

TYPICAL OPERATING CONDITIONS.

HEPTODE SECTION.

(as A.M. Frequency Changer).

Anode Supply Voltage	$V_a = V_b$	250	250	250 volts.
Screen Grid Feed Resistor	R_{g2g4}	22	*22	†18 kΩ
Oscillator Grid Resistor	R_{g3g_t}	47	47	47 kΩ
Oscillator Grid Current	I_{g3g_t}	200	200	200 μA.
Grid Voltage ...	V_{g1}	-2	-2	-1.9 volts.
Anode Current ...	I_a	3.25	2.5	3.0 mA.
Screen Grid Current	I_{g2g4}	6.7	5.5	6.1 mA.
Conversion Conductance	g_c	775	700	750 μA/V.
Anode Impedance ...	r_a	1	1	1 MΩ
Equivalent Noise Resistance	R_{eq}	70	66	70 kΩ
Grid Voltage (for 100:1 reduction in g_c)	V_{g1}	-28.5	-28.5	-28.5 volts.

*Common screen grid resistor with valve type EBF80 or 6N8.
Total Current 7.2 mA.

†Common screen grid resistor with EF85 or 6BY7.
Total Current 8.5 mA.

(as I.F. or R.F. Amplifier).

Anode Supply Voltage ...	$V_a = V_b$	250	250 volts.
Screen Grid Feed Resistor ...	R_{g2g4}	39	†22 kΩ
Screen Grid Voltage ...	V_{g2g4}	100	105 volts.
Suppressor Grid Voltage ...	V_{g3}	0	0 volts.
Control Grid Voltage ...	V_{g1}	-2	-2.1 volts.
Anode Current ...	I_a	6.5	6.5 mA.
Screen Grid Current ...	I_{g2g4}	3.8	4.1 mA.
Mutual Conductance ...	g_m	2.4	2.4 mA/V.
Anode Impedance ...	r_a	0.7	0.7 MΩ
Inner mu. ...	$\mu_{g1-g2g4}$	20	20
Equivalent Noise Resistance	R_{eq}	8.5	8.5 kΩ
Input Resistance at 100 Mc/s.	r_{in}	2.0	2.0 kΩ
Grid Voltage (for 100:1 reduction in g_m) ...	V_{g1}	-42	-42 volts.

†Common screen grid resistor with valve type EF85 or 6BY7.
Total Current is 6.7 mA.

TRIODE SECTION.

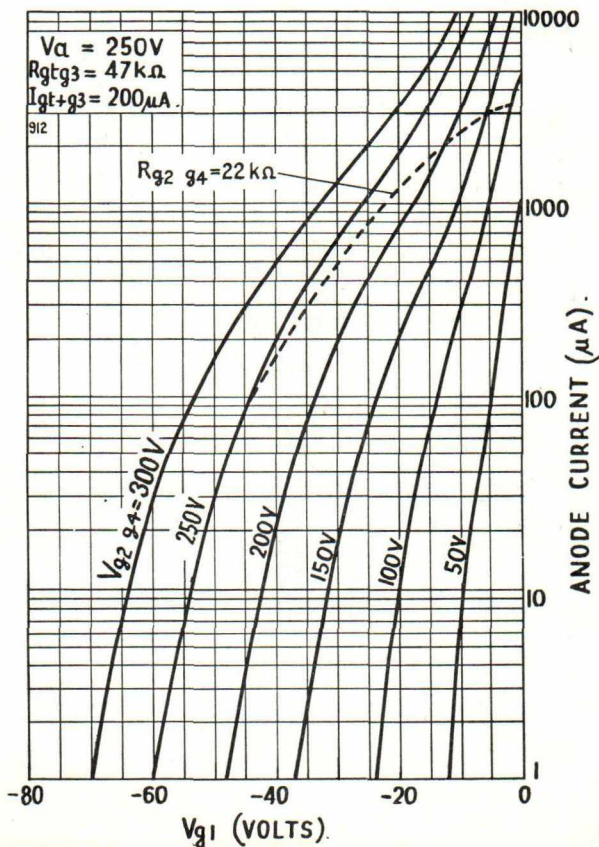
(as Oscillator).

Supply Voltage ...	V_b	250 volts.
Anode Load Resistor ...	R_{at}	33 kΩ
Grid Resistor ...	R_{gt}	47 kΩ
Grid Current ...	I_{gt}	200 μA.
Anode Current ...	I_{at}	4.5 mA.
Mutual Conductance ...	g_m (eff)	650 μA/V.

CAPACITANCES.

	Triode.	Heptode.
C_{out}	2.2	7.9 pF.
C_{in}	2.6	(g_1) 4.8 pF.
		(g_3) 6.0 pF.
C_{a-g}	1.0	<0.01 pF.
C_{g-h}	<0.02	<0.02 pF.
C_{g1-g3}		<0.3 pF.
C_{g3-h}		<0.06 pF.
C_{ah-at}		0.20 pF.
C_{ah-gt}		<0.09 pF.
$C_{ah-g3gt}$		<0.35 pF.
C_{g1-gt}		<0.06 pF.
C_{g1-gt}		<0.17 pF.
$C_{g1-g3gt}$		<0.45 pF.

Typical Anode Current/Grid Voltage Characteristics
when used as Frequency Changer.

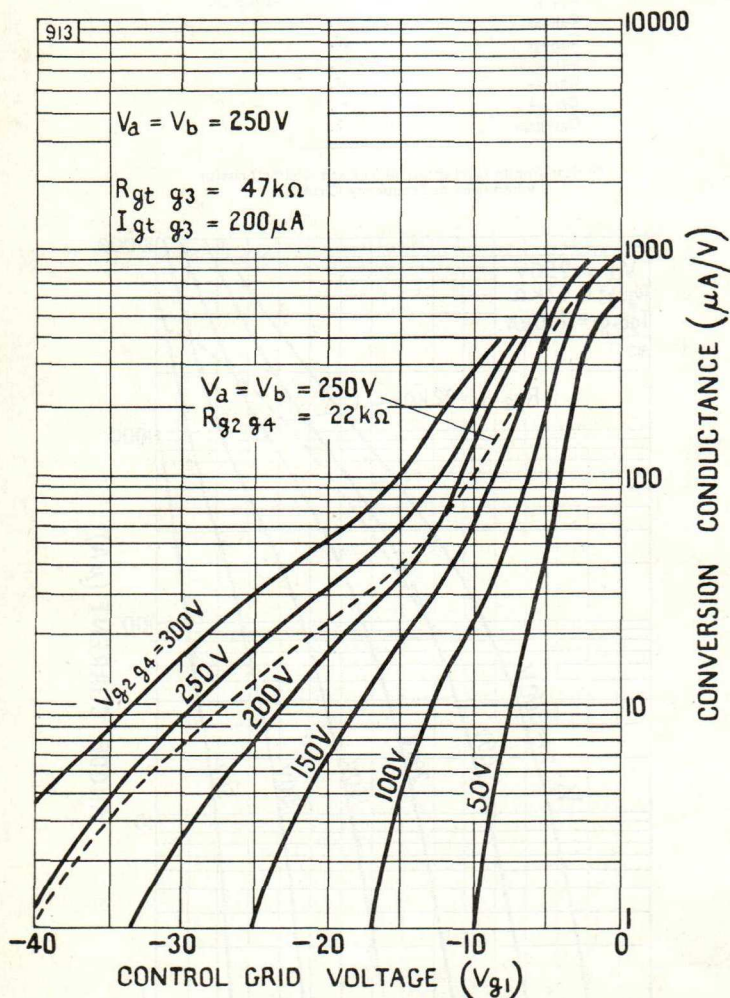


ECH81

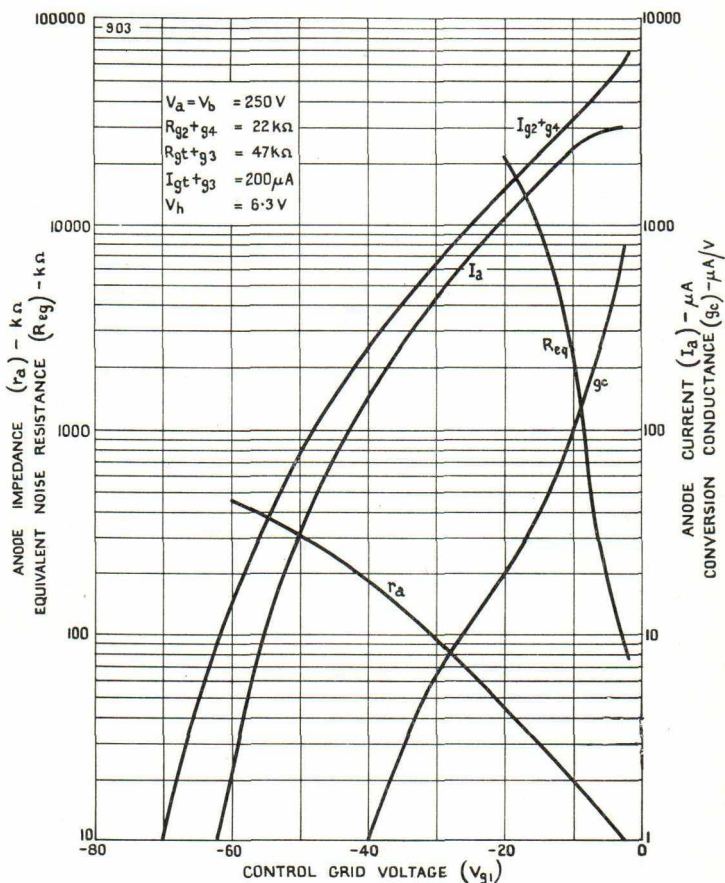
6AJ8

Ferranti

Typical Conversion Conductance/Grid Voltage/Screen Voltage
when used as Frequency Changer.



Typical Characteristics as Frequency Changer.

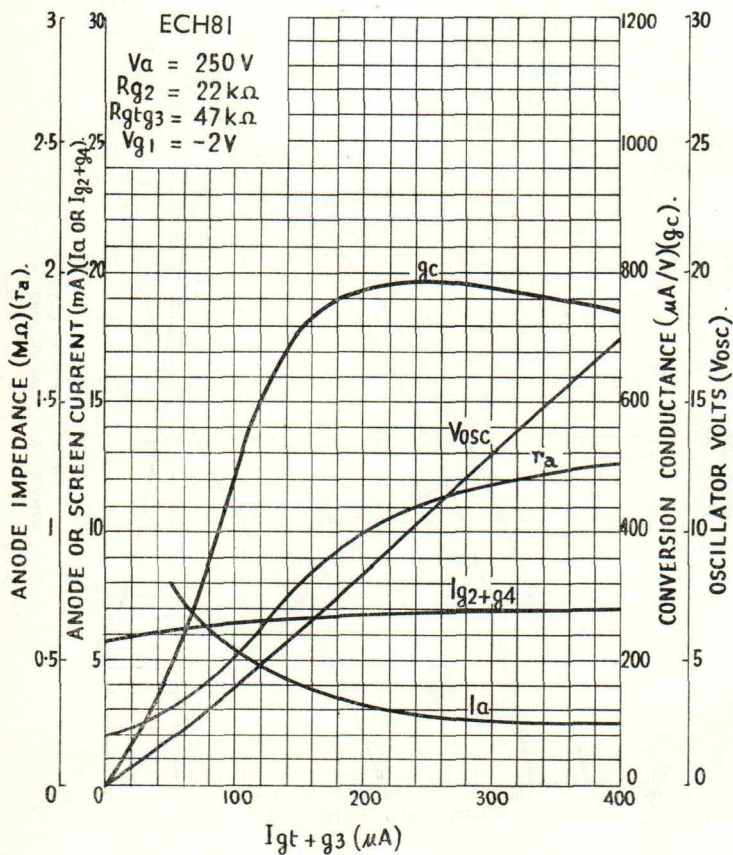


ECH81

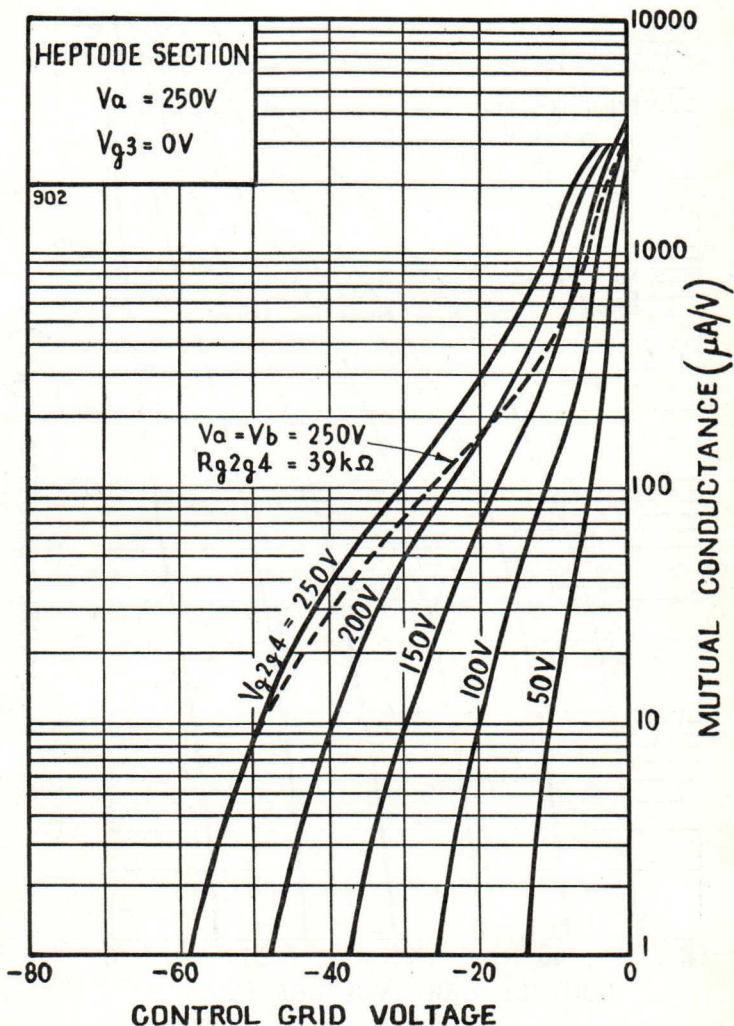
6AJ8

Ferranti

Typical Characteristics as Frequency Changer.



Typical Mutual Conductance/Grid Voltage Characteristics—Heptode Section.

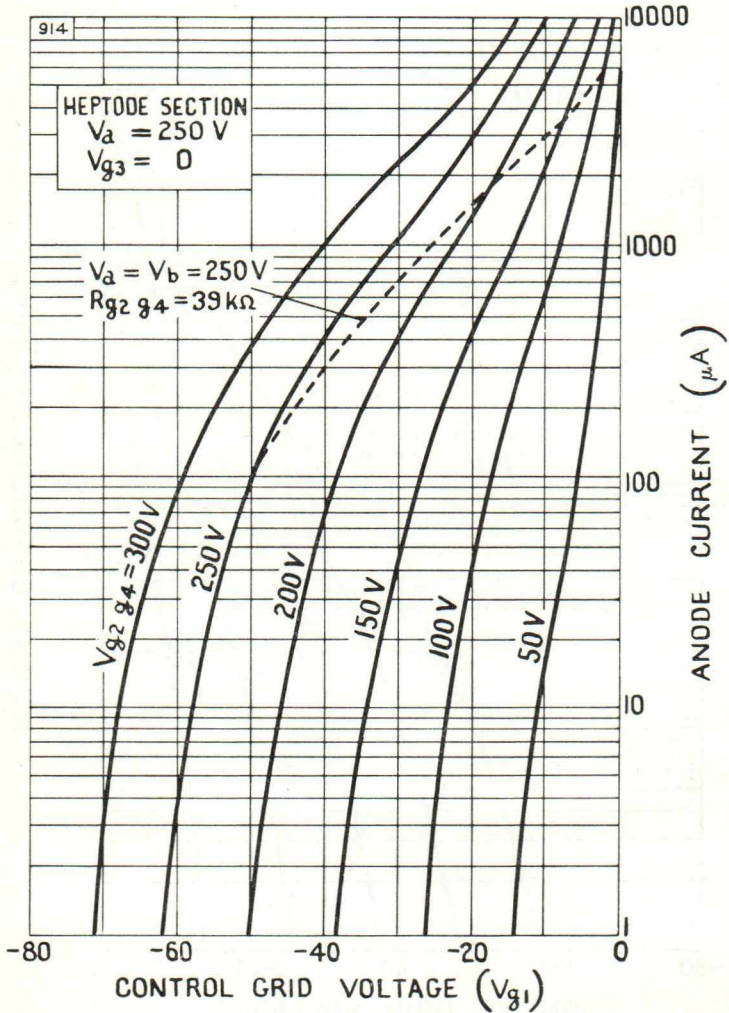


ECH81

