



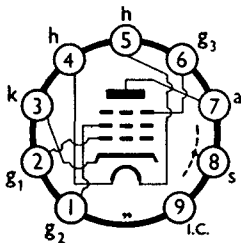
VIDEO POWER PENTODE

N309/PL83

FEBRUARY, 1956

A power pentode of high mutual conductance primarily designed for use as a video output valve in television receivers.

BASE CONNECTIONS AND VALVE DIMENSIONS



External view

Base Type : B9A

Bulb : Tubular.

Maximum Dimensions

Overall Length :	78	mm
Seated Length	72	mm
Diameter	22	mm

HEATER

I_h	0.3	A
V_h	15	V

MAXIMUM RATINGS

V_{h-k}	150	V
V_a	250	V
V_{g2}	250	V
P_a	9	W
P_{g2}	2	W

CHARACTERISTICS

Pentode Connection

V_a	170	200	250	V
V_{g2}	170	200	250	V
V_{g1} approx.	-2.3	-3.5	-5.8	V
I_a	36	40	36	mA
I_{g2}	5	5.5	5	mA
μ	410	450	840	
r_a	41	42	75	k Ω
g_m	10	10.7	11.2	mA/V

Triode Connection

$V_a, g2^*$	170	200	V
V_{g1} approx.	-2.4	-3.4	V
$I_a, g2$	40	45	mA
μ	24	25	—
$r_a, g2$	1.92	1.84	k Ω
g_m	12.5	13.5	mA/V

* $g2$ connected to anode through 100 ohms resistor.

MARCONI'S WIRELESS TELEGRAPH COMPANY LIMITED

Head Office : Marconi House, Chelmsford · Telephone : Chelmsford 3221 · Telegraphic Address : Expanse, Chelmsford

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TYPICAL OPERATION

Pentode Connection Class A Amplifier. Single Valve

V _a	170	200	250	V
V _{g2}	170	200	250	V
V _{g1} (no sig.) approx.	−2.5	−3.0	−5.5	V
I _a (no sig.)	32	39	33	mA
I _{g2} (no sig.)	4.2	5.0	4.2	mA
r _a	5.0	5.0	5.0	kΩ
R _k	68	68	150	Ω
P _{out}	1.65	2.72	3.45	W
D	7.8	10.0	10.0	%

CAPACITANCES

Taken on an unscreened valve.

c_{in} 10.8 pF c_{out} 6 pF c_{a-g} <0.1 pF

MOUNTING

Any position.

SCREENING

No internal or external screening is fitted to the valve.

