

APPLICATION DIRECTIONS

Ambient illumination

To obtain a clear reading the ambient illumination should range from 40-400 lux measured with an illumination-meter placed in vertical position. This illumination range incorporates the best compromise between the visibility of the figures of the mask and the luminescent picture.

CHARACTERISTICS

Heater voltage	V_f	6.3	V
Heater current	I_f	300	mA

CAPACITANCES

Anode No.2 to all other electrodes	C_{a2}/R	10.5	pF
Deflection plate to all other electrodes	C_D/R	3.5	pF
Deflection plate to all other electrodes	$C_{D'}/R$	3.8	pF
Anode No.1 to all other electrodes	C_{a1}/R	4.9	pF
Grid No.1 to all other electrodes	C_{g1}/R	6.8	pF
Grid No.4 to all other electrodes	C_{g4}/R	7.7	pF

OPERATING CHARACTERISTICS

Column I Nominal value

II Permitted values of spread and variation

		I	II	
Supply voltage	V_b	300		V
Grid No.1 supply voltage	V_{bg1}	11.9	± 0.15	V
Grid No.2 supply voltage	V_{bg2}	300		V
Deflection plate supply voltage	V_D	156	± 1.5	V
Luminescent screen voltage	V_l	300		V
Cathode current	I_k	0.95		mA
Grid No.2 current	I_{g2}	0.1		mA
Cathode resistor	R_k	15	$\pm 1\%$	k Ω
Grid No.4 resistor	R_{g4}	47	$\pm 5\%$	k Ω
Anode No.1 resistor	R_{a1}	39	$\pm 10\%$	k Ω
Anode No.2 resistor	R_{a2}	1	$\pm 1\%$	M Ω

OPERATING CHARACTERISTICS (continued)

Note

The tube should be used in the circuit of fig.2.

Provided the ratio of the supply voltages V_{bg1} and V_D is strictly maintained the supply voltage V_b is allowed to vary within the range of $V_b \text{ nom. } \pm 10\%$.

This condition can be realised by using a voltage divider R_1, R_2, R_3 with 1% precision resistors as indicated in the diagram fig.2.

A max. counting speed of 30 000 count/s can be obtained with this circuit.

The input pulse at D should have a positive value of $13.6 \text{ V} \pm 15\%$. The slope of the leading edge should be at least $20 \times 10^6 \text{ V/s}$. The slope of the trailing edge should not exceed $1.2 \times 10^6 \text{ V/s}$.

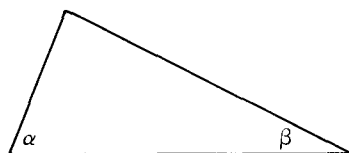
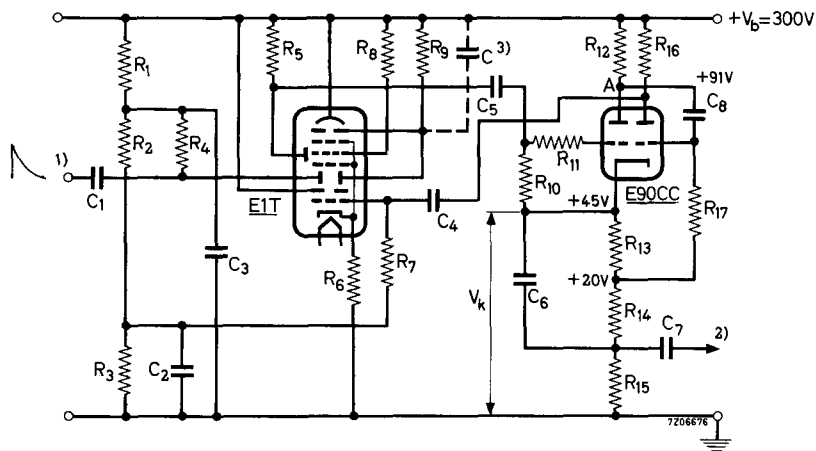


Fig.1

$$\tan \alpha > 20 \times 10^6 \text{ V/s}$$

$$\tan \beta < 1.2 \times 10^6 \text{ V/s}$$



R ₁	68 kΩ ± 1%	R ₁₀	0.56 MΩ ± 10%	C ₁	1)
R ₂	68 kΩ ± 1%	R ₁₁	5.6 kΩ ± 10%	C ₂	0.39 μF ± 20%
R ₃	5.6 kΩ ± 1%	R ₁₂	39 kΩ ± 2%	C ₃	0.15 μF ± 20%
R ₄	15 kΩ ± 2%	R ₁₃	4.7 kΩ ± 2%	C ₄	6800 pF ± 10%
R ₅	39 kΩ ± 10%	R ₁₄	2.7 kΩ ± 2%	C ₅	220 pF ± 10%
R ₆	15 kΩ ± 1%	R ₁₅	1 kΩ ± 1%	C ₆	68 pF ± 2%
R ₇	0.33 MΩ ± 10%	R ₁₆	3.3 kΩ ± 2%	C ₇	680 pF ± 5%
R ₈	47 kΩ ± 5%	R ₁₇	0.15 MΩ ± 2%	C ₈	68 pF ± 2%
R ₉	1 MΩ ± 1%				

1. Connected to the preceeding E90CC pulse shaper (C₁ = 6800 pF ± 10%) or the preceeding E90CC interstage pulse shaper (C₁ = 680 pF ± 5%).
2. Connected to deflection plate D of next counter tube.
3. This parasitic capacitance should be reduced to the minimum by keeping the wiring as short as possible.

LIMITING VALUE of supply voltage V_b (See operating characteristics):

V_b = max. 400 V

PHILIPS

Data handbook



**Electronic
components
and materials**

E1T

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