GEIGER-MÜLLER TUBE

Halogen quenched γ and high energy β (> 0.5 MeV) radiation counter tube.

QUICK REFERENCE DATA

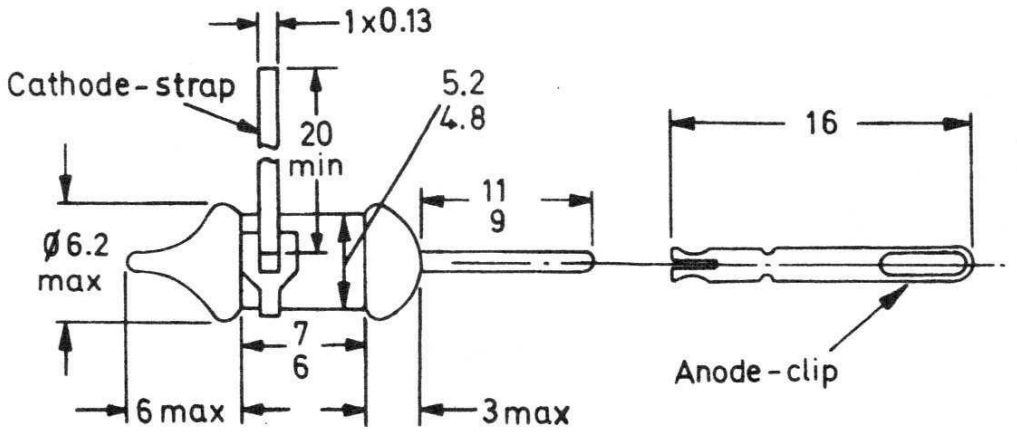
Dose rate range	10^{-1} to 2×10^4	mGy/h
Plateau threshold voltage	500	V
Plateau length	100	V
Recommended supply voltage	550	V
Chrome-iron cathode	80 to 100	mg/cm^2

This data must be read in conjunction with General Information Geiger-Müller tubes.

MECHANICAL DATA

Dimensions in mm ←

Fig.1



D7076A

CATHODE

Thickness	80 to 100	mg/cm^2
Sensitive length	8	mm
Material	chrome-iron	

FILLING

helium, neon, halogen

CAPACITANCE

Anode to cathode	0.7	pF

OPERATING CHARACTERISTICS (Ambient temperature ≈ 25 °C)

Measured in circuit of Fig.2

Starting voltage	max.	400	V
Plateau threshold voltage	max.	500	V
Plateau length		100	V
Recommended supply voltage		550	V
Plateau slope	max.	0.3	%/V
Background (shielded with 50 mm Pb with an inner liner of 3 mm Al), at recommended supply voltage	max.	1	count/min
Dead time, at recommended supply voltage	max.	11	μs

LIMITING VALUES (Absolute max. rating system)

Anode resistor	min.	2.2	MΩ
Anode voltage	max.	600	V
Ambient temperature			
continuous operating	max.	+70	°C
	min.	−40	°C
storage	max.	+75	°C