RETAINING

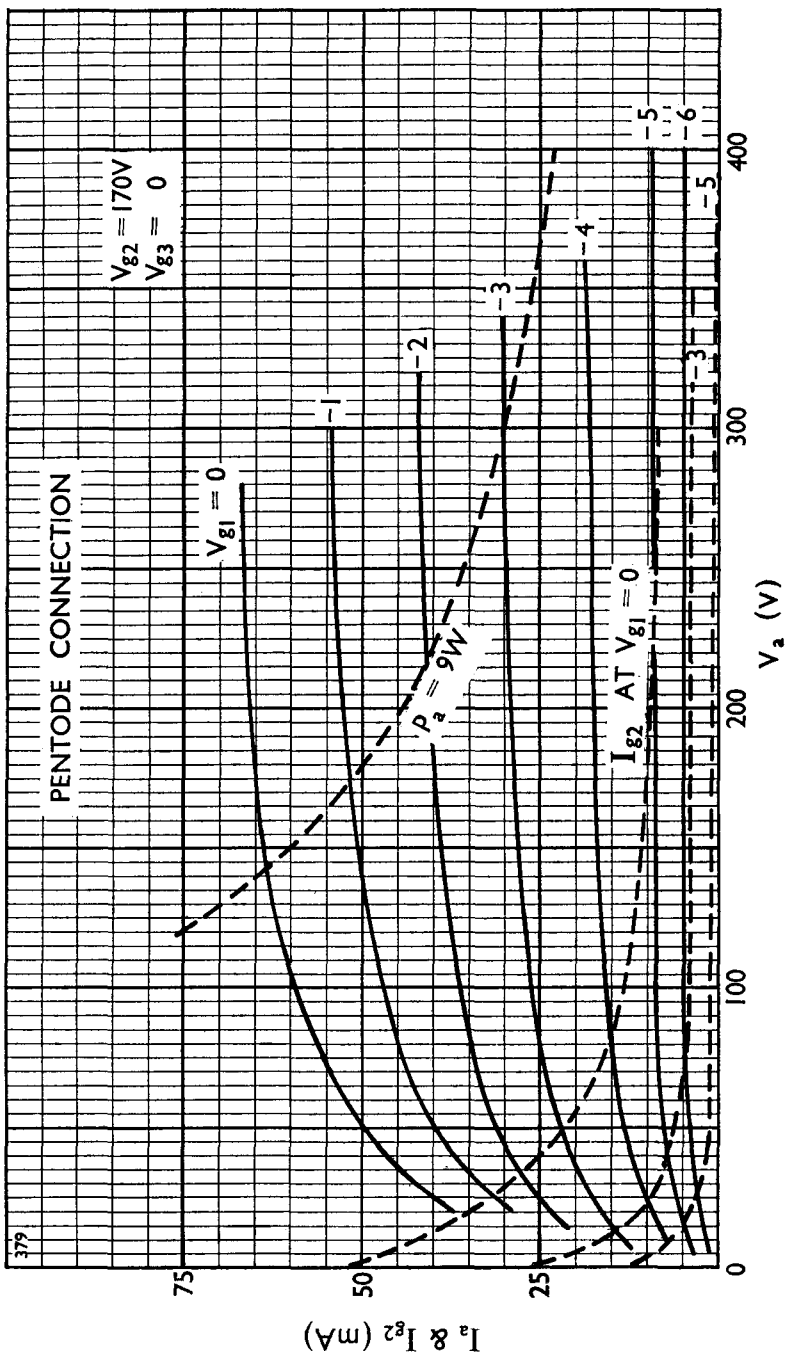
In equipment subject to vibration or shock a retainer is required.

