

GEIGER-MÜLLER TUBE

Halogen quenched γ radiation counter tube fitted in a filter. The energy response is flat to within $\pm 15\%$ over the range 80 keV to 3.0 MeV referred to ^{137}Cs (661 keV). The ZP1301 is an energy compensated version of the ZP1300. Also available with long life artificial background as ZP1302.

QUICK REFERENCE DATA

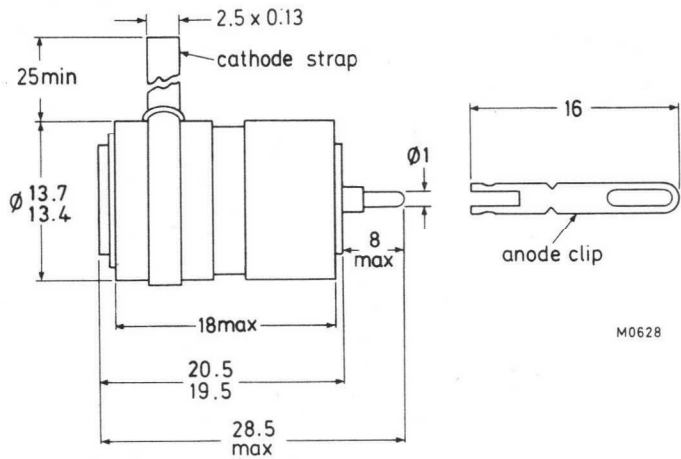
Dose rate range	10^{-1} to 2×10^4	mGy/h
Plateau threshold voltage	500	V
Plateau length	100	V
Recommended supply voltage	500	V
Chrome-iron cathode	80 to 100	mg/cm ²

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

MECHANICAL DATA

Dimensions in mm

Fig.1



CATHODE (ZP1300)

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

FILLING

helium, neon, halogen

CAPACITANCE

Anode to cathode	1.25	pF
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OPERATING CHARACTERISTICS (Ambient temperature $\approx 25^{\circ}\text{C}$)

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 550 V	max.	1	count/min
Dead time at 550 V	max.	13	μs

LIMITING VALUES (Absolute max. rating system)

Anode resistor	min.	2.2	$\text{M}\Omega$
Anode voltage	max.	600	V
Ambient temperature	max.	+70	$^{\circ}\text{C}$
continuous operating	min.	-40	$^{\circ}\text{C}$
storage	max.	+75	$^{\circ}\text{C}$

