

Double triode with 100mA heater primarily intended for use in f.m./a.m. receivers as an r.f. amplifier and self-oscillating additive mixer.

HEATER

Suitable for series operation, a.c. or d.c.

I_h	100	mA
V_h	26	V

CAPACITANCES

$^*c_{a-g}$	1.5	pF
$^*c_{g-k+h+s}$	3.1	pF ←
$^*c_{a-k}$	180	mpF
$^*c_{a-k+h+s}$	1.2	pF
$^*\dagger c_{a-k+h+s}$	1.8	pF ←
$c_{a'-a''}$	<40	mpF
$\dagger c_{a'-a''}$	<8.0	mpF
$c_{g'-g''}$	<3.0	mpF
$c_{a''-g'}$	<8.0	mpF
$c_{a'-g''}$	<8.0	mpF
$c_{a''-k'}$	<8.0	mpF
$c_{a'-k''}$	<8.0	mpF
$c_{g''-k'}$	<3.0	mpF
$c_{g'-k''}$	<3.0	mpF

*Each section

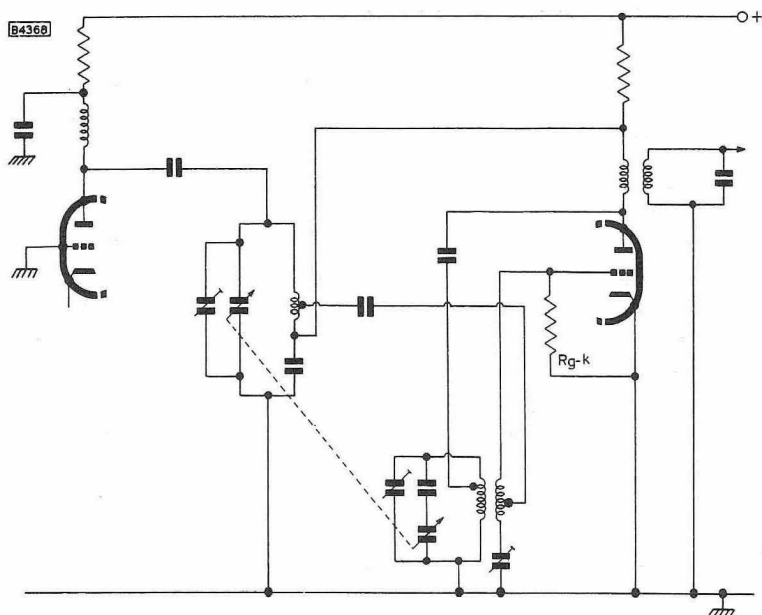
†Measured with an external shield.

CHARACTERISTICS (each section)

V_a	170	200	V
I_a	10	10	mA
V_g	-1.75	-2.4	V ←
g_m	6.7	6.0	mA/V ←
μ	48	46	←
r_a	7.1	7.7	k Ω ←

OPERATING CONDITIONS AS R.F. AMPLIFIER

V_a	155	161	V
V_b	170	170	V
R_a	1.5	1.3	k Ω
I_a	9.8	6.6	mA $\leftarrow$
R_k	150	330	Ω $\leftarrow$
g_m	6.7	5.1	mA/V $\leftarrow$
r_a	7.0	8.5	k Ω $\leftarrow$
r_{gl} ($f = 100\text{Mc/s}$)	3.8	5.2	k Ω $\leftarrow$
R_{eq}	550	820	Ω



OPERATING CONDITIONS AS SELF-OSCILLATING ADDITIVE MIXER (with i.f. feedback, see basic circuit in fig.1.)

V_b	170	200	V
R_a	4.7	8.2	k Ω
* R_{g-k}	1.0	1.0	M Ω
I_a	5.5	6.0	mA $\leftarrow$
V_{osc} (r.m.s.)	2.8	2.8	V
g_c	2.8	2.9	mA/V $\leftarrow$
r_a	15	14	k Ω

*The presence of the i.f. feedback voltage tends to stabilise the performance of the oscillator and hence permits this relatively high value to be used for the grid leak.