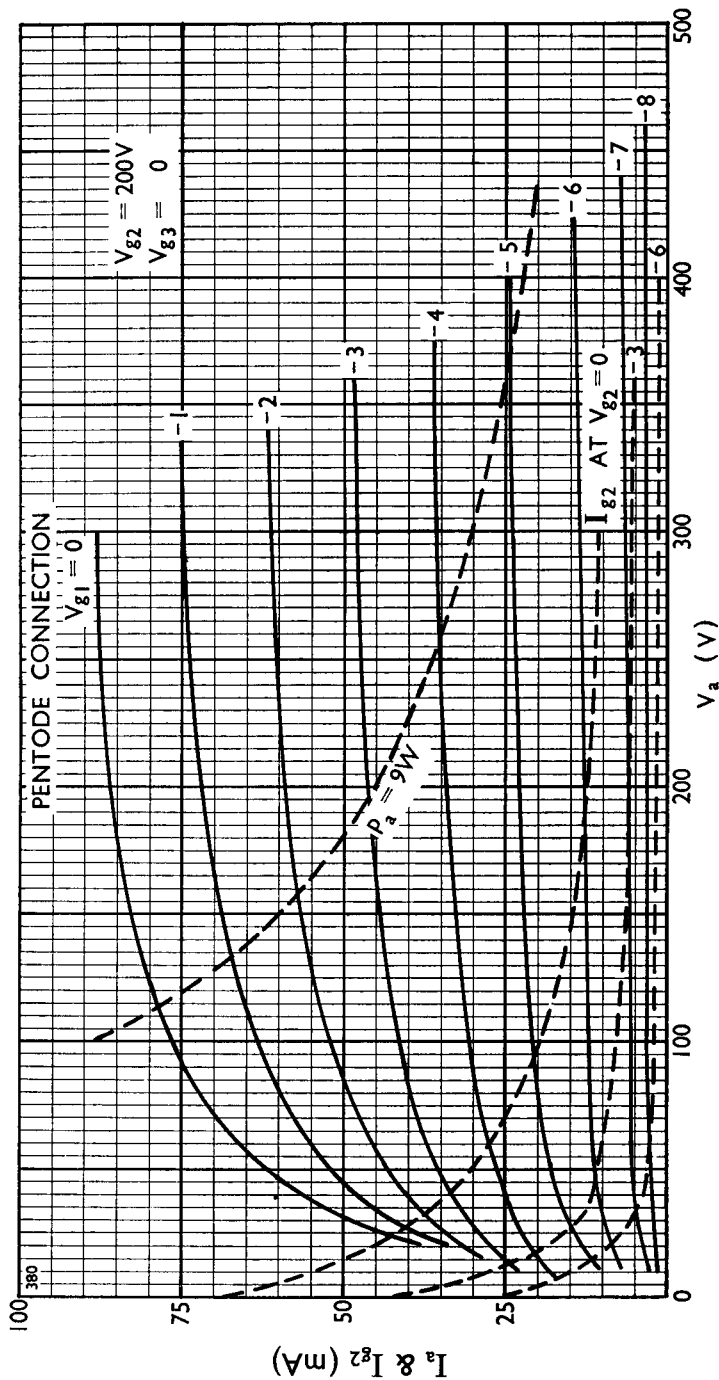
VENTILATION

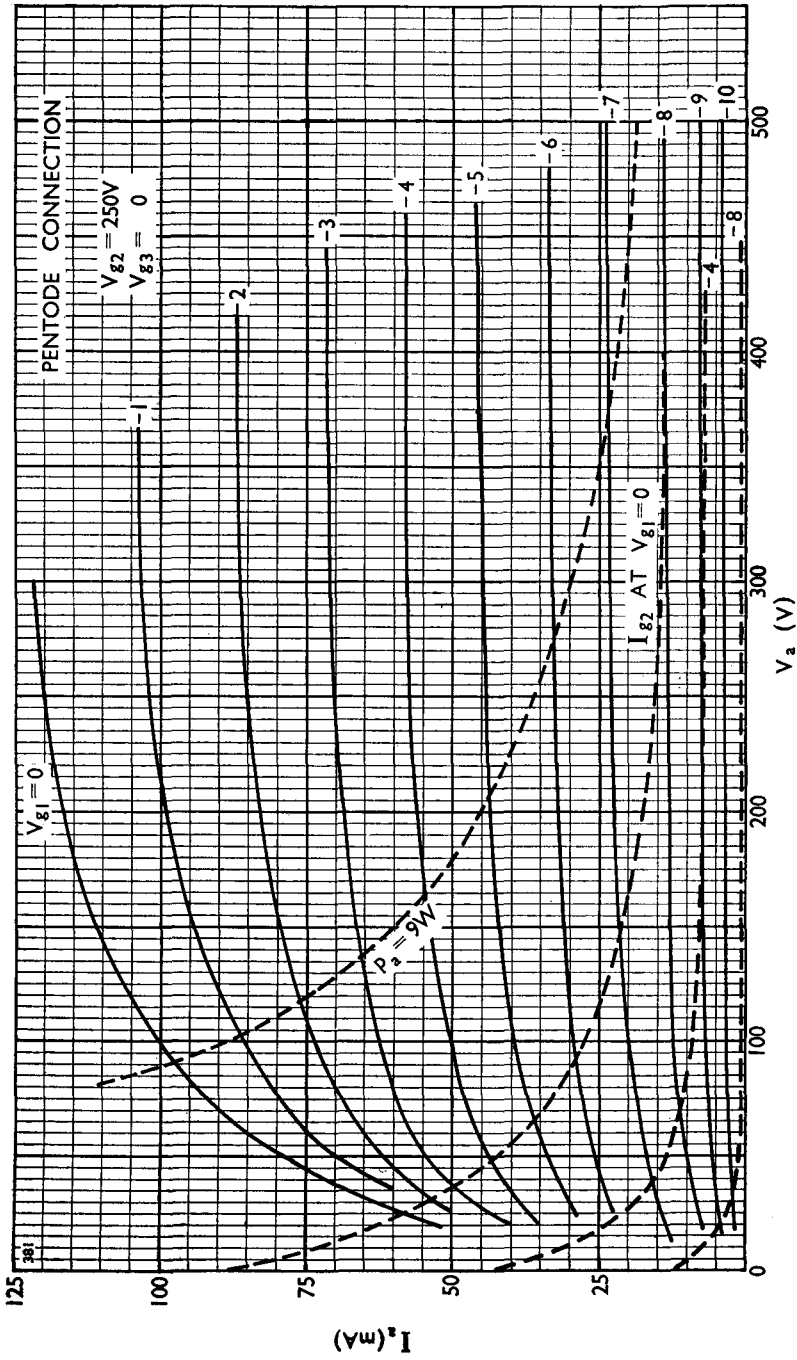
Free air circulation is preferable. The temperature of the hottest part of the bulb must not exceed 200°C.

