7GV7/ 6GV7 | **GENERAL** | V.H.F. TRIODE PENTODE

This triode and variable mu pentode valve combination, with the pentode of frame grid construction, is for use in television tuners. It is primarily intended to be used as a variable gain V.H.F. frequency changer with the triode as local oscillator but the pentode is also designed for use as a high gain controlled I.F. amplifier following a U.H.F. tuner.

RATINGS

Heater Current I_h 0.3 A | Heater Voltage V_h 7.4 V

		Pentode	Triode	
Maximum Anode Dissipation	$P_{a(max)}$	2.	2	W
Maximum Screen Grid Dissipation	$P_{g2(max)}$	0.5	-	W
Maximum Anode Voltage	$V_{a(max)}$	250	250	V
Maximum Screen Grid Voltage	$V_{g2(max)}$	230.	-	V
Maximum Heater to Cathode Voltage (RMS)	$V_{h-k(r.m.s.)max.}$	200	200	V
Maximum Cathode Current	$I_{k(max)}$	18	15	mA
Maximum Grid to Cathode Resistance(Fixed Bias)	$R_{g1(max)}$	250	500	kΩ

CAPACITANCES pF

g_1/all	6.7
a_p/all	2.7
g_1/a_p	.007
a_t/E	2.2
g_t/E	2.4
a_p/g_t	.001
g_t/a_t	2.0
a_p/a_t	.014
g_1/g_t	.008
g_1/a_t	.002

The symbol E denotes the electrodes of only second valve section and the remaining earthy potential electrodes of the section under measurement, H&M joined to cathode unless otherwise stated. Measurment with valve cold

MECHANICAL DATA

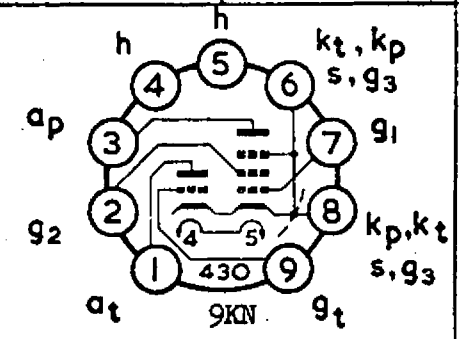
BASE † B9A | CAP -

Maximum Dimensions mm.

Overall length	56
Seated height	49
Diameter	22.2

Mounting Position

Unrestricted



CHARACTERISTICS.

		Pentode	Triode	
Anode Voltage	V_a	125	100	V
Screen Grid Voltage	V_{g2}	125	-	V
Control Grid Voltage	V_{g1}	-1.5	-3	V
Anode Current	I_a	10	14	mA
Screen Grid Current	I_{g2}	3.1	-	mA
Mutual Conductance	g_m	11.	5.5	mA/V
Amplification Factor	μ	-	17	
Inner Amplification Factor	μ_{g1-g2}	50	-	

Notes.

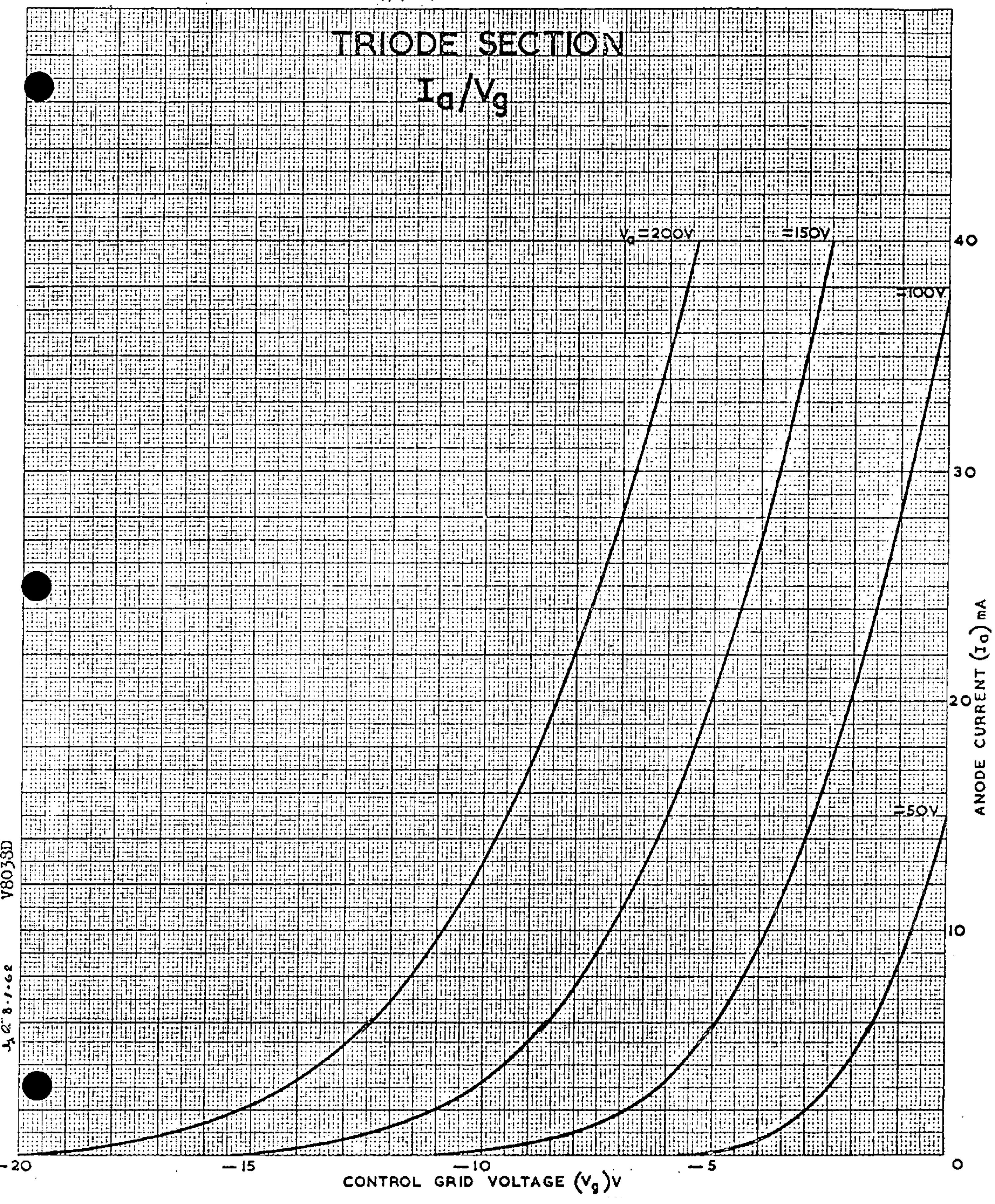
† Shield completely surrounds pentode.
Basing arranged to minimise pentode cathode lead inductance effects with the shorter lead to pin 8.

