

TRIODE PENTODE

PCF86

Combined triode and high slope frame grid r.f. pentode for use as a frequency changer at frequencies up to 220Mc/s in television tuners.

HEATER

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

I_h	300	mA
V_h	8.0	V

CAPACITANCES (measured without an external shield)

C_{ap-at}	125	mpF←
C_{ap-gt}	14	mpF
C_{g1-at}	<10	mpF
C_{g1-gt}	<10	mpF

Pentode section

C_{a-g1}	12	mpF
C_{g1-g2}	1.7	pF
C_{in}	5.8	pF←
C_{out}	3.5	pF

Triode section

C_{g-k+h}	2.4	pF
C_{a-k+h}	1.1	pF
C_{a-g}	2.0	pF

CHARACTERISTICS

Pentode section

V_a	170	V
V_{g2}	150	V
I_a	10	mA
I_{g2}	3.3	mA
g_m	12	mA/V
r_a	>350	kΩ
μ_{g1-g2}	70	
V_{g1}	-1.2	V
R_{eq}	1.0	kΩ

Triode section

V_a	100	V
I_a	* 14	mA
g_m	5.7	mA/V←
μ	17	
V_g	-3.0	V

OPERATING CONDITIONS AS A FREQUENCY CHANGER

Pentode section

V_a	190	V
$V_{g2(b)}$	190	V
R_{g2}	18	k Ω
R_{g1}	100	k Ω
I_a	8.5	mA
I_{g2}	2.7	mA
$V_{osc(r.m.s.)}$	2.3	V
g_c	4.5	mA/V

LIMITING VALUES

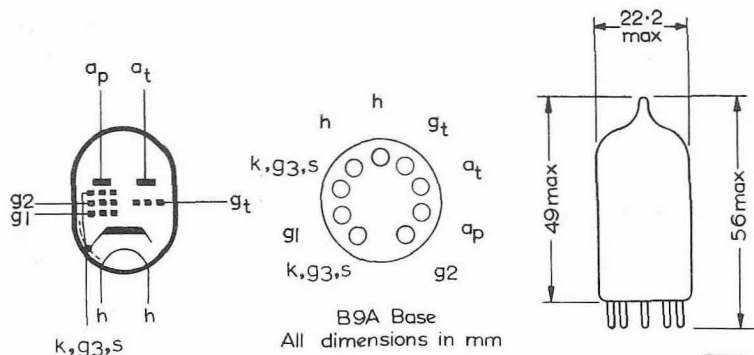
Pentode section

V_a max.	250	V
p_a max.	2.0	W
V_{g2} max.	150	V
p_{g2} max.	500	mW
I_k max.	18	mA
R_{g1-k} max.	250	k Ω

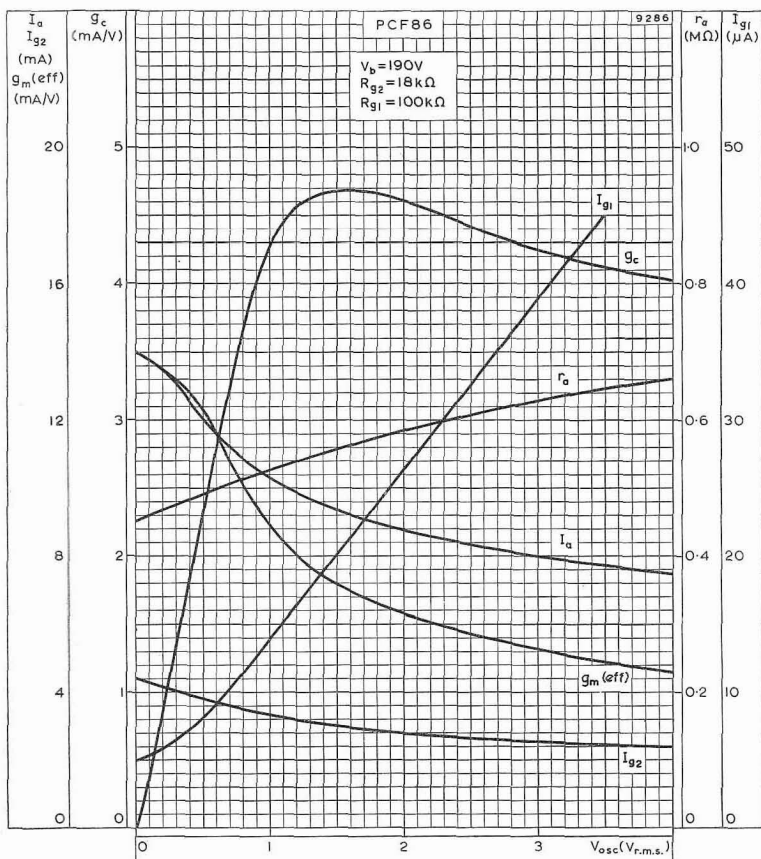
Triode section

V_a max.	125	V
p_a max.	1.5	W
I_k max.	15	mA
R_{g-k} max.	500	k Ω
$*V_{h-k}$ max.	100	V