MICROPHONY

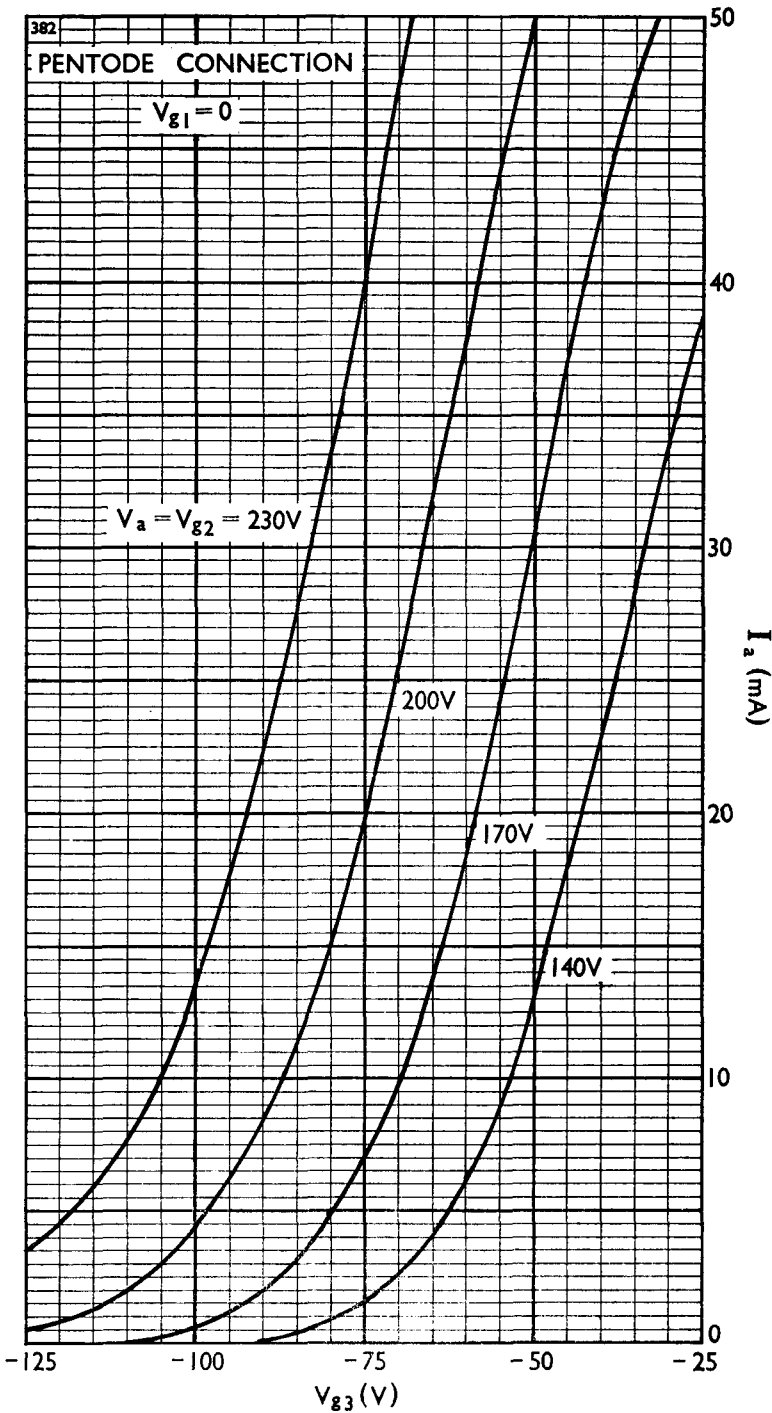
This type is free from microphony in normal receiver application.

