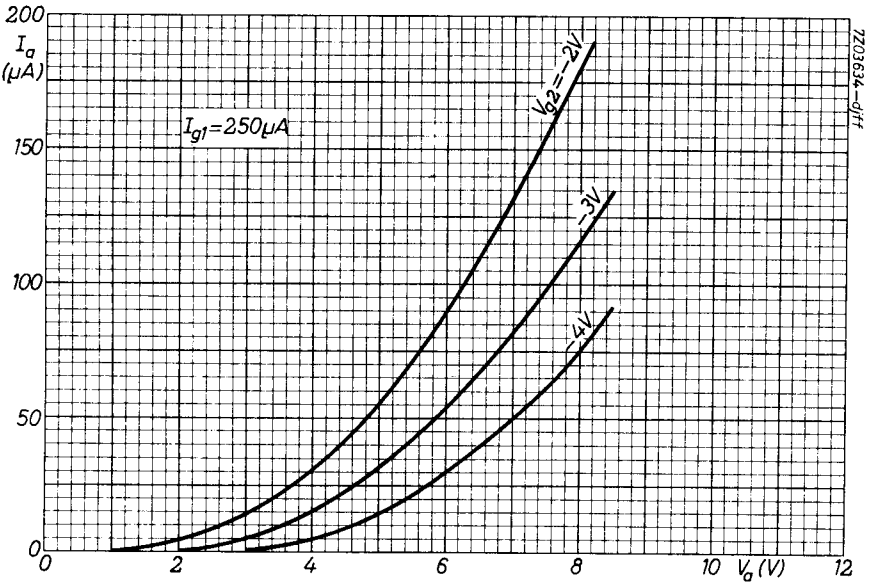
[1]) Only valid in darkness

[2]) "Crossover point" is the point at which the direction of I_{g_2} is reversed At this point, V_{g_2} is at least 0.5 V less negative than its value at I_a = 20 μA


7Z03636–dfff
I_a (μA)
I_a
I_{g1}
I_{g2}
V_a=4.5V
V_{g1}=3V
60
40
20
0
I_{g1} (μA)
300
200
100
0
−2
I_{g2} (x10^{-15}A)
−6
V_{g2} (V)
−4
−2
0


200
I_a (μA)
150
100
50
0
0
2
4
6
8
10
12
V_a (V)
V_{g1} = 3V
V_{g2} = −2V
−3V
−4V
7Z03635-diff


200
I_a (μA)
150
100
50
0
0
2
4
6
8
10
12
V_a (V)
I_{g1} = 250μA
V_{g2} = −2V
−3V
−4V
7Z03634-diff

PHILIPS

Data handbook

Electronic components and materials

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1	1	1968.12
2	2	1968.12
3	3	1968.12
4	4	1968.12
5	FP	2001.05.19