LIFE EXPECTANCY

Life expectancy at ≈25 °C		10^{10}	count

MEASURING CIRCUIT

R_1 = 2.2 MΩ
R_2 = 47 kΩ
C_1 = 1 pF

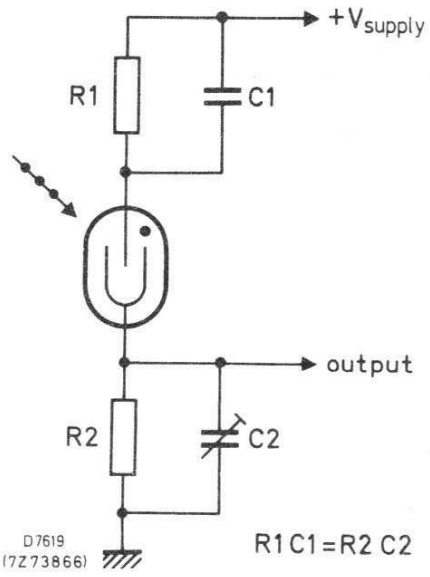
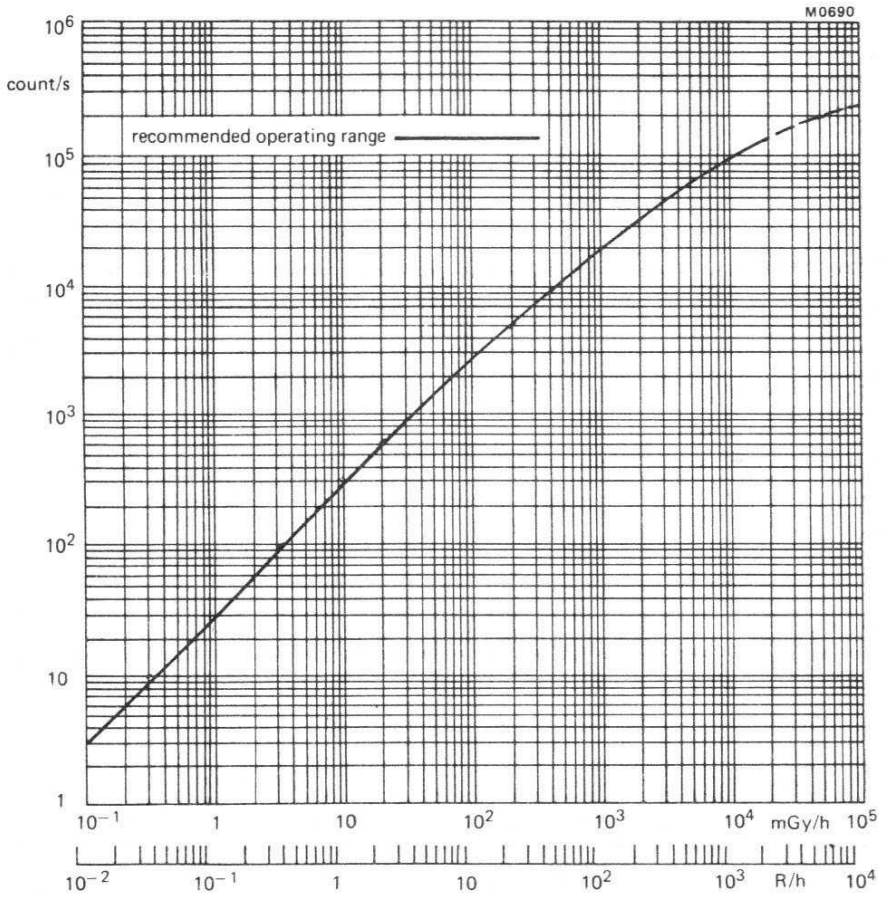
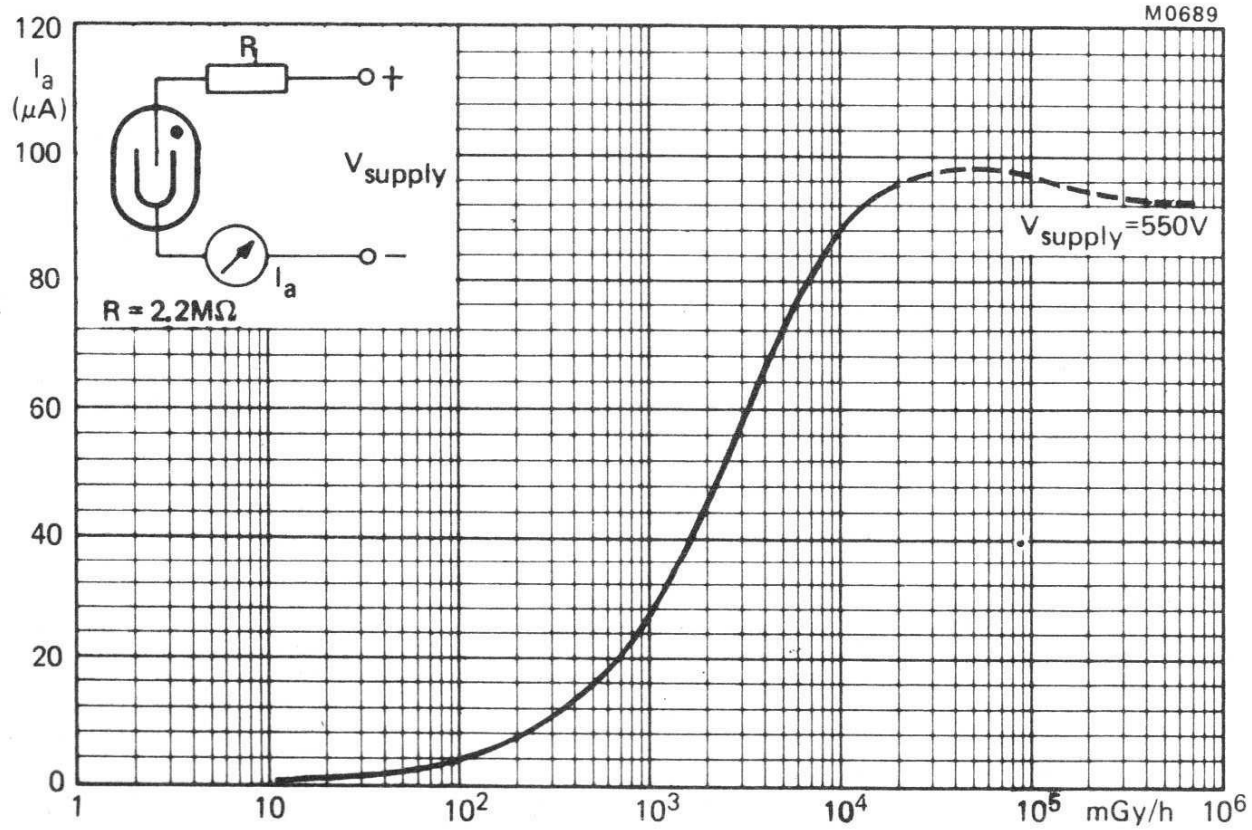