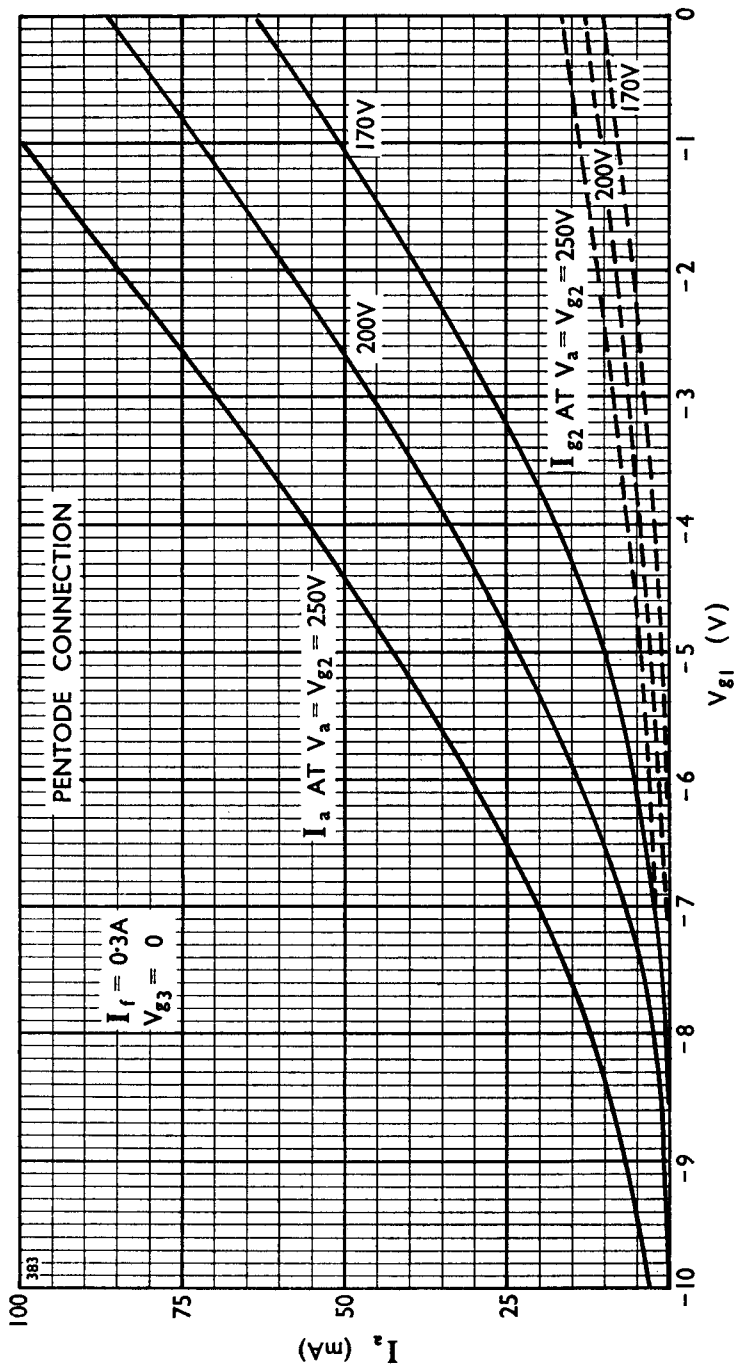


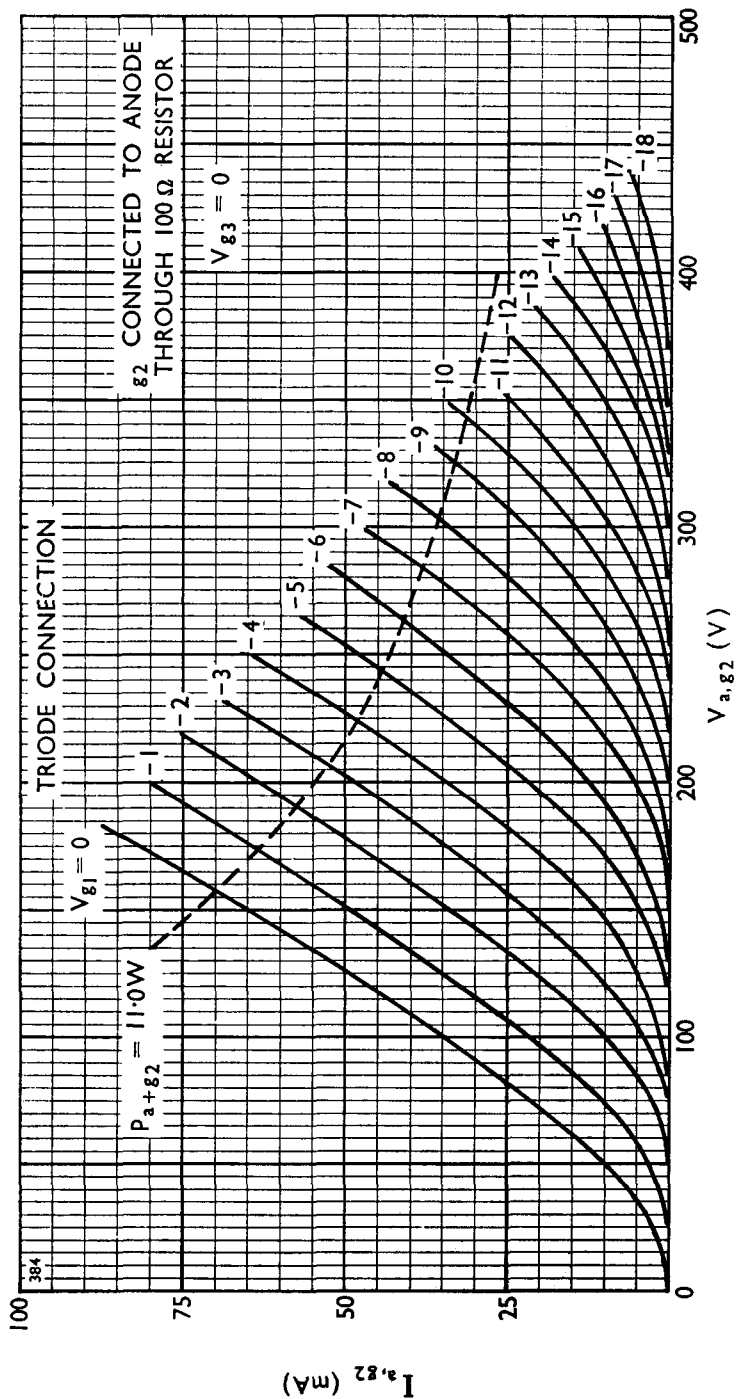