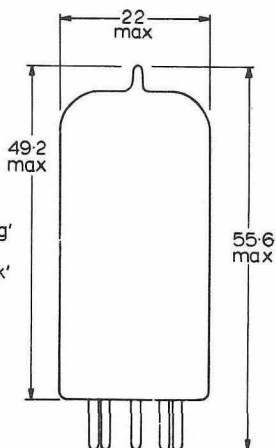
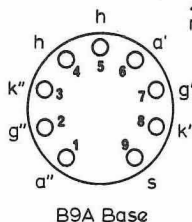
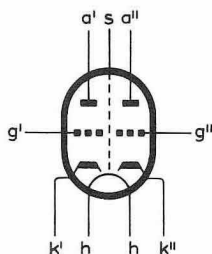
RATINGS (ABSOLUTE MAXIMUM SYSTEM)

(each section unless otherwise specified)

$V_{a(b)}$ max.	550	V
V_a max.	250	V
p_a max.	2.5	W
$p_{a'} + p_{a''}$ max.	4.5	W
I_k max.	15	mA
$-V_g$ max.	100	V
R_{g-k} max.	1.0	MΩ
$*V_{h-k}$ max.	90	V
R_{h-k} max.	20	kΩ

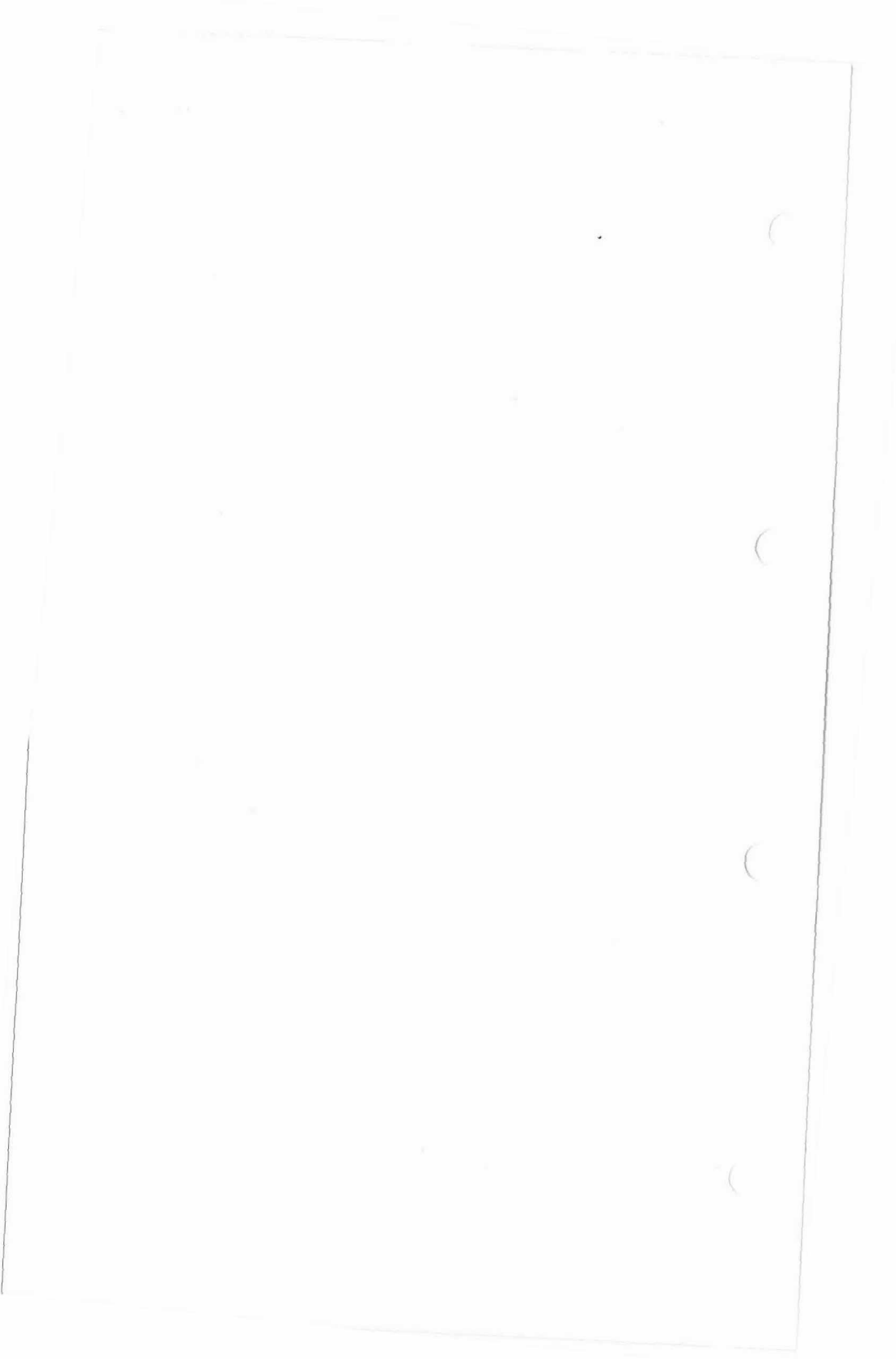
*When operating as an oscillator no r.f. voltage should be applied between heater and cathode.