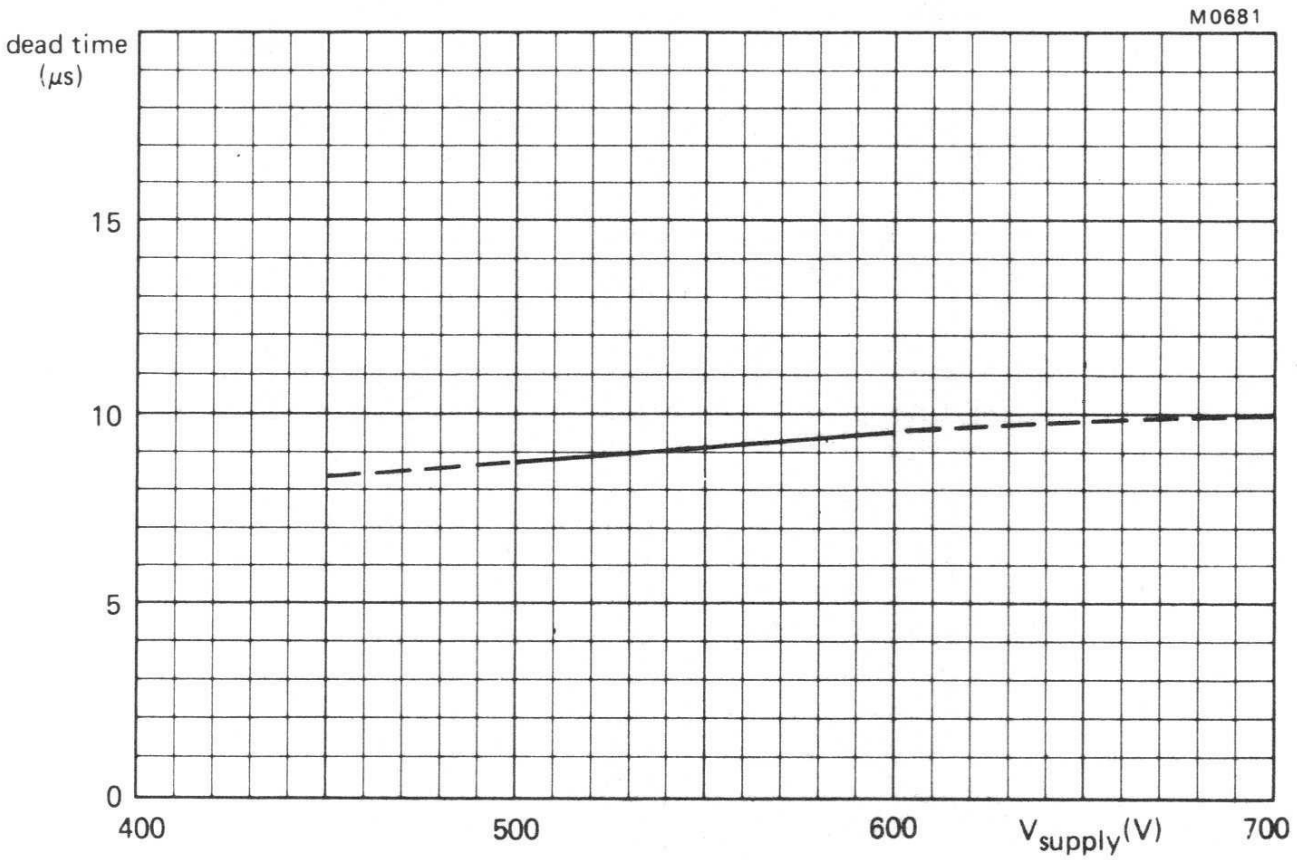
Fig.2



Typical counting rate as a function of dose rate (^{137}Cs)



Typical counting rate as a function of dose rate (^{137}Cs)



Typical dead time as a function of supply voltage