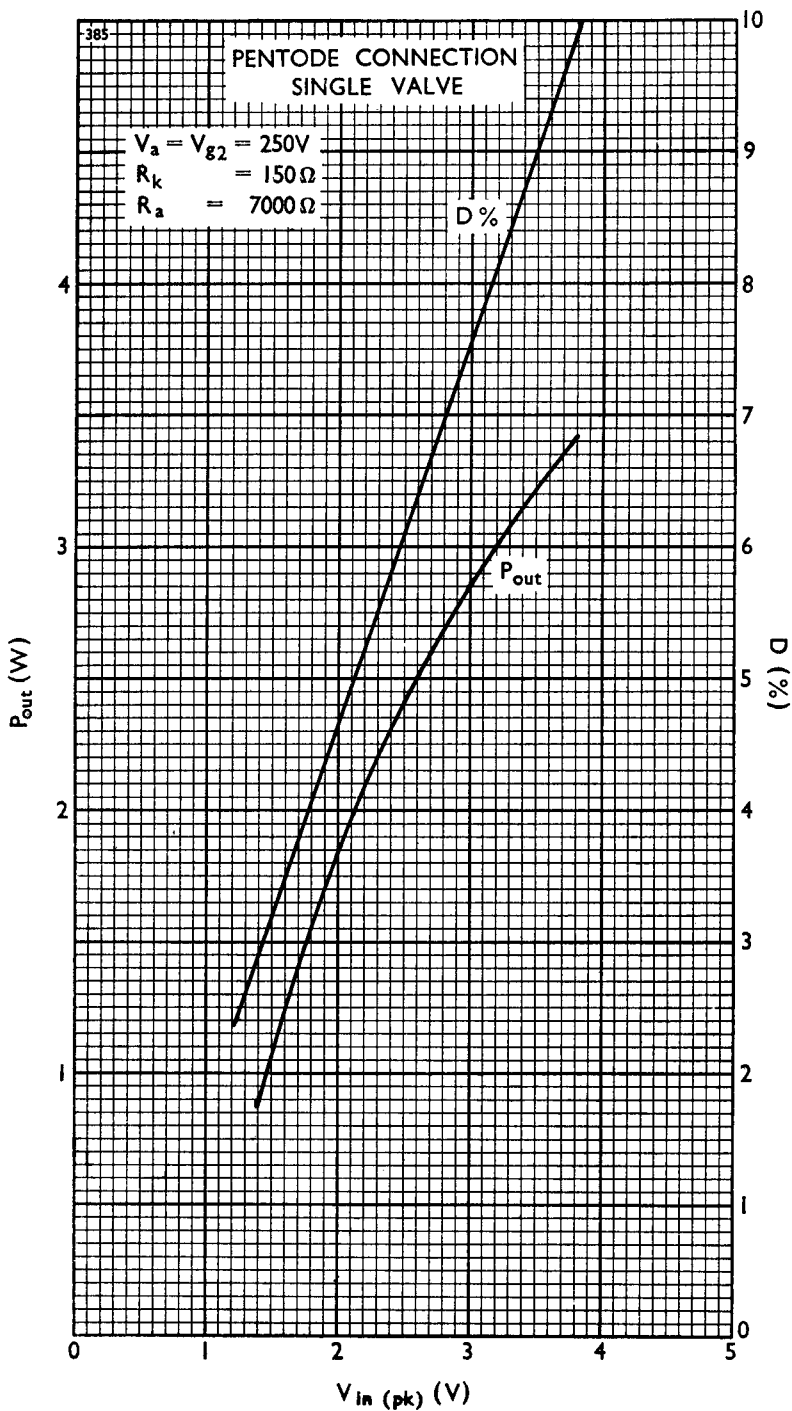


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