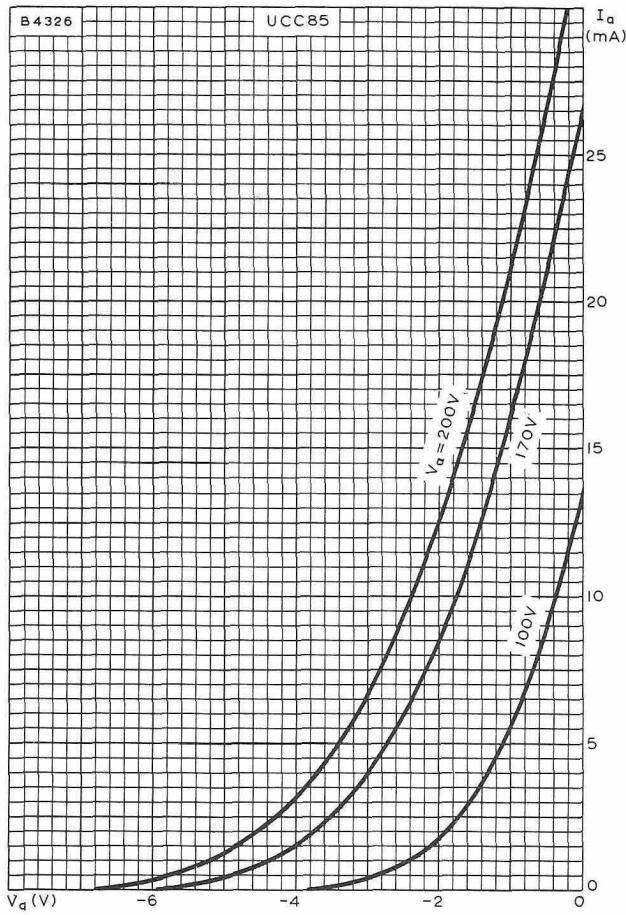
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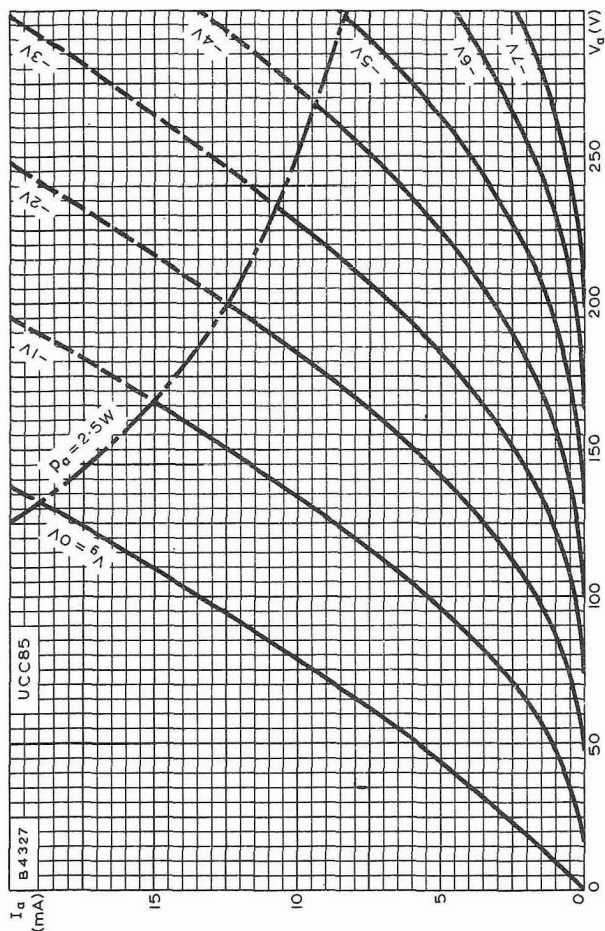
All dimensions in mm

The triode on pins 6, 7, 8 should be used as the r.f. amplifier and that on pins 1, 2, 3 as the self-oscillating additive mixer.

