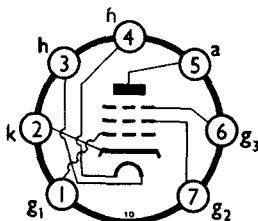




MINIATURE
R.F. PENTODE
6.3V INDIRECTLY HEATED

Z77
APRIL, 1952

BASE CONNECTIONS AND VALVE DIMENSIONS



View from underside
of base.

Base : B7G

Bulb : Tubular

Overall length : 49—55 mm.

Seated length : 43—49 mm.

Max. diameter : 19 mm.

RATING

Pentode Connection

V_h	6.3	V
I_h	0.3	A
v_{h-k} (pk)	150 max.	V
V_a	250	V
V_{g2}	250	V
P_a	2.5 max.	W
P_{g2}	0.8 max.	W
r_a	{ 0.3 7.5	M Ω mA/V
g_m		

at $V_a = V_{g2} = 250$, $I_a = 10$ mA

Triode Connection

I_k	30 max.	mA
$V_a, g2$	250 max.	V
$P_a, g2$	3.3 max.	W
μ	{ 75 10 7.5	k Ω mA/V
r_a		
g_m		

at $V_a, g2 = 250$, $V_{g1} = -2$

CAPACITANCES (of cold unscreened valve)

C_{g1-all}	7.4	pF	C_{a-all}	3.1	pF	C_{a-g1}	0.009	pF
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TYPICAL OPERATION

Class A Amplifier. Pentode Connection

V_a	250	V
V_{g2}	250	V
V_{g3}	0	V
I_a	10	mA
I_{g2}	2.5	mA
V_{g1}	-2 approx.	V
R_k	160	Ω

Mixer. Pentode Connection

Series injection to g_1 .

V_a	250	V
V_{g2}	250	V
V_{g3}	0	V
I_a	4.5	mA
I_{g2}	1.5	mA
R_k	680	Ω
g_c	2.7	mA/V
V_{osc} (pk)	4.5	V

Class A. Amplifier. Triode Connection

V_a, g_2	250	V
V_{g1}	-2 approx.	V
I_a, g_2	12.5	mA
R_k	160	Ω
μ	75	
g_m	7.5	mA/V
r_a	10	k

Class A Amplifier. Pentode Connection

V_a, g_3	28	V
V_{g2}	8	V
I_a	0.75	mA
I_{g2}	0.15	mA
R_L	22	k Ω
R_k	2.2	k Ω
Gain	30	db

Whenever possible, a potentiometer supply should be used for V_{g2} .

GENERAL

At $V_a = V_{g2} = 250$, $V_{g3} = 0$, $I_a = 10$ mA.

C_{g1-k}	10	pF
C_{a-k}	3	pF
C_{h-k}	4	pF
r_{g1-k} (at 45 Mc/s)	9	k Ω
r_{eq} noise ref g_1	1.0	k Ω

Under conditions of maximum anode and screen dissipation, the D.C. resistance between control grid and cathode must not exceed 0.5 M Ω with auto-bias, or 0.1 M Ω with fixed bias.

SCREENING

No internal or external screening is fitted to the valve.

MOUNTING

Any position.

RETAINING

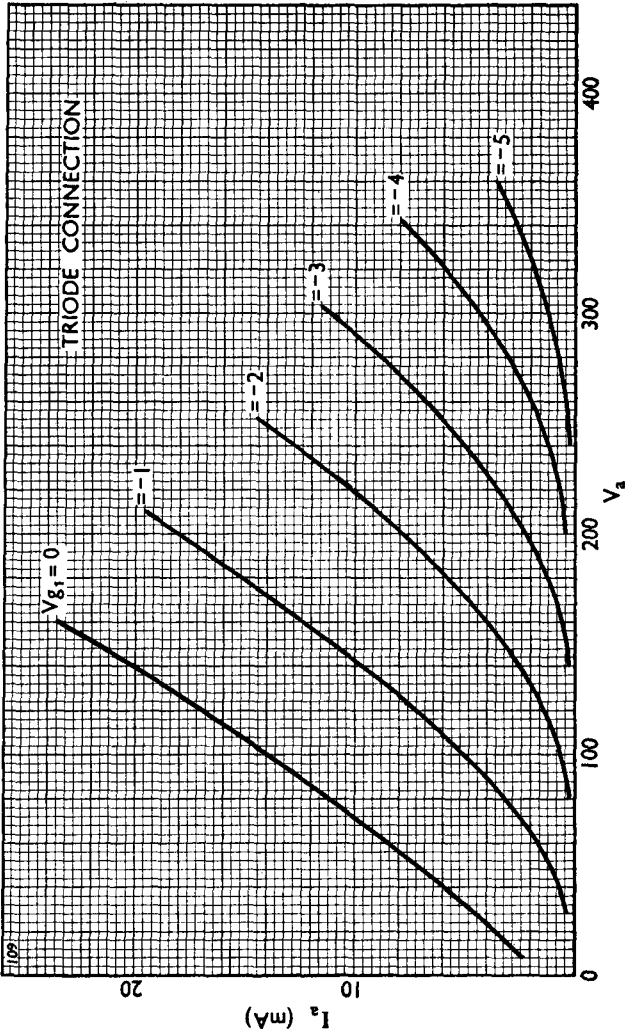
A retaining device should be used.

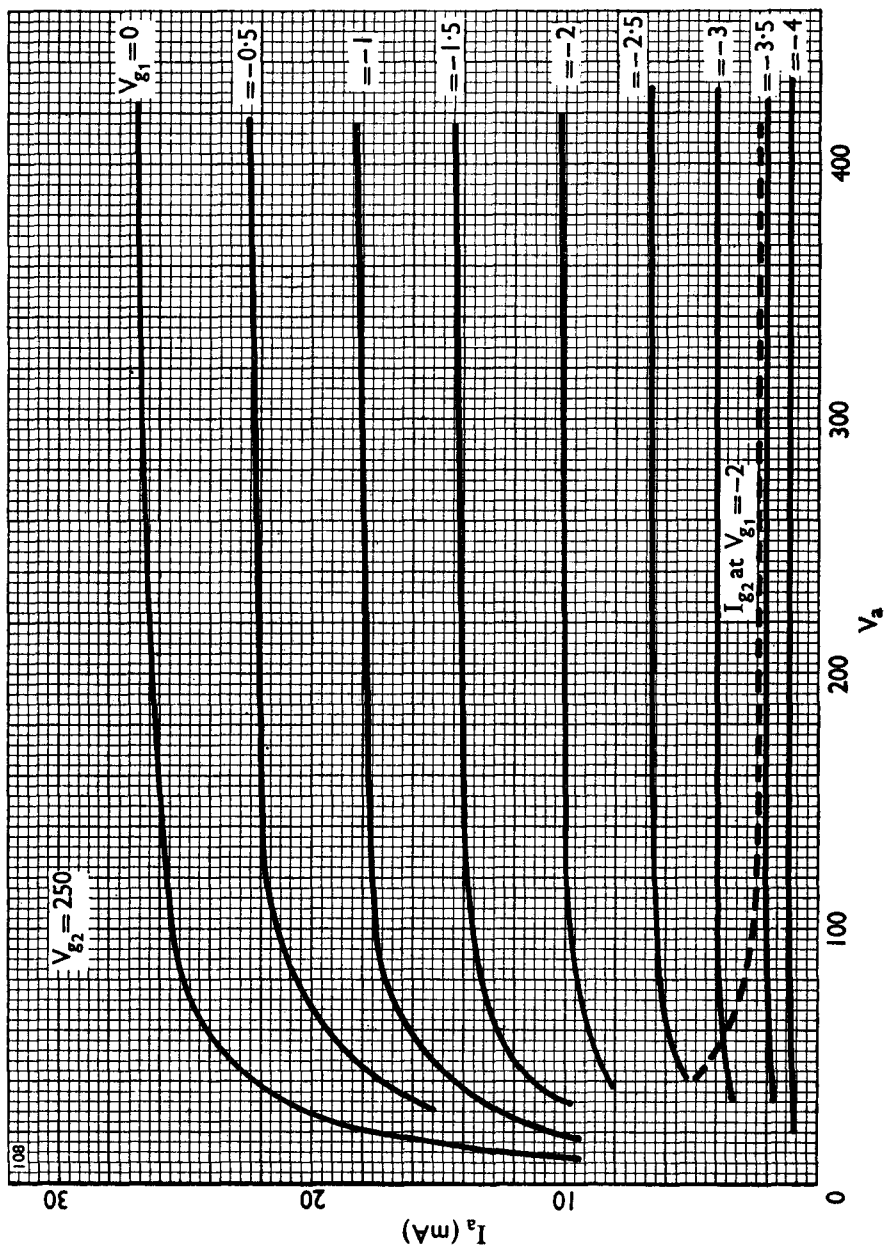
VENTILATION

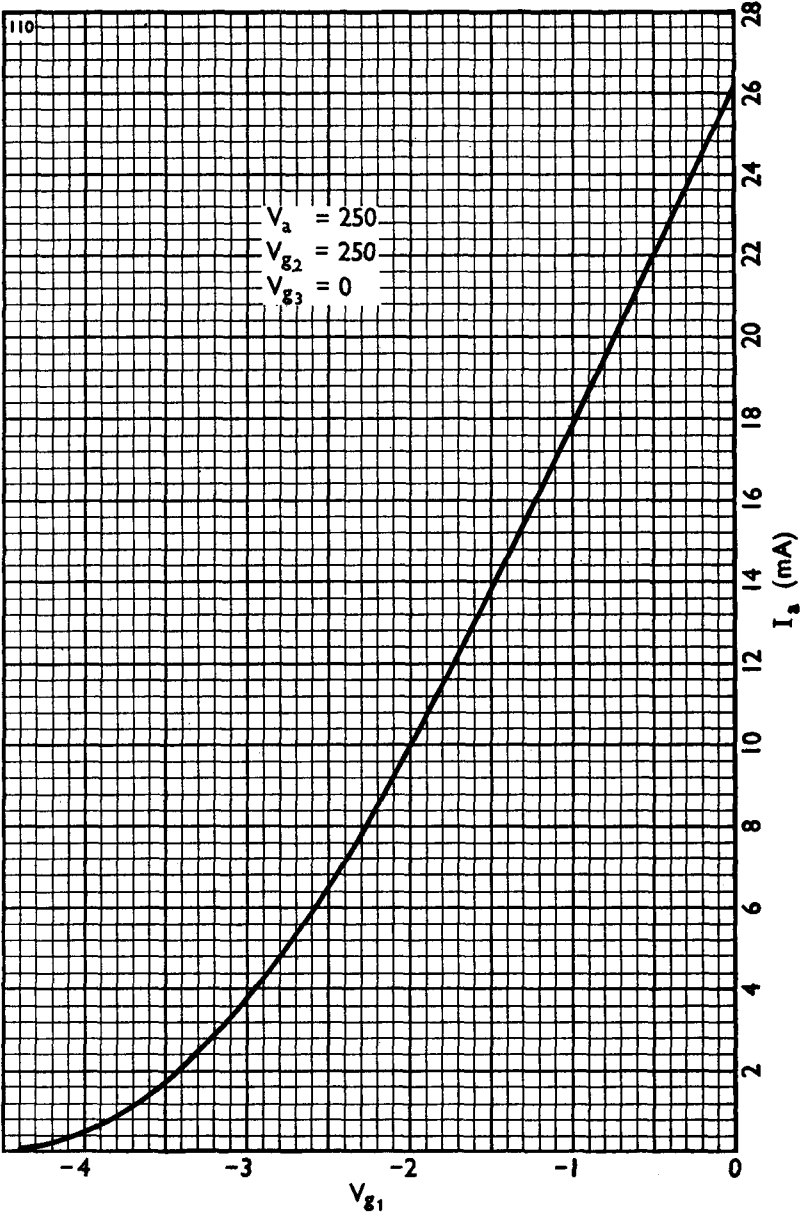
The valve and screening canister should be mounted to provide as much free air circulation as possible.

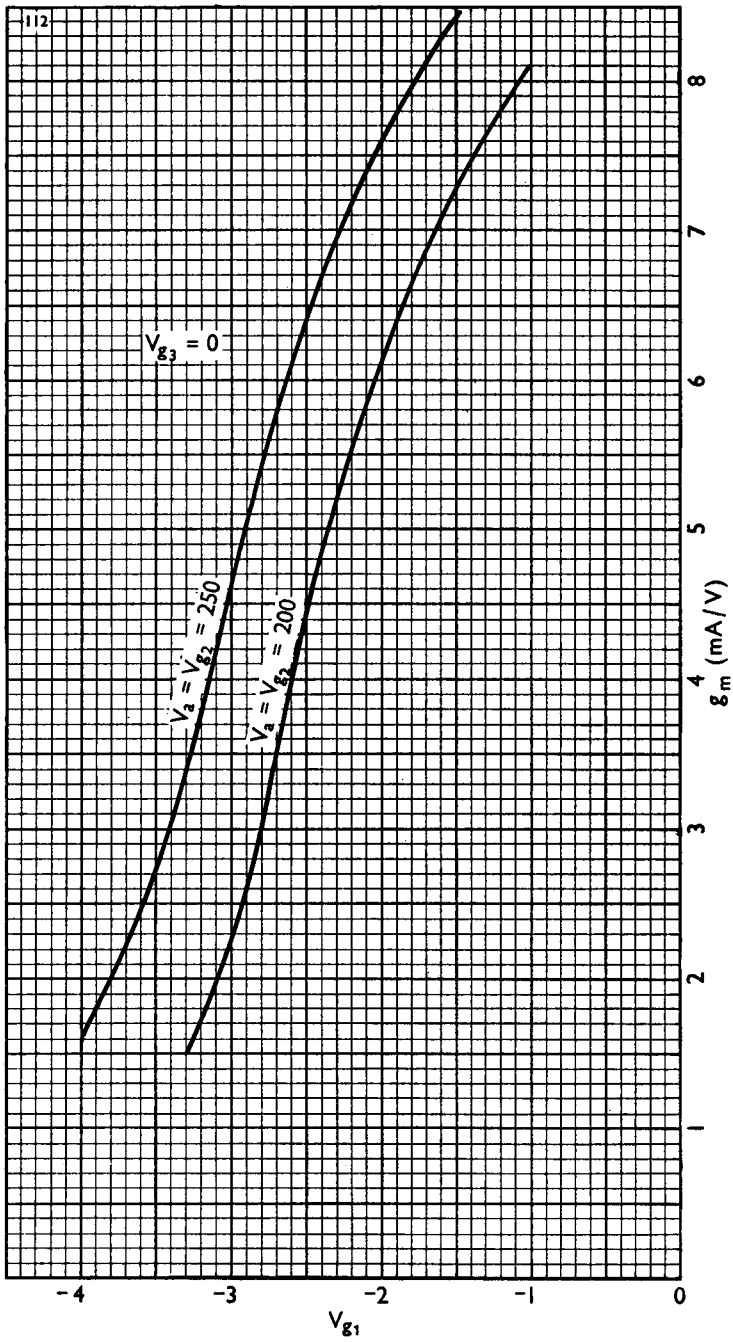
MICROPHONY

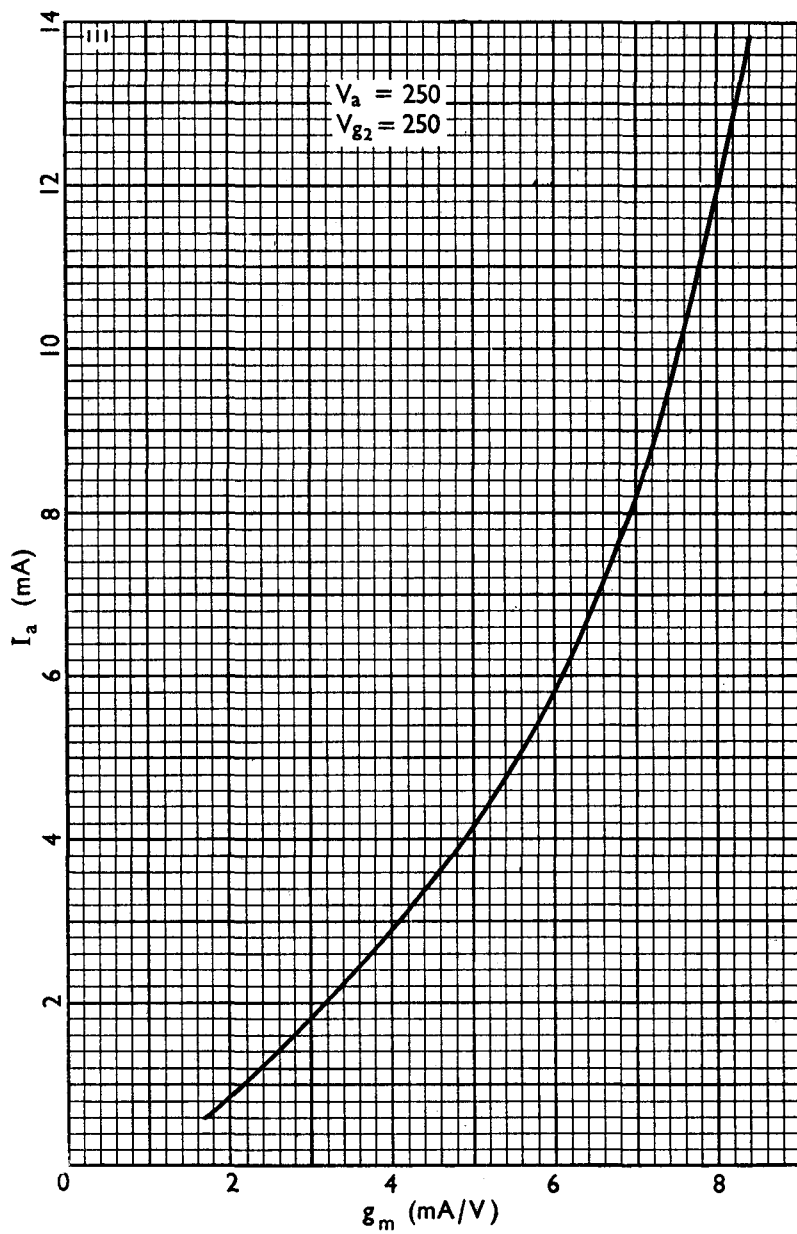
Although this is of a very low order, equipment should be designed to minimise microphony.

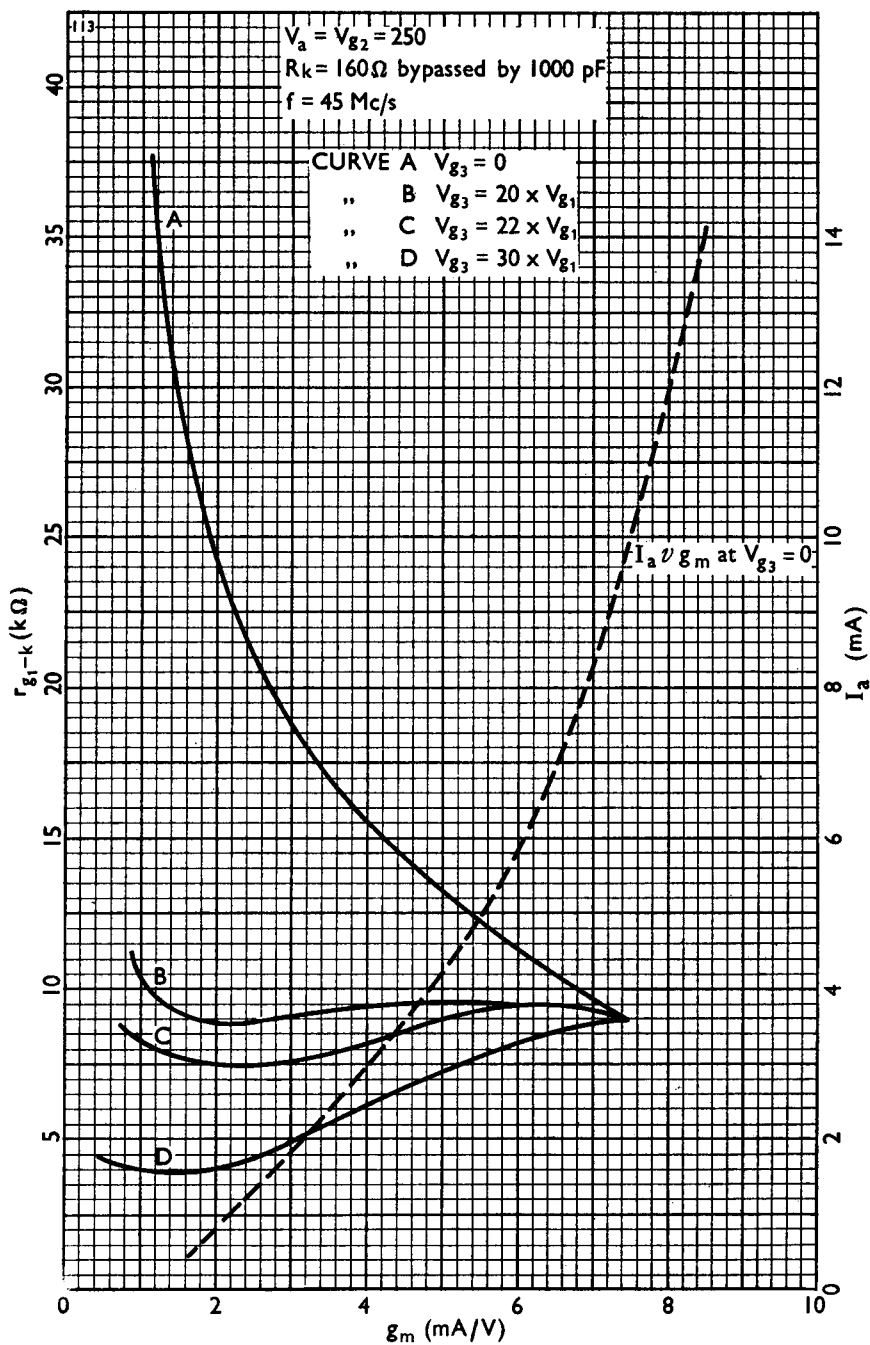


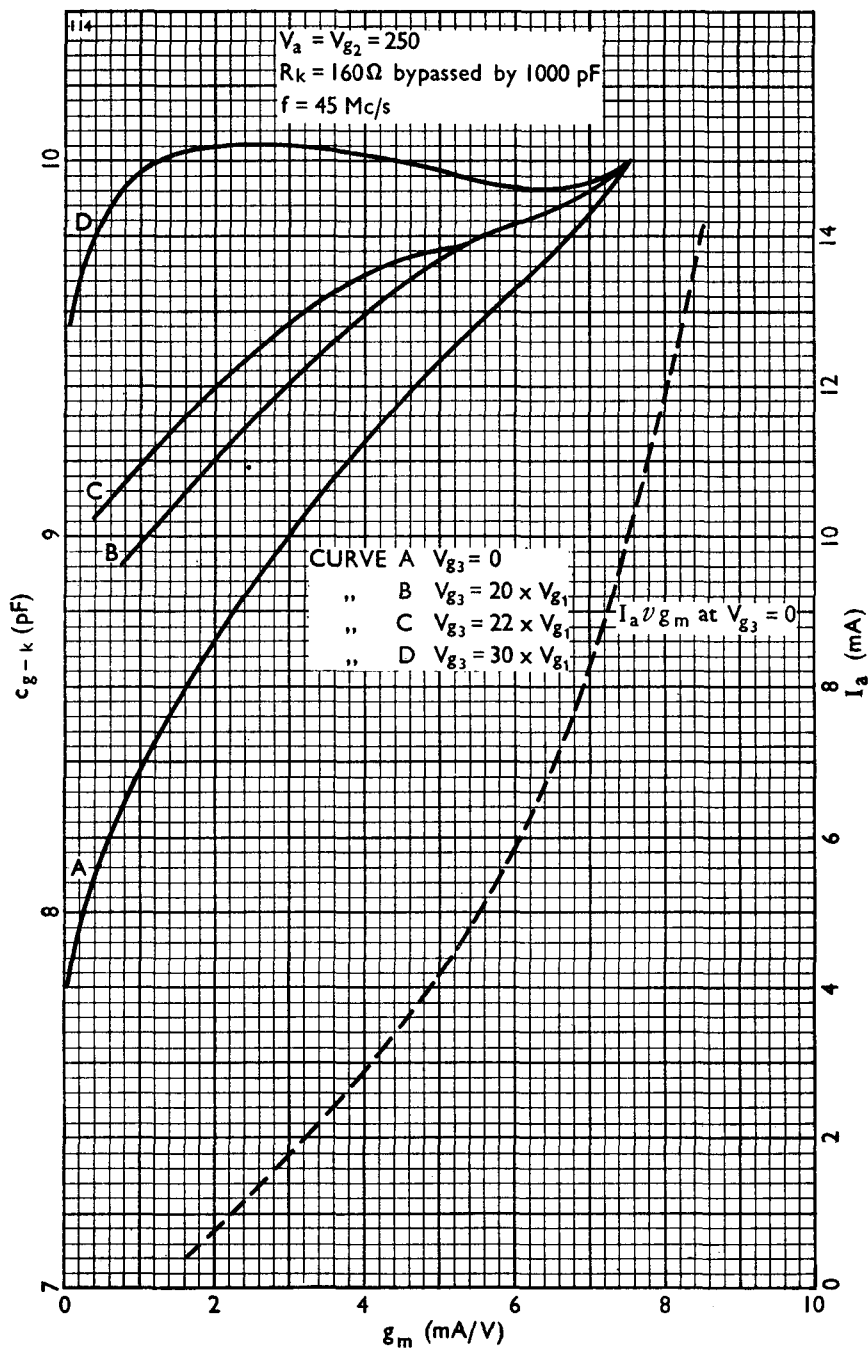


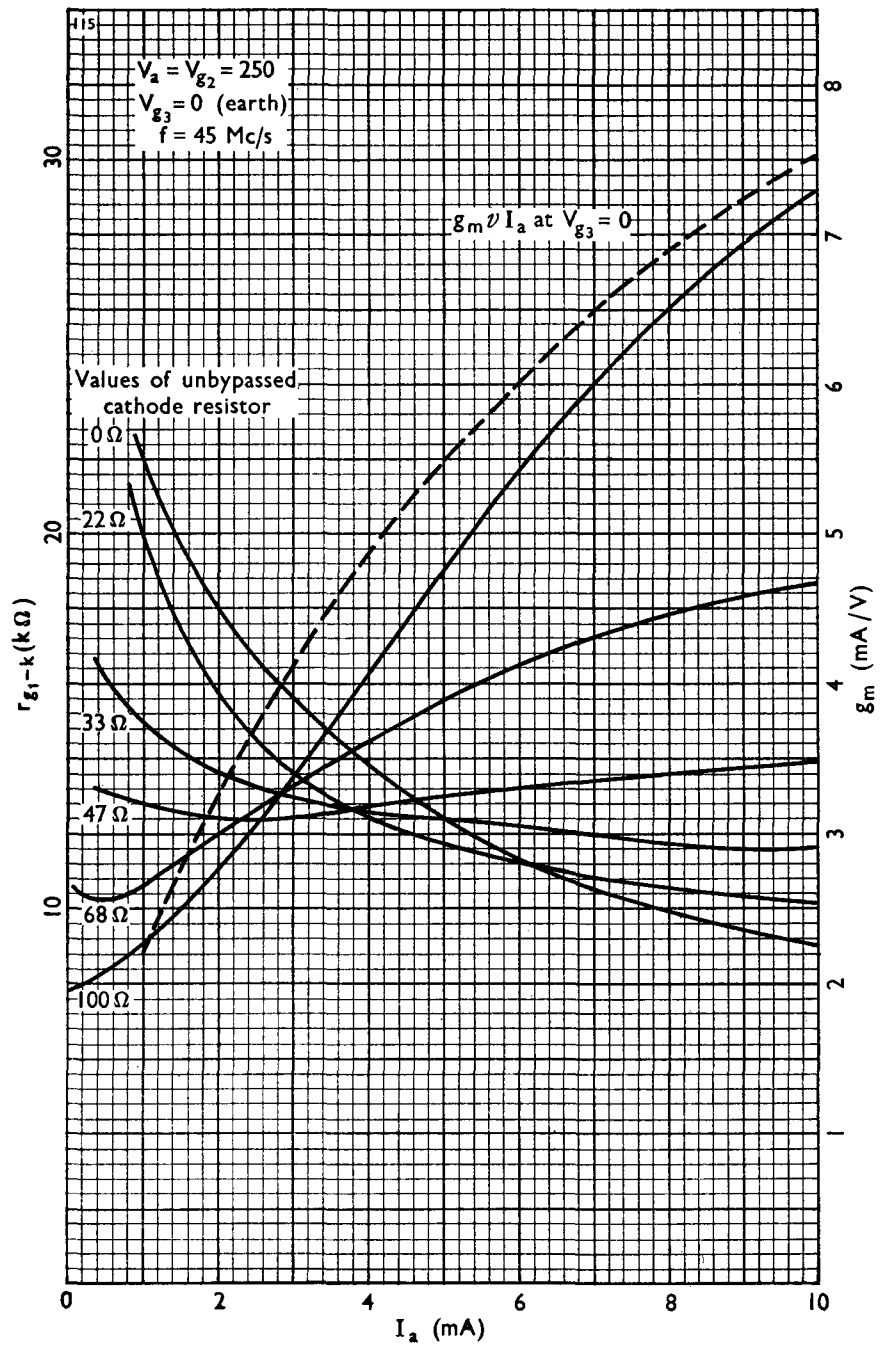


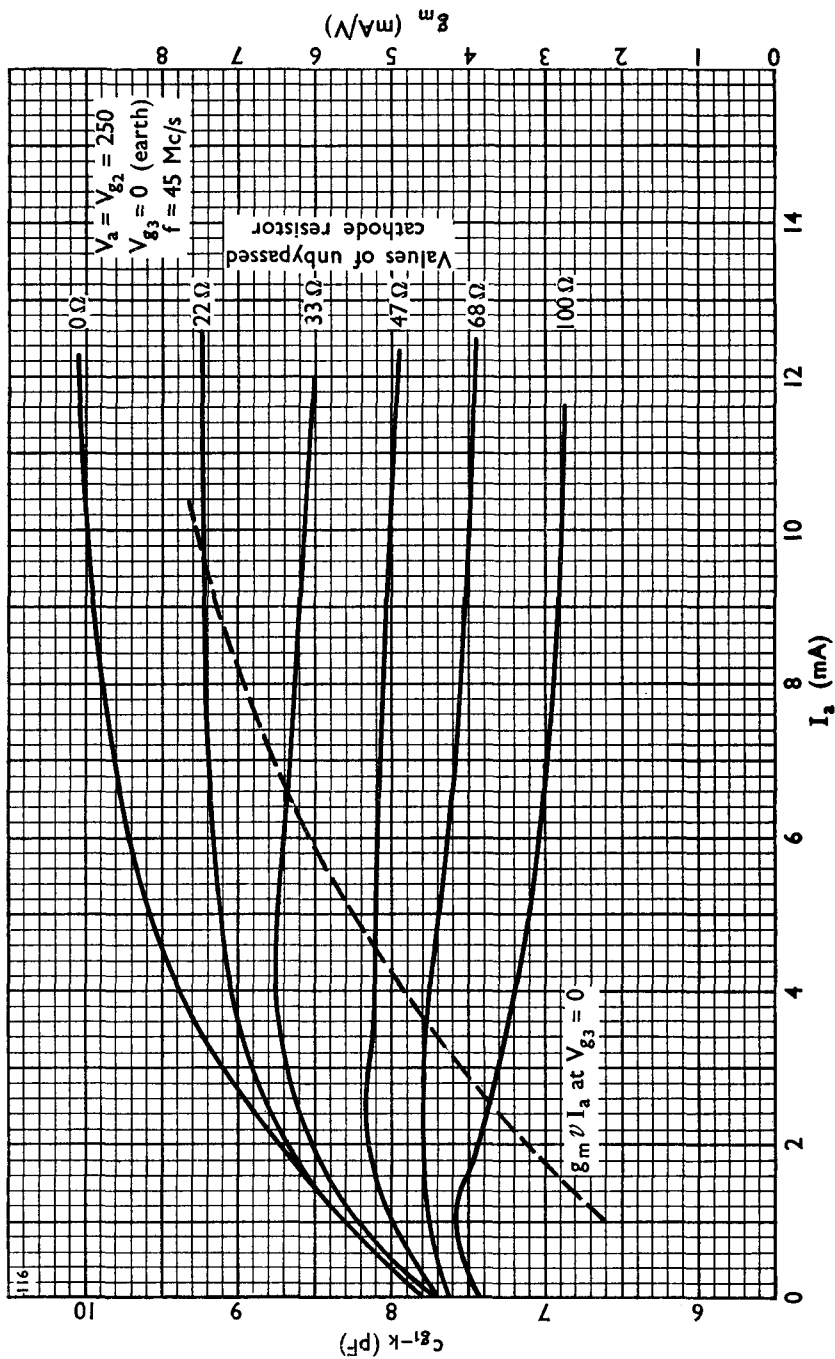












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