* In fully shielded socket with can. (I.E.C. Publication 100)

§ The 6GV7 is identical with the 7GV7 with the exception of the heater ratings, which are 6.3 volts, 0.35 ampere.

This valve performs the same function as the 30C17 but the basing has been changed to suit certain tuners.

← INDICATES A CHANGE


TRIODE SECTION
Ia/Vg
Va=200V
=150V
=100V
=50V
40
30
20
10
0
-20
-15
-10
-5
CONTROL GRID VOLTAGE (Vg)V
ANODE CURRENT (Ia) mA

V8038D

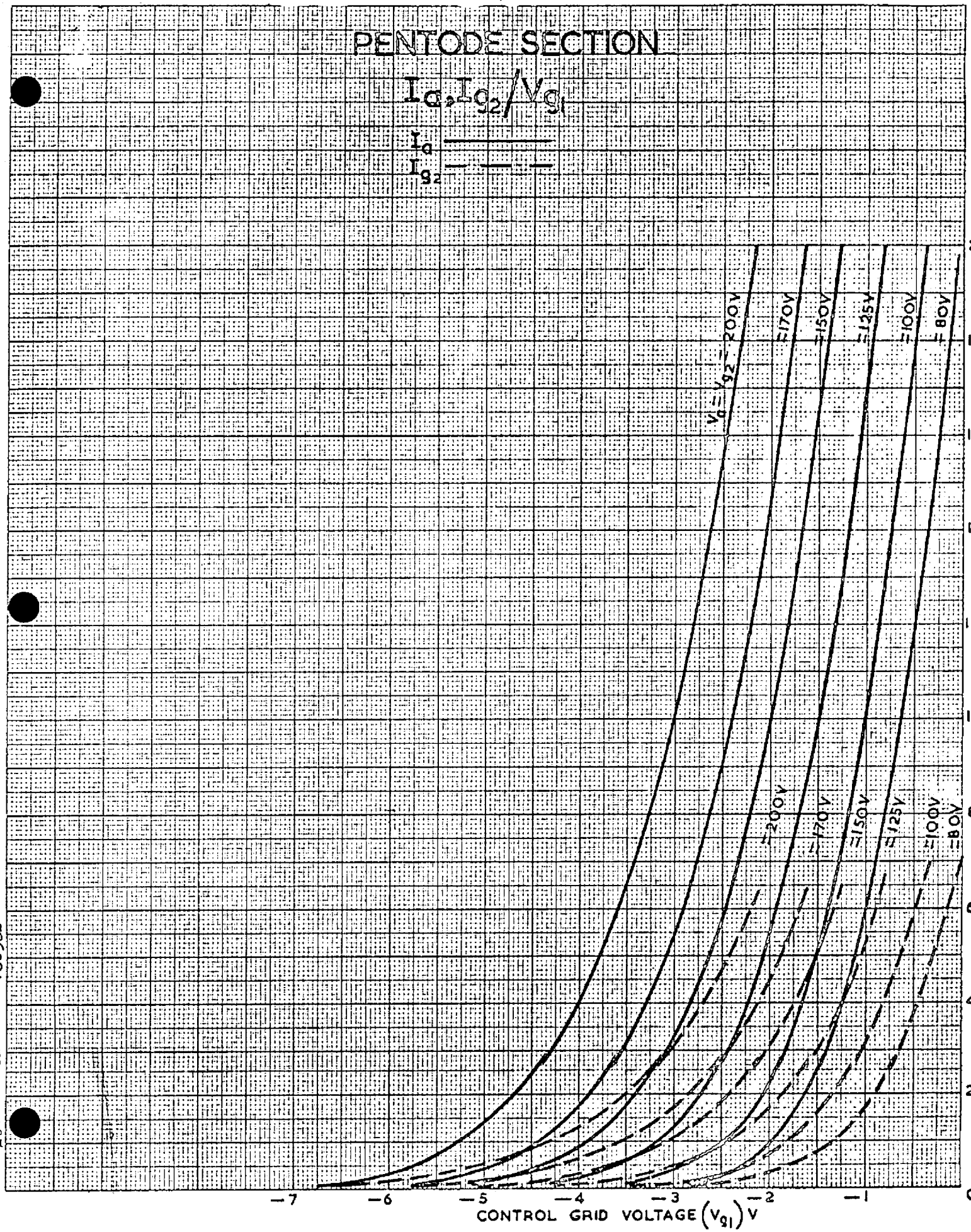
6GV7 / 7GV7

PENTODE SECTION

$I_a, I_{g_2} / V_{g_1}$

I_a ——————

I_{g_2} — — — —



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