

TRIODE PENTODE

PCL84

Triode pentode for use in television circuits as keyed a.g.c. valve, sync-separator, sync-amplifier or in noise suppression circuits. Pentode section for use as video output valve.

HEATER

I_h	300	mA
V_h	15	V

CAPACITANCES

C_{at-g1}	<10	mpF
C_{gt-g1}	<10	mpF

Pentode section

C_{in}	8.7	pF
C_{out}	4.2	pF
C_{a-g1}	<100	mpF

Triode section

C_{g-k}	3.8	pF
C_{a-k}	2.3	pF
C_{a-g}	2.7	pF
C_{g-h}	<100	mpF

CHARACTERISTICS

Pentode section

V_a	170	200	220	V
V_{g2}	170	200	220	V
V_{g1}	-2.1	-2.9	-3.4	V
I_a	18	18	18	mA
I_{g2}	3.0	3.0	3.0	mA
g_m	11	10.4	10	mA/V
r_a	100	130	150	k Ω
μ_{g1-g2}	36	36	36	
$V_{g1 \text{ max. }} (I_g = +0.3 \mu A)$			-1.3	V

Triode section

V_a	200	V
V_g	-1.7	V
I_a	3.0	mA
g_m	4.0	mA/V
r_a	16.2	k Ω
μ	65	
$V_g \text{ max. } (I_g = +0.3 \mu A)$	-1.3	V

PENTODE SECTION AS VIDEO OUTPUT VALVE

$V_b = V_{g2}$	170	200	220	V
V_{g1}	-2.0	-2.8	-3.3	V
R_a	3.0	3.0	3.0	k Ω
I_a	18	18	18	mA
I_{g2}	3.2	3.1	3.1	mA
g_m	10.4	10	9.7	mA/V

LIMITING VALUES

Pentode section

$V_{a(b)}$ max.	550	V
V_a max.	250	V
p_a max.	4.0	W
$V_{g2(b)}$ max.	550	V
V_{g2} max.	250	V
p_{g2} max.	1.7	W
I_k max.	40	mA
R_{g1-k} max. (fixed bias)	1.0	M Ω
R_{g1-k} max. (self bias)	2.0	M Ω
V_{h-k} max.	200	V
R_{h-k} max.	20	k Ω

Triode section

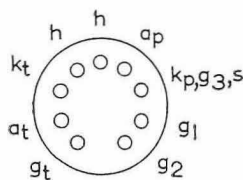
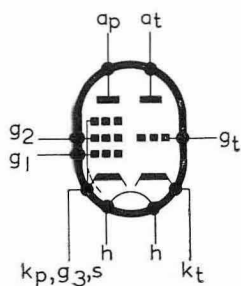
$V_{a(b)}$ max.	550	V
V_a max.	250	V
$v_{a(pk)}$ max.	600	V
p_a max.	1.0	W
* $i_{k(pk)}$ max.	160	mA
I_k max.	12	mA
R_{g-k} max. (fixed bias)	1.0	M Ω
R_{g-k} max. (self bias)	3.0	M Ω
V_{h-k} max. (cathode negative)	150	V
† V_{h-k} max. (cathode positive)	350	V
R_{h-k} max.	20	k Ω

*Maximum pulse duration = 800 μ s.

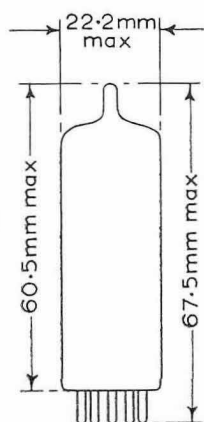
†Maximum d.c. component = 200V.