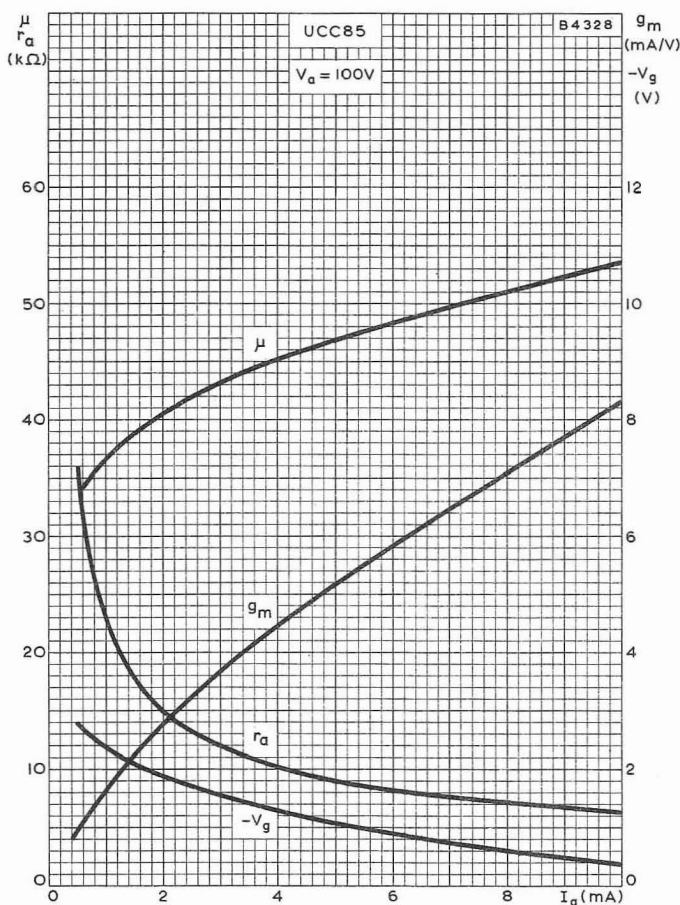




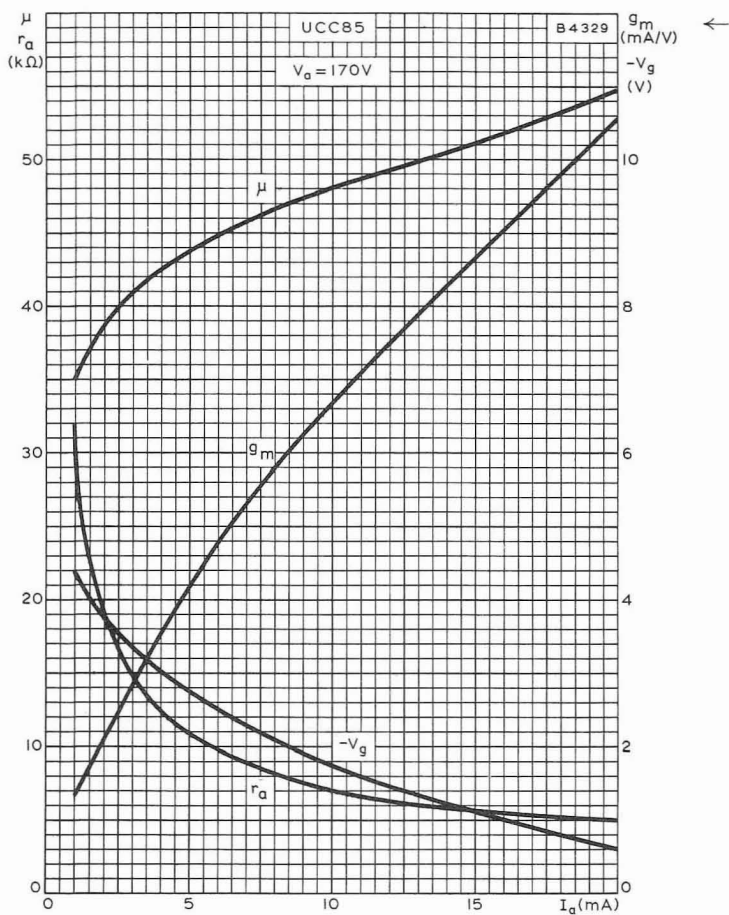
ANODE CURRENT PLOTTED AGAINST GRID VOLTAGE WITH ANODE VOLTAGE AS PARAMETER



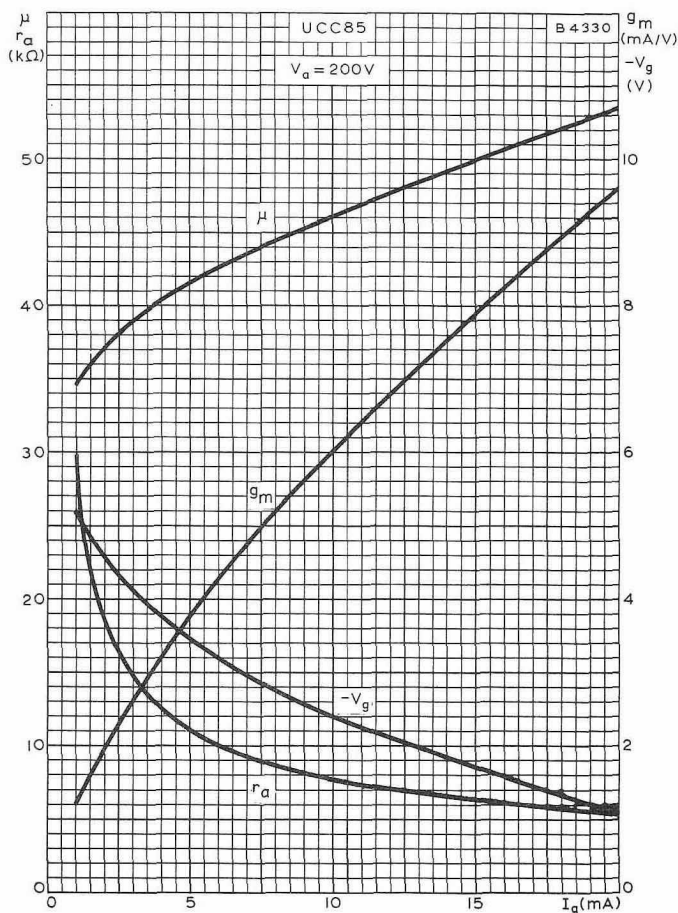
ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH GRID VOLTAGE AS PARAMETER



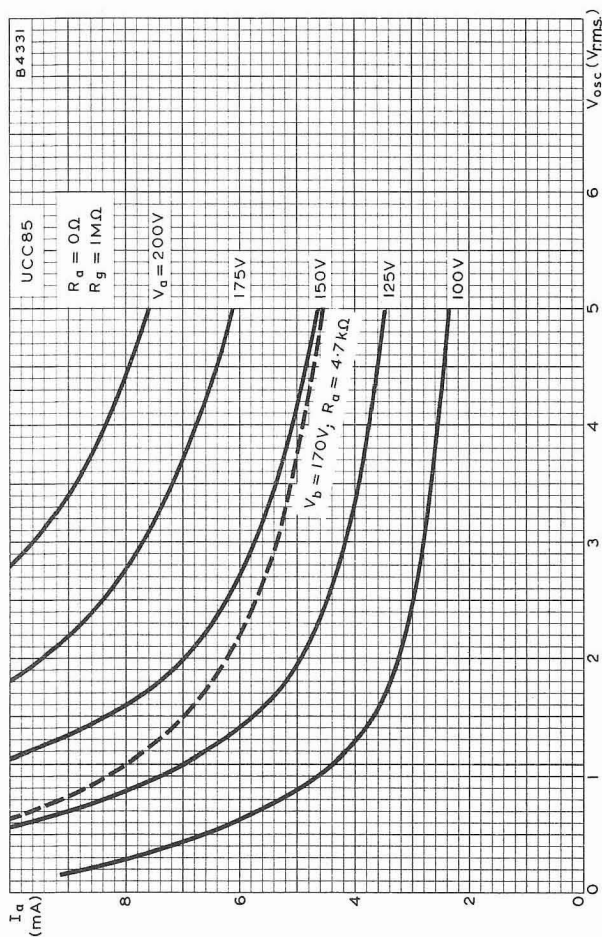
MUTUAL CONDUCTANCE, ANODE IMPEDANCE, AMPLIFICATION FACTOR
AND GRID VOLTAGE PLOTTED AGAINST ANODE CURRENT, $V_a = 100V$



