TUNING INDICATOR

Subminiature tuning indicator.

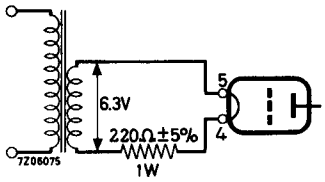
HEATING: Direct by D.C. or A.C.; series or parallel supply

A. In battery receivers

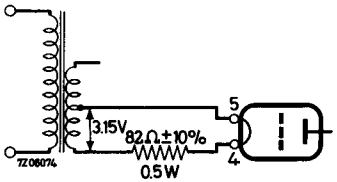
Filament voltage	V_f	1.4 V
Filament current	I_f	25 mA

One of the pins 4 and 5 should be connected to the earthed point of the detector circuit.

B. In A.C. receivers



With 6.3 V transformer winding



With 6.3 V winding with mid tap

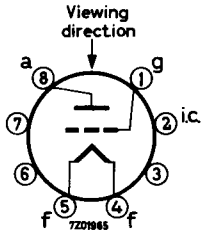
Pin 5 should be connected to the earthed point of the detector circuit.

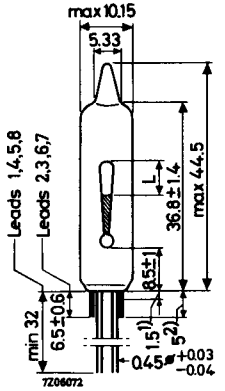
C. In A.C./D.C. receivers — Filament voltage V_f 1.3 V

The filament of the DM70 with a suitable shunt resistor can be connected in a normal heater chain, provided an N.T.C. resistor is present.
Pin 5 should be connected to the earthed point of the detector circuit.

DIMENSIONS AND CONNECTIONS

Dimensions in mm





Base: Submin. 8 p

L = length of the light bar = max. 14 mm

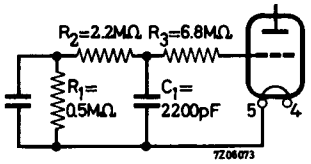
OPERATING CHARACTERISTICS

Anode circuit in the case of A.C. filament supply

In order to avoid hum an anode resistor R_a is recommended according to the table below.

Supply voltage	V_b	250	V	R_a	1.8	MΩ
	V_b	170	V	R_a	1.0	MΩ
	V_b	110	V	R_a	0.47	MΩ

Grid circuit in the case of A.C. filament supply



In order to avoid hum a filter is recommended in the grid circuit according to the above diagram.
R_1 is the detector resistor. In the case of non-delayed A.G.C. the resistor R_2 and the capacitor C_1 are already present.

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1) This part of the leads should not be bent.
2) This part of the leads should not be soldered.

OPERATING CHARACTERISTICS (continued)

A. Battery supply

Filament voltage	V_f	1.4[1]	1.4[2] V
Supply voltage	V_b	67.5	90 V
Anode voltage	V_a[3]	60	85 V
Grid voltage	V_g	0	0 V
Anode current	I_a	105	170 μA
Length of light bar	L	10	11 mm
Grid voltage at L = 0	$V_g(L = 0)$	−7	−10 V

B. Mains supply

Filament voltage	V_f[4]	1.4	1.4	1.4	V_{RMS}
Supply voltage	V_b	110	170	250	V
Anode resistor	R_a	0.47	1.0	1.8	MΩ
Grid voltage	V_g	0	0	0	V
Anode current	I_a	105	110	105	μA
Length of light bar	L	10	10	10	mm
Grid voltage at L = 0	$V_g(L = 0)$	−15	−23	−34	V

LIMITING VALUES (Design centre rating system)

Supply voltage in cold condition	V_{bo}	max. 450	V
Supply voltage	V_b	max. 300	V
Anode voltage in non-controlled condition	V_a	max. 150	V
Anode voltage	V_a	min. 45	V
Anode dissipation	W_a	max. 75	mW
Cathode current	I_k	max. 0.6	mA
Grid resistor	R_g	max. 10	MΩ

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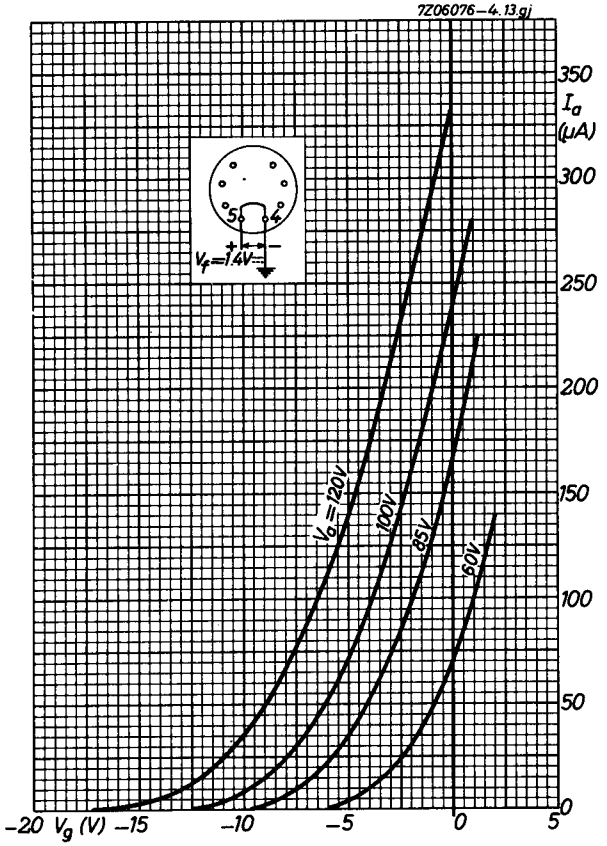
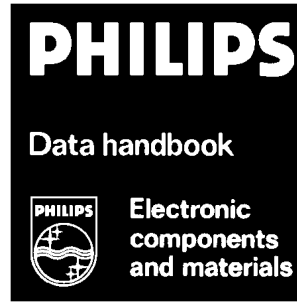
[1]) D.C.; pin 5 grounded

[2]) D.C.; pin 4 grounded

[3]) $V_a = V_b$ reduced by the bias for the output valve

[4]) A.C.; pin 5 connected to earth. When V_f is adjusted according to page 1, I_a will be 1-2 μA lower. The other data remain unchanged.


7Z06076-4.13.gj
350
I_a
(μA)
300
250
200
150
100
50
0
V_b=120V
100V
85V
60V
5
4
V_f=1.4V
−20 V_g (V) −15
−10
−5
0
5



DM70

page	sheet	date
1	1	1969.12
2	2	1969.12
3	3	1969.01
4	4	1969.12
5	FP	1999.08.11