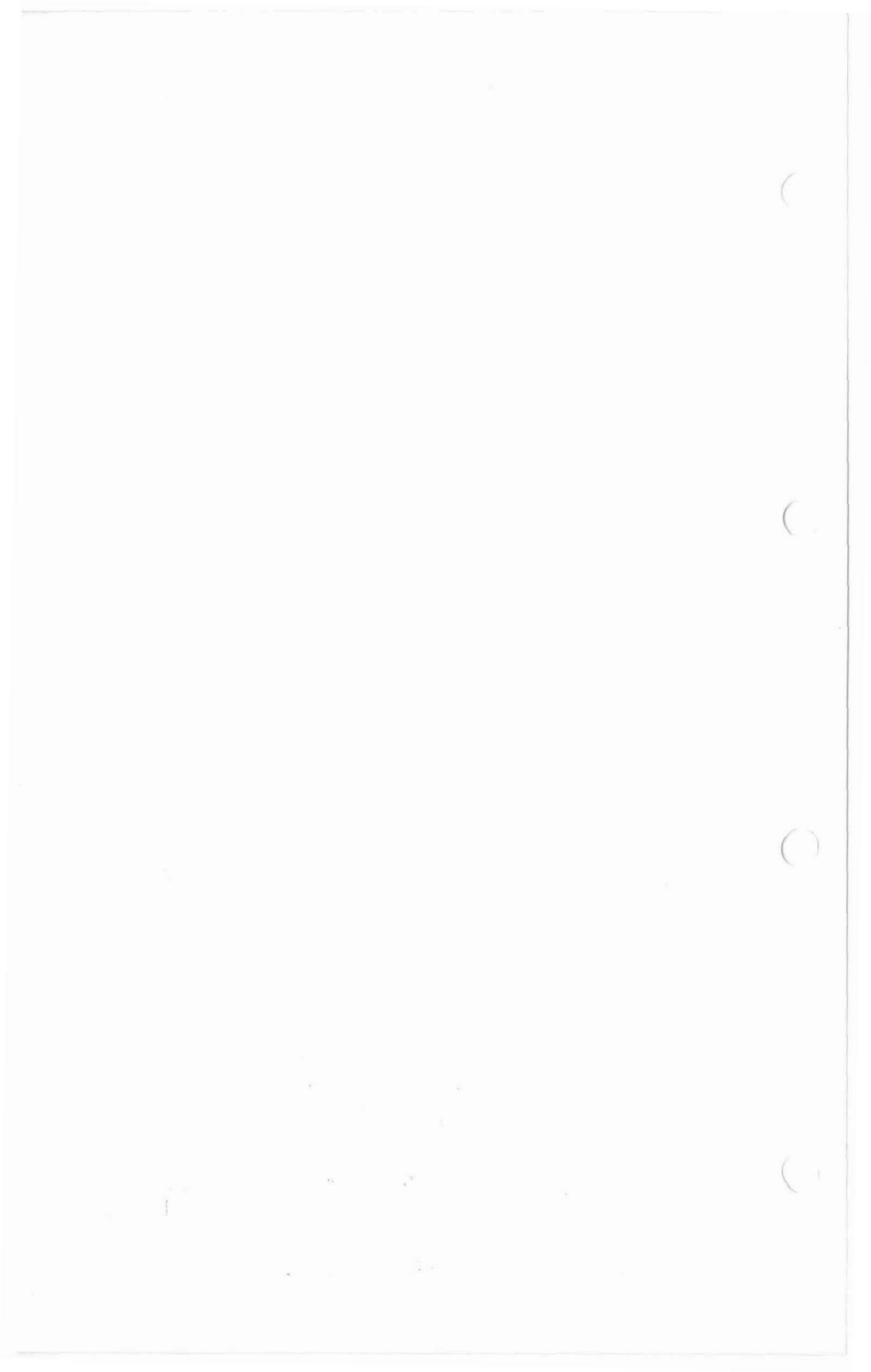


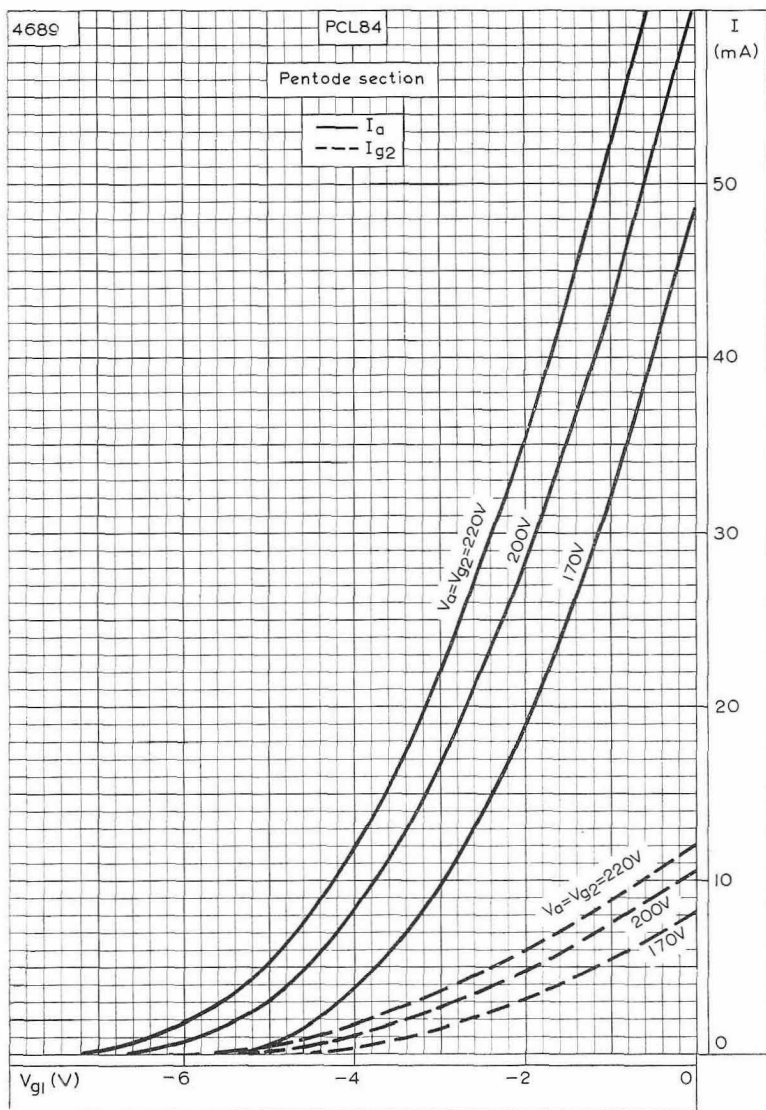
4690



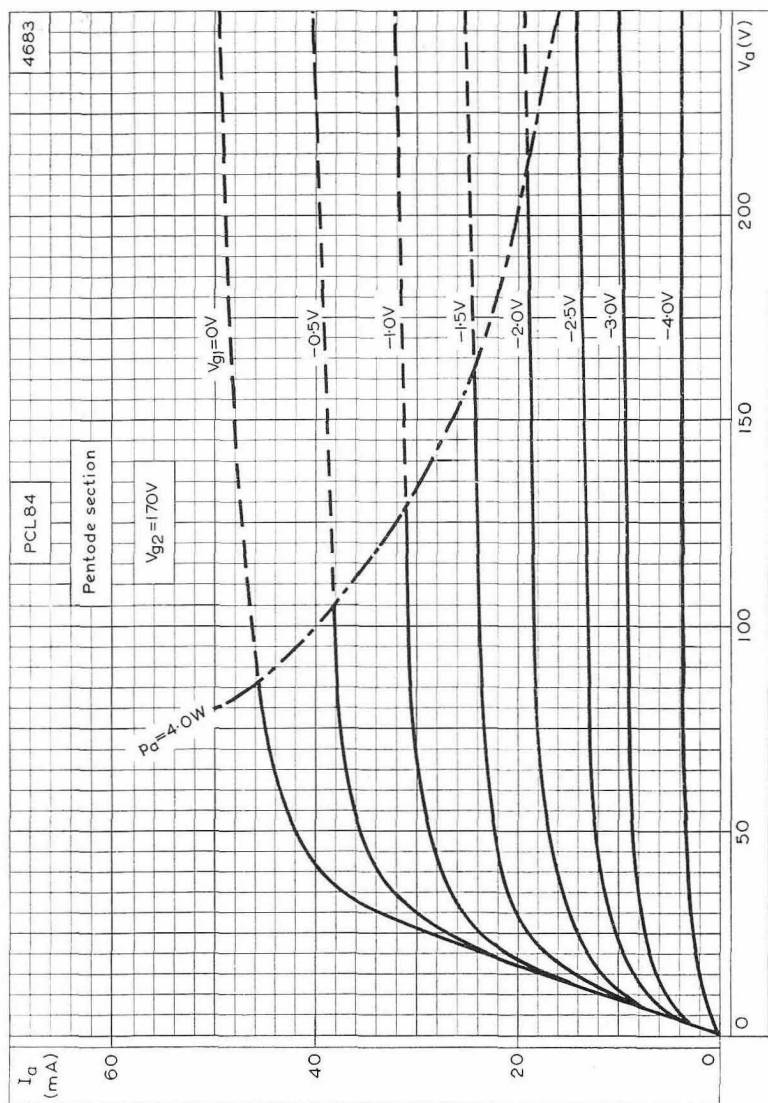
B9A Base







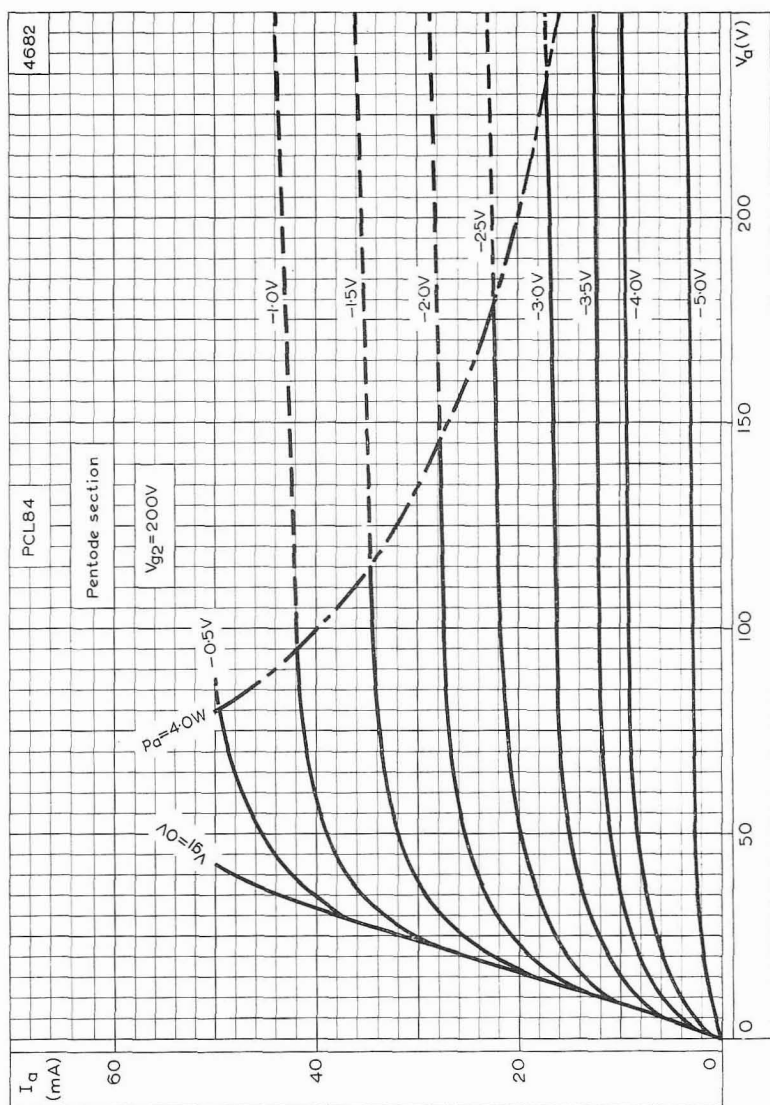
ANODE AND SCREEN-GRID CURRENTS PLOTTED AGAINST
CONTROL-GRID VOLTAGE FOR VARIOUS ANODE AND
SCREEN-GRID VOLTAGES



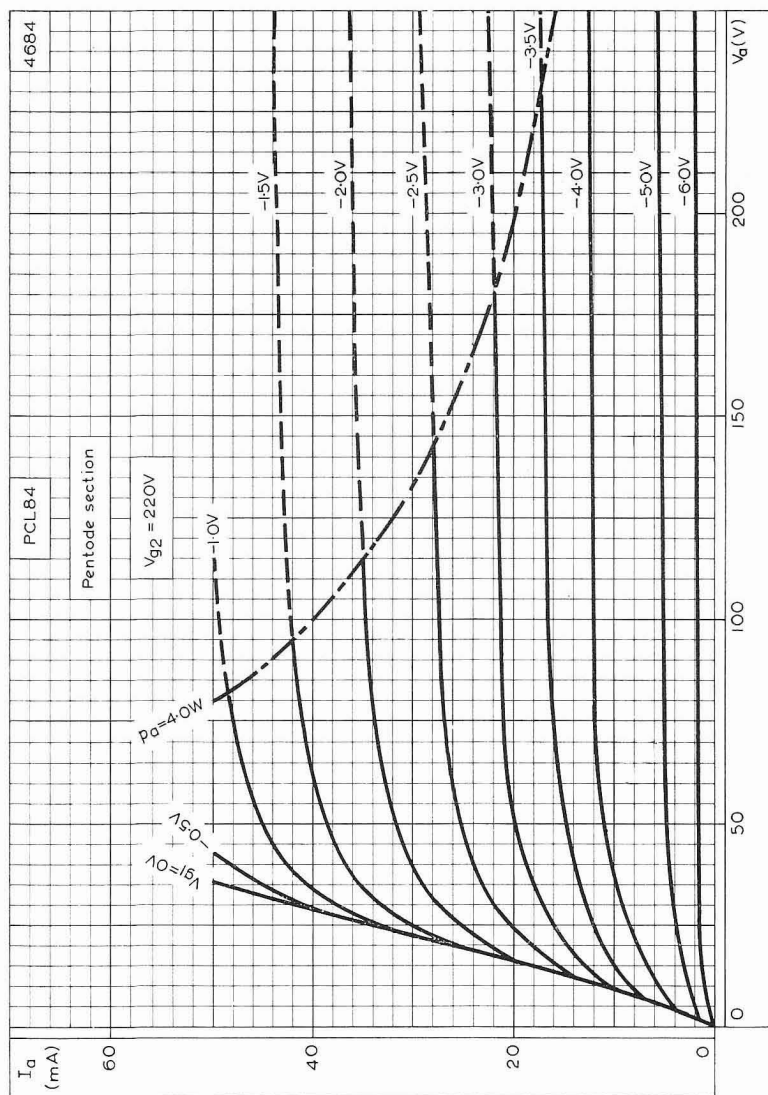
ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE
WITH CONTROL-GRID VOLTAGE AS PARAMETER.

$V_{g2} = 170V$

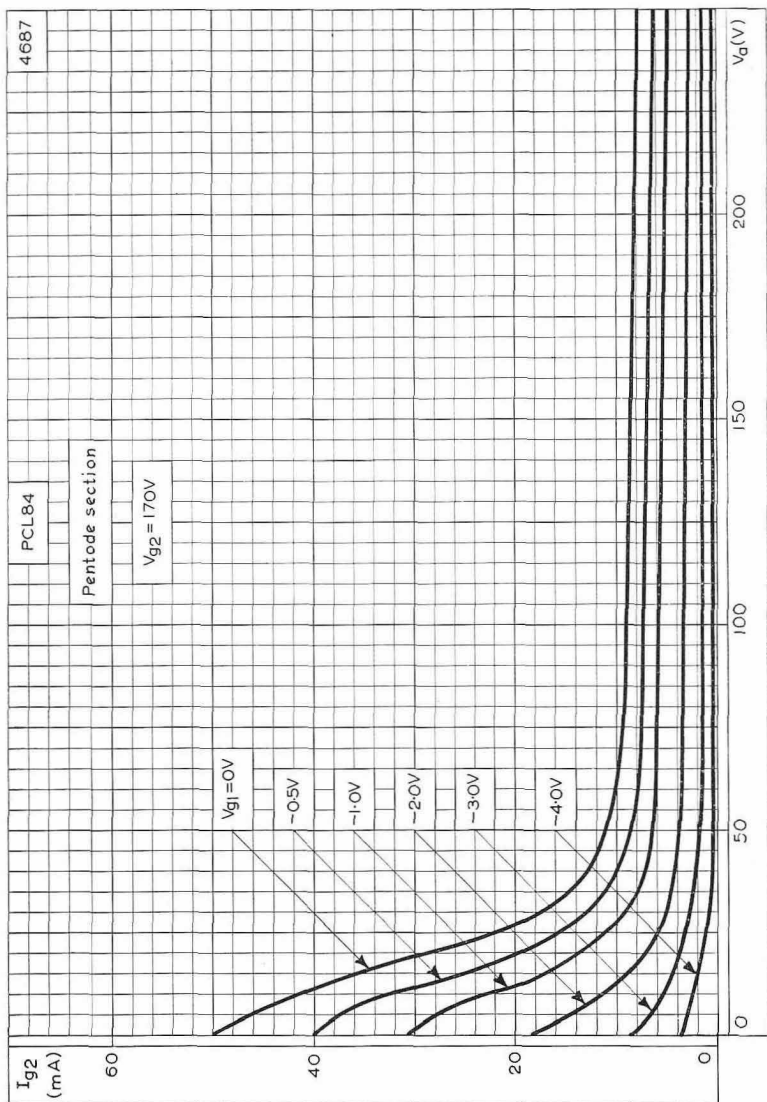




ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE
WITH CONTROL-GRID VOLTAGE AS PARAMETER
 $V_{g2} = 200V$

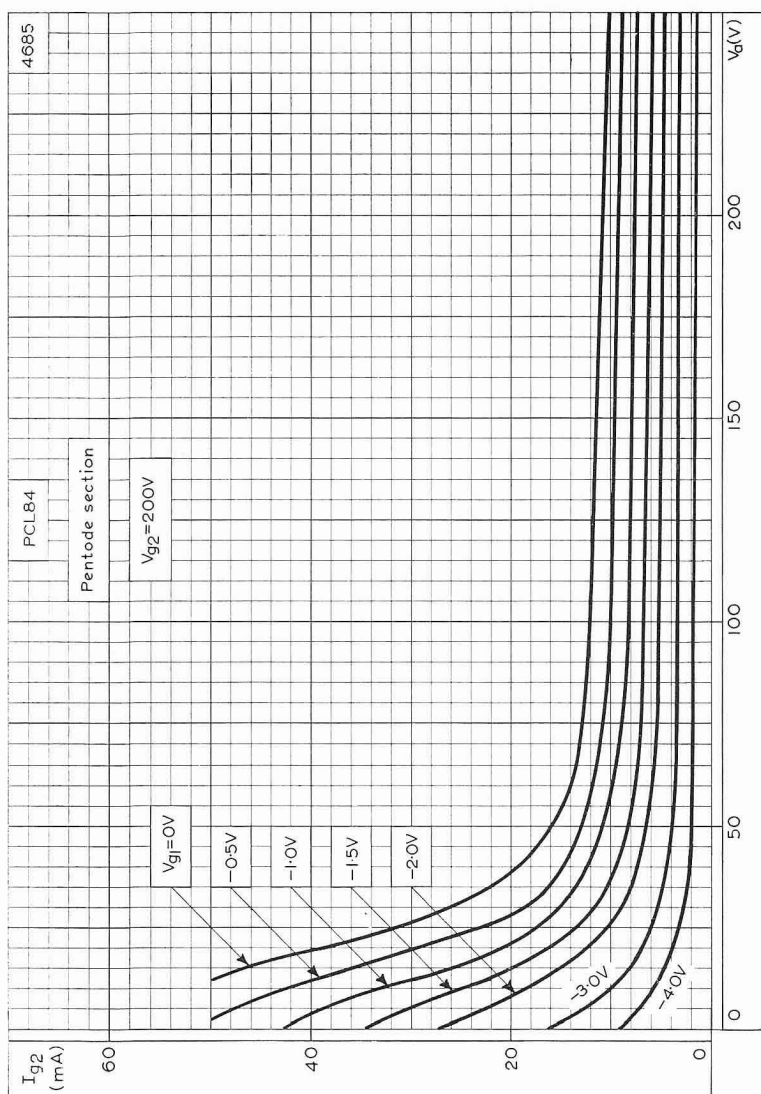


ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE
WITH CONTROL-GRID VOLTAGE AS PARAMETER
 $V_{g2} = 220V$

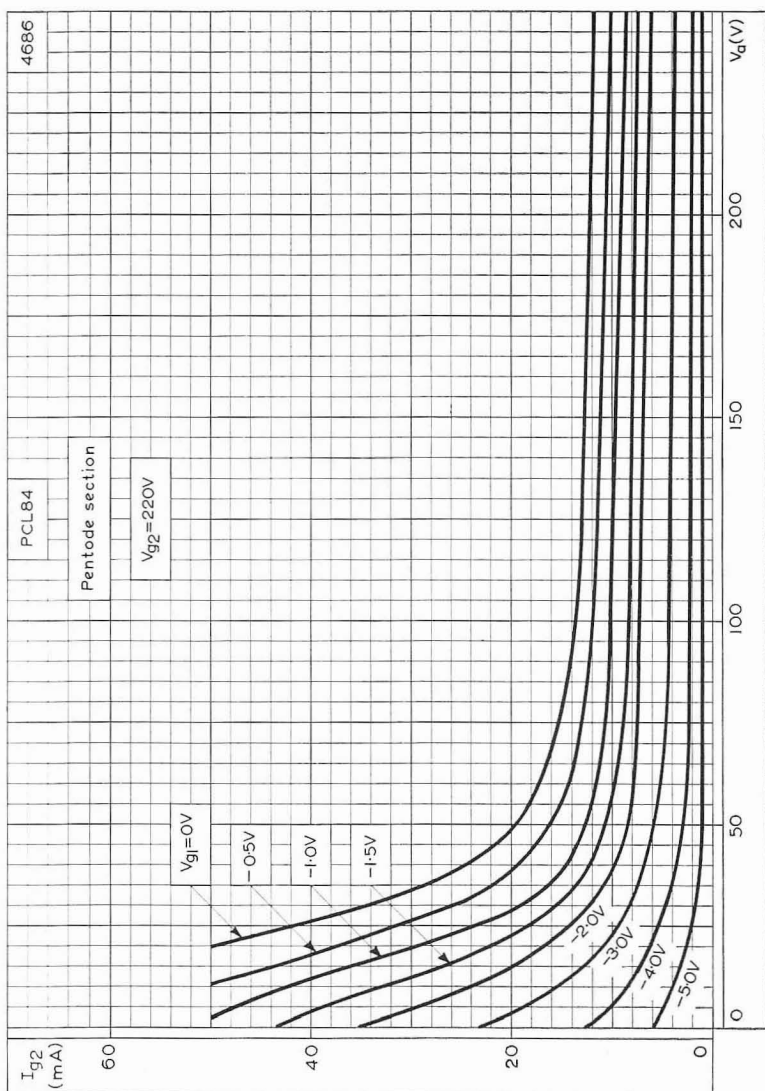


SCREEN-GRID CURRENT PLOTTED AGAINST ANODE VOLTAGE
WITH CONTROL-GRID VOLTAGE AS PARAMETER

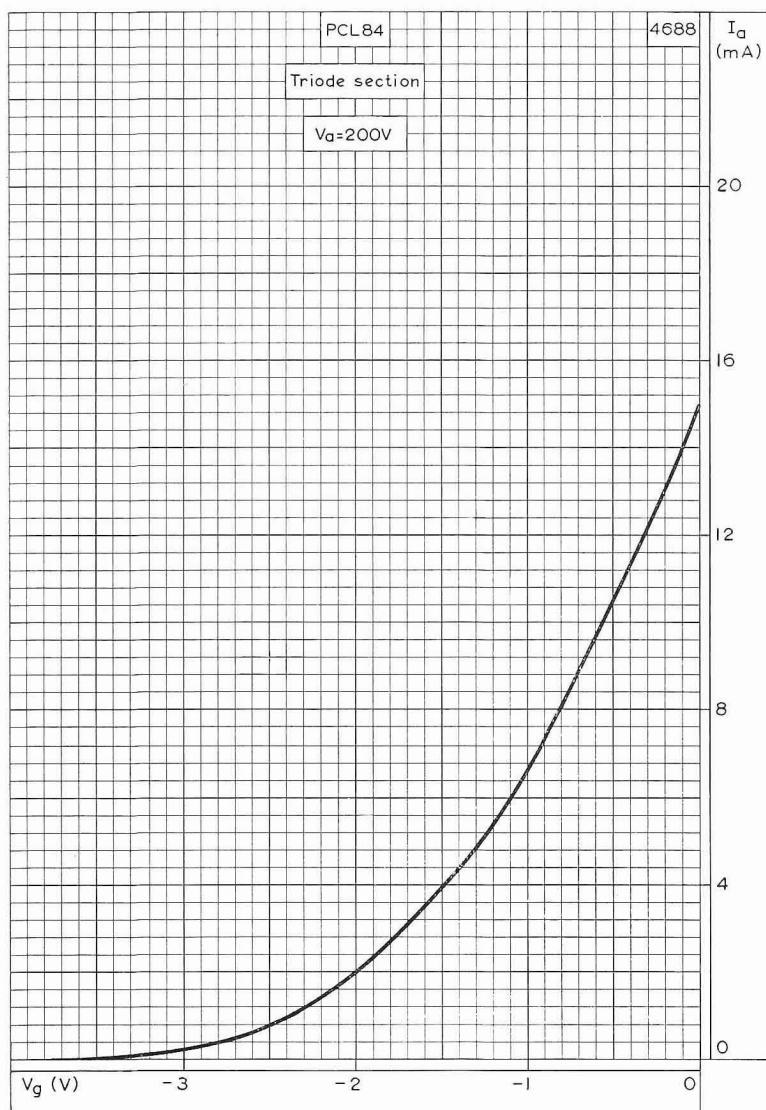
$V_{g2} = 170V$



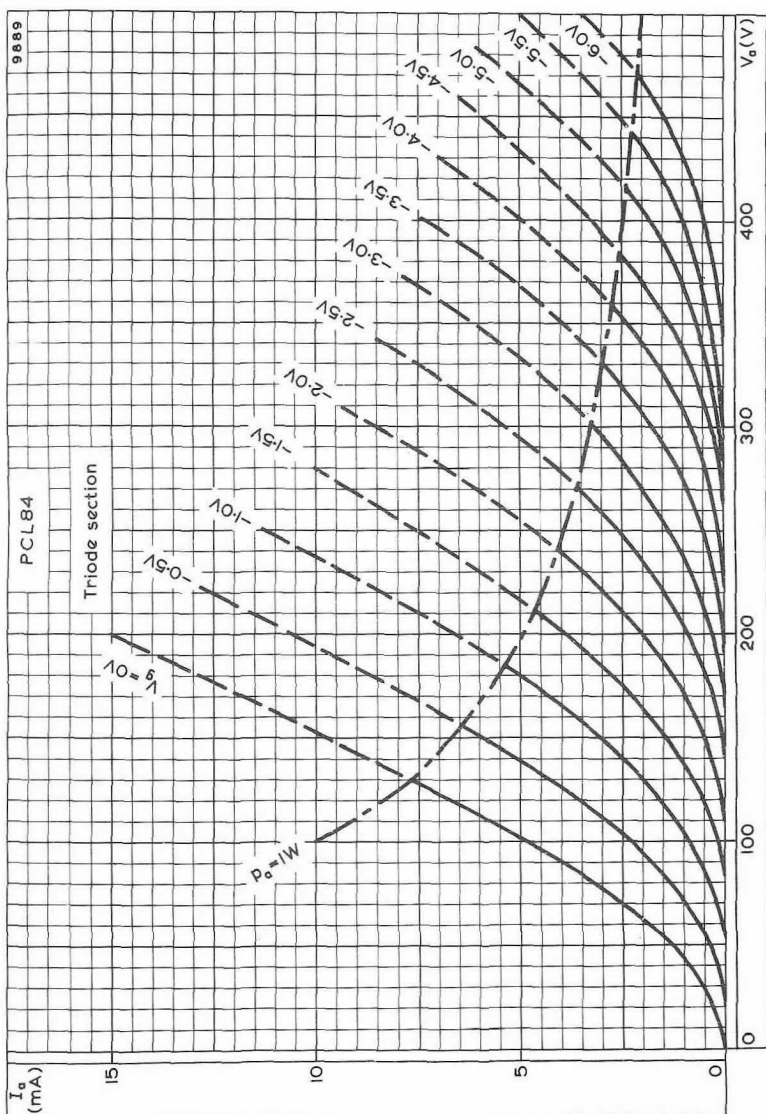
SCREEN-GRID CURRENT PLOTTED AGAINST ANODE VOLTAGE
WITH CONTROL-GRID VOLTAGE AS PARAMETER
 $V_{g2} = 200V$



SCREEN-GRID CURRENT PLOTTED AGAINST ANODE VOLTAGE
WITH CONTROL-GRID VOLTAGE AS PARAMETER
 $V_{g2} = 220V$



ANODE CURRENT PLOTTED AGAINST GRID VOLTAGE
FOR TRIODE SECTION



ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH CONTROL-GRID VOLTAGE AS PARAMETER, TRIODE SECTION