LIFE EXPECTANCY

Life expectancy at $\approx 25^{\circ}\text{C}$	10^{10}	count
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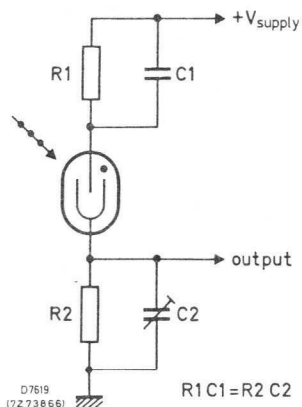
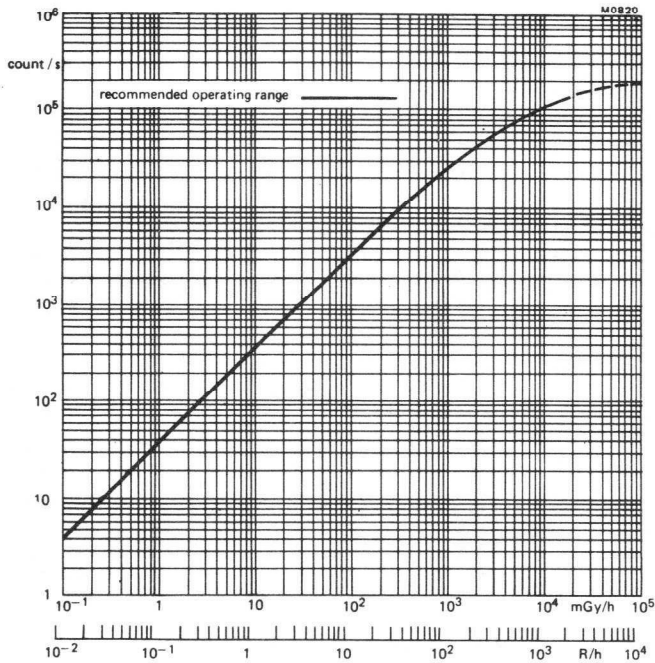
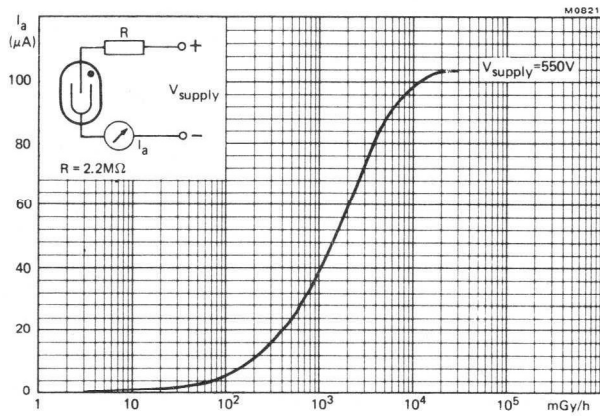
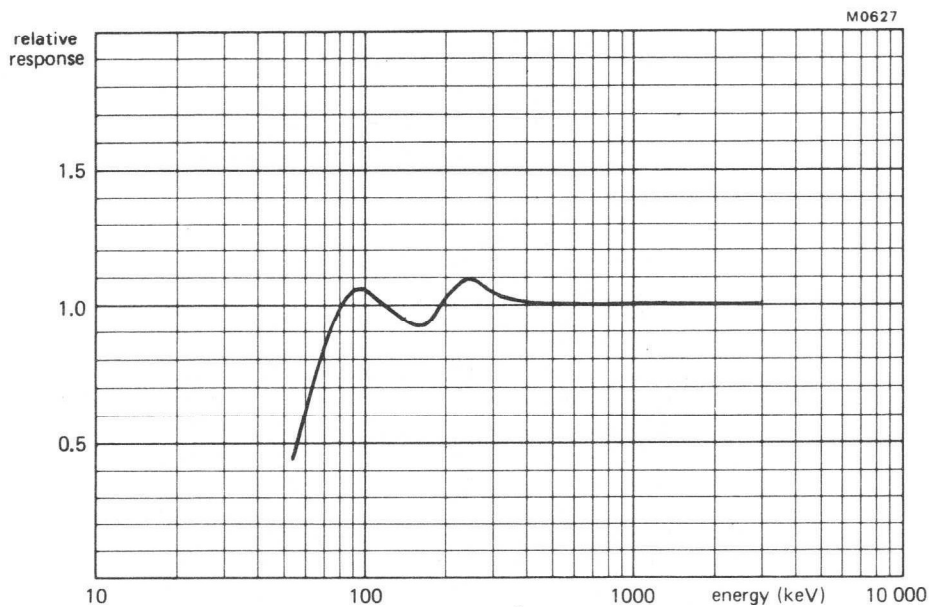
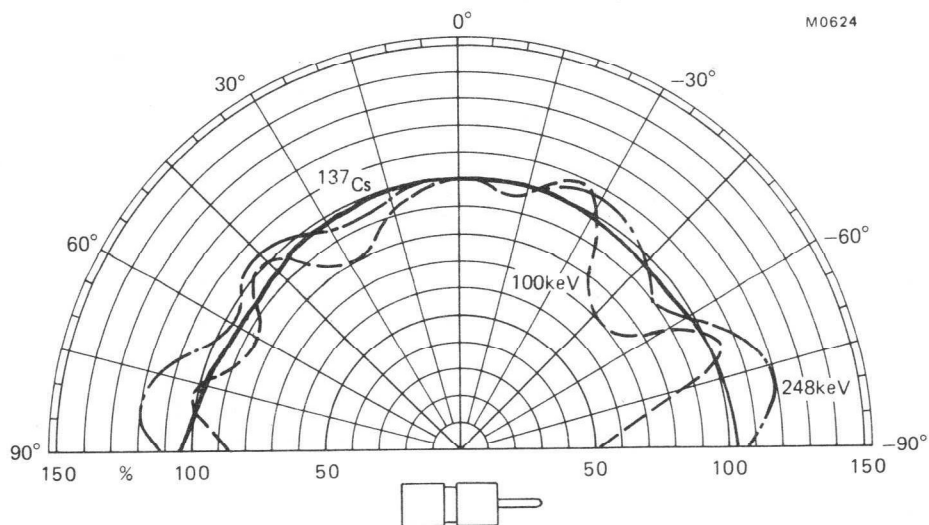
MEASURING CIRCUIT $R_1 = 2.2 \text{ M}\Omega$ $R_2 = 47 \text{ k}\Omega$ $C_1 = 1 \text{ pF}$ 

Fig.2

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



Typical energy response relative to ^{137}Cs



Typical polar responses