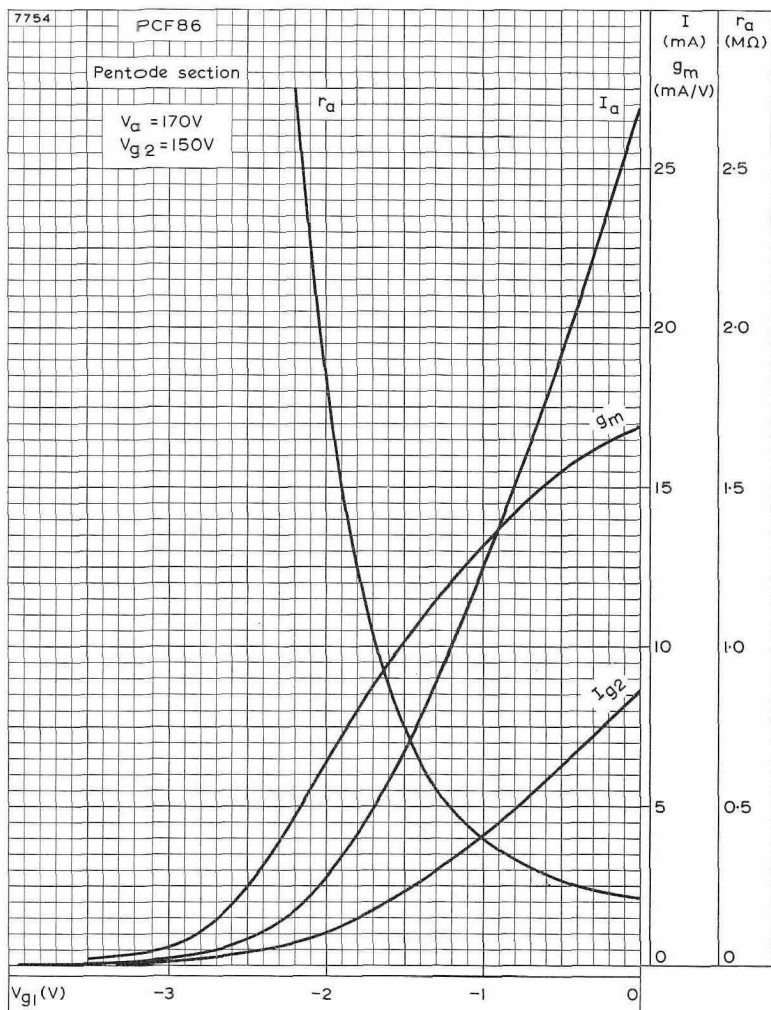
*To fulfil hum requirements on a.m. sound, it will be necessary for V_{h-k} to be less than $50V_{r.m.s.}$. For intercarrier receivers V_{h-k} should not exceed $75V_{r.m.s.}$



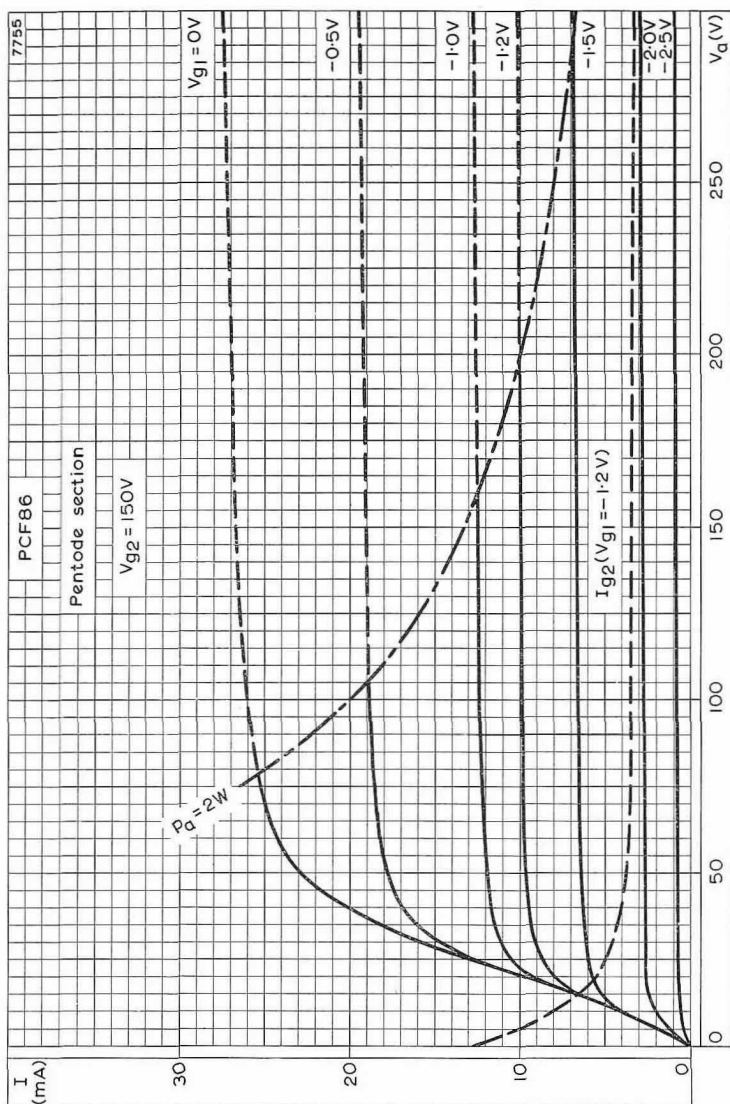
7408



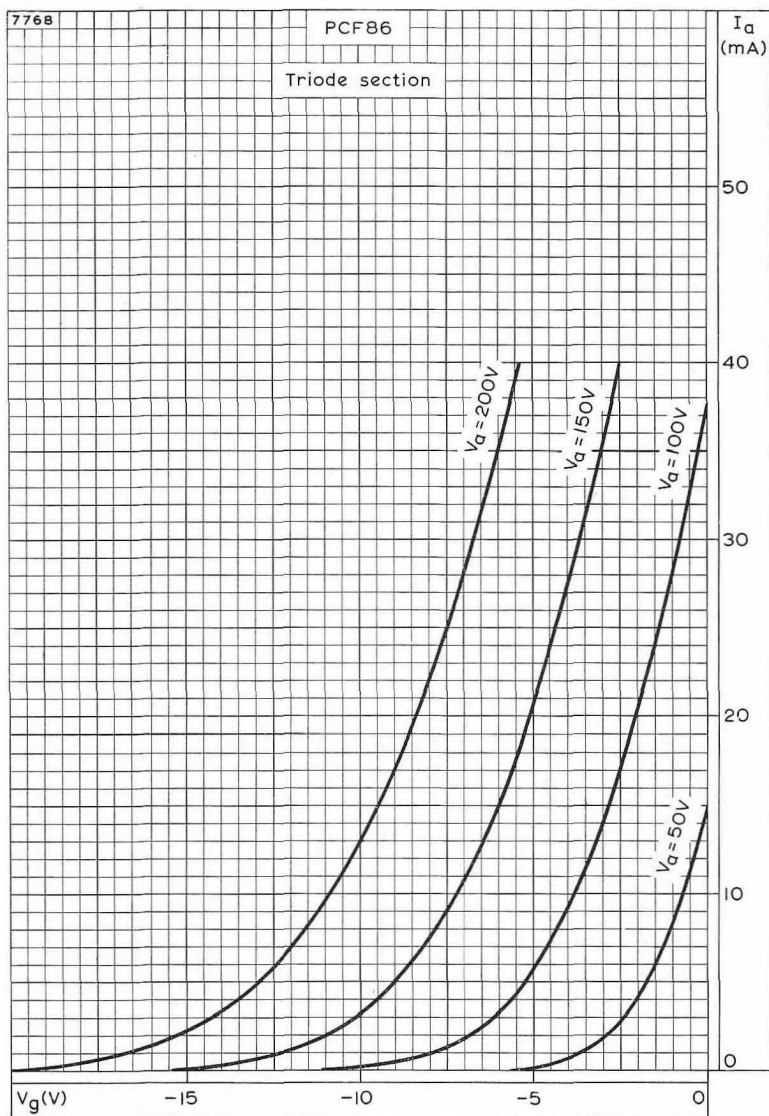
PERFORMANCE CURVES FOR USE AS A FREQUENCY CHANGER



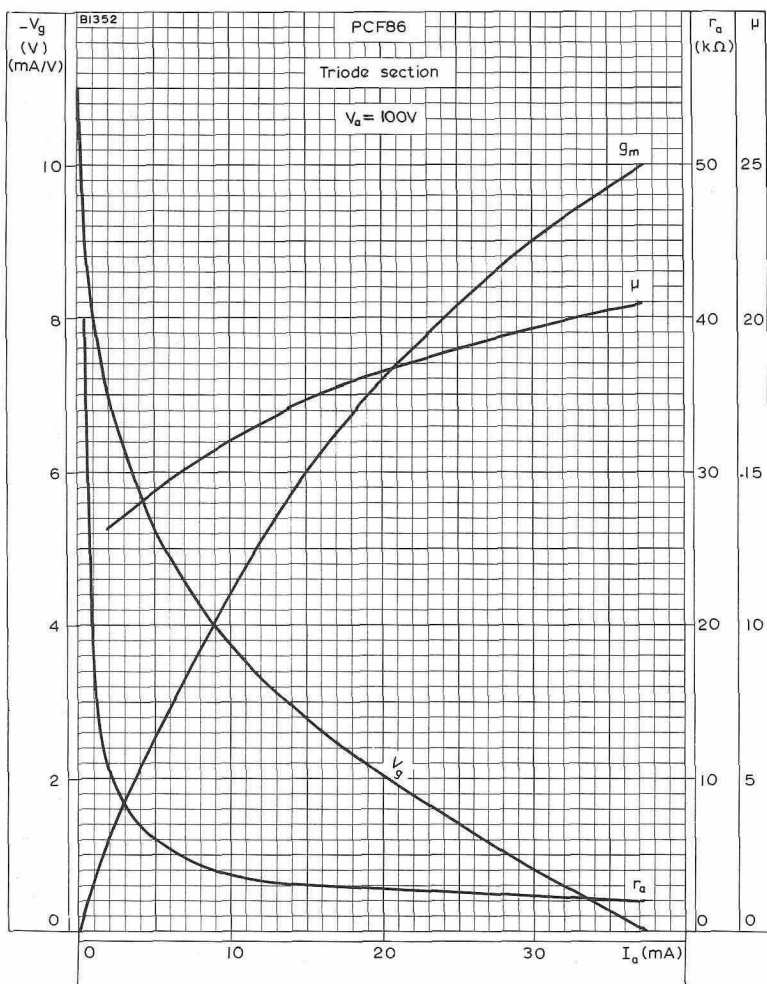
ANODE AND SCREEN-GRID CURRENTS, MUTUAL CONDUCTANCE AND ANODE IMPEDANCE PLOTTED AGAINST CONTROL-GRID VOLTAGE. PENTODE SECTION



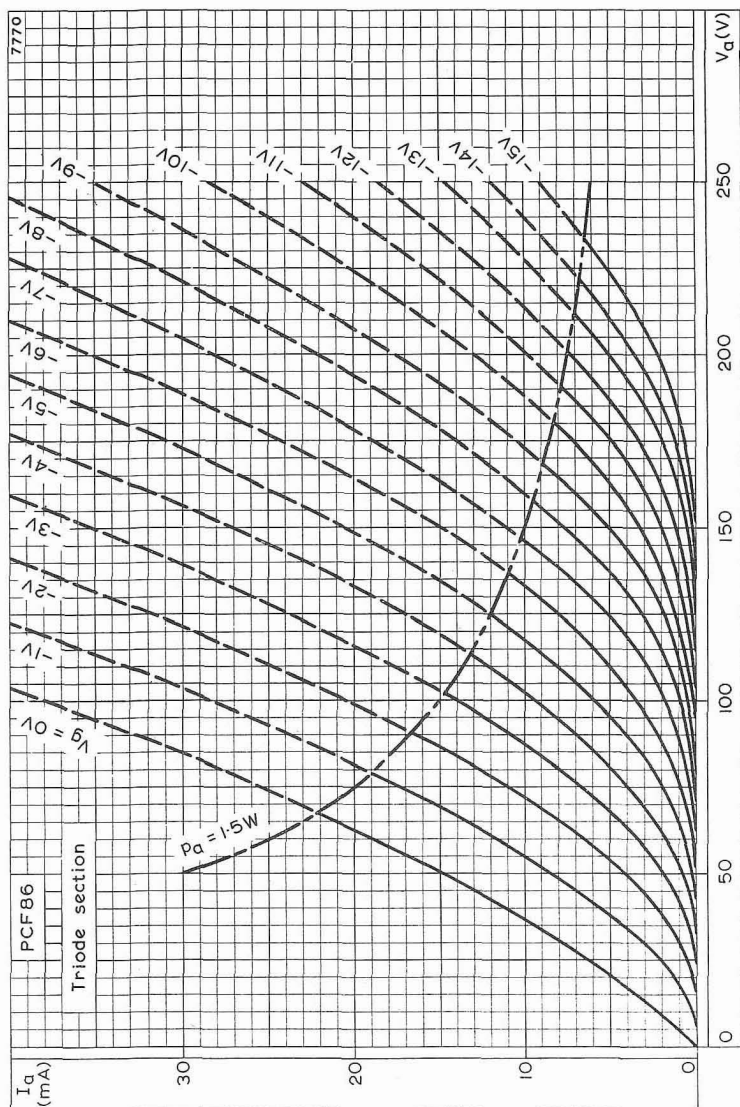
ANODE AND SCREEN-GRID CURRENTS PLOTTED AGAINST ANODE VOLTAGE WITH CONTROL-GRID VOLTAGE AS PARAMETER. PENTODE SECTION



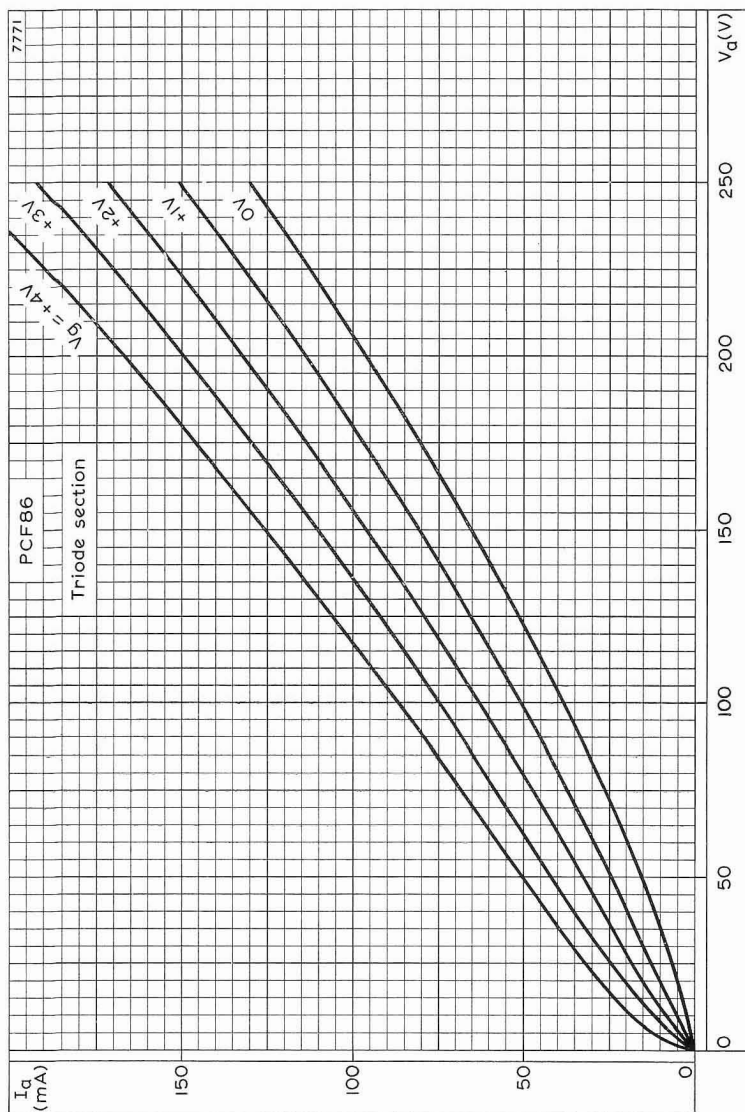
ANODE CURRENT PLOTTED AGAINST GRID VOLTAGE FOR VARIOUS VALUES OF ANODE VOLTAGE. TRIODE SECTION



GRID VOLTAGE, MUTUAL CONDUCTANCE, ANODE IMPEDANCE AND AMPLIFICATION FACTOR PLOTTED AGAINST ANODE CURRENT. TRIODE SECTION



ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH GRID VOLTAGE AS PARAMETER. TRIODE SECTION



ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE WITH POSITIVE GRID VOLTAGE AS PARAMETER. TRIODE SECTION