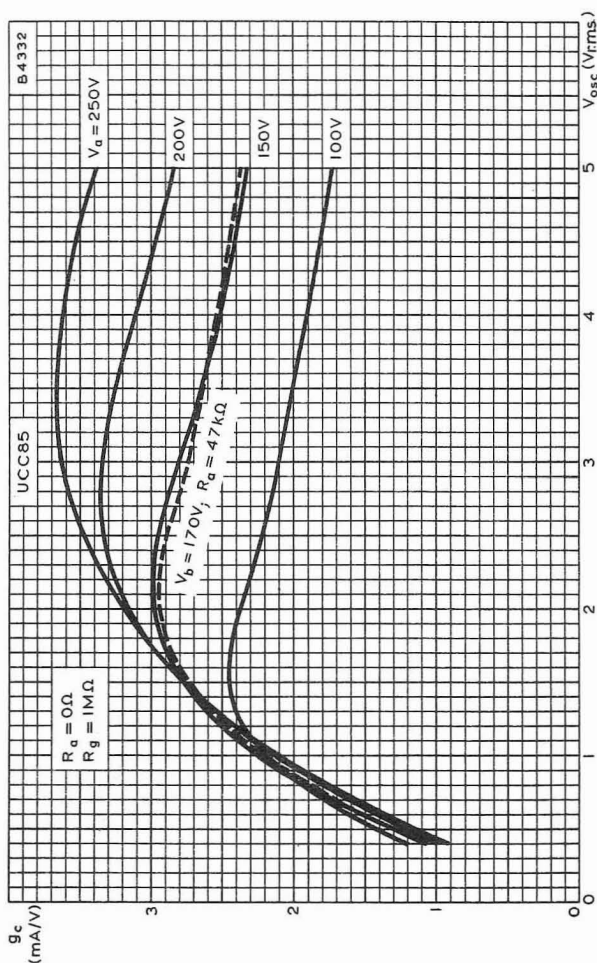
MUTUAL CONDUCTANCE, ANODE IMPEDANCE, AMPLIFICATION FACTOR
AND GRID VOLTAGE PLOTTED AGAINST ANODE CURRENT, $V_a = 170V$



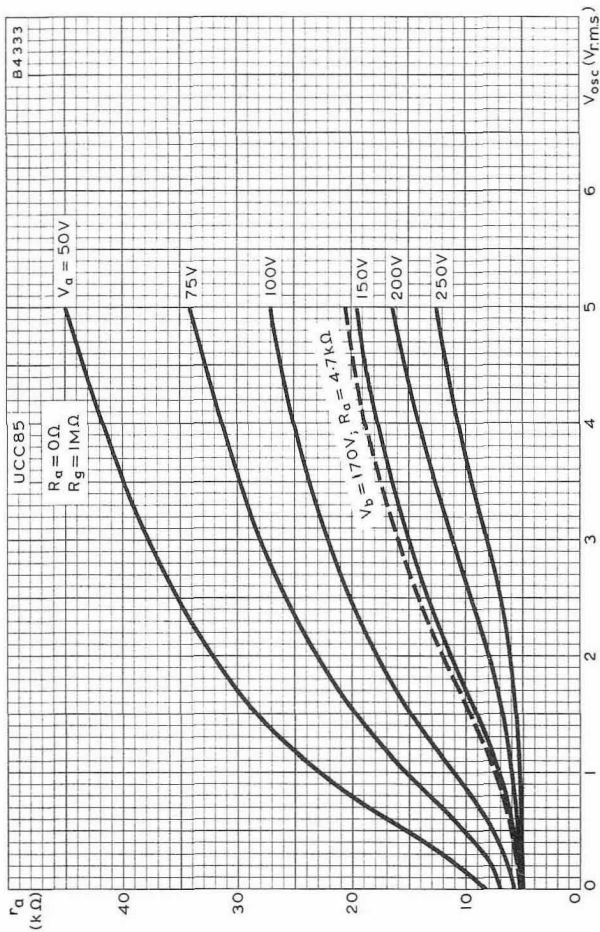
MUTUAL CONDUCTANCE, ANODE IMPEDANCE, AMPLIFICATION FACTOR
AND GRID VOLTAGE PLOTTED AGAINST ANODE CURRENT, $V_a = 200V$



ANODE CURRENT PLOTTED AGAINST OSCILLATOR VOLTAGE WITH
 ANODE VOLTAGE AS PARAMETER



CONVERSION CONDUCTANCE PLOTTED AGAINST OSCILLATOR VOLTAGE
WITH ANODE VOLTAGE AS PARAMETER



ANODE IMPEDANCE PLOTTED AGAINST OSCILLATOR VOLTAGE WITH
 ANODE VOLTAGE AS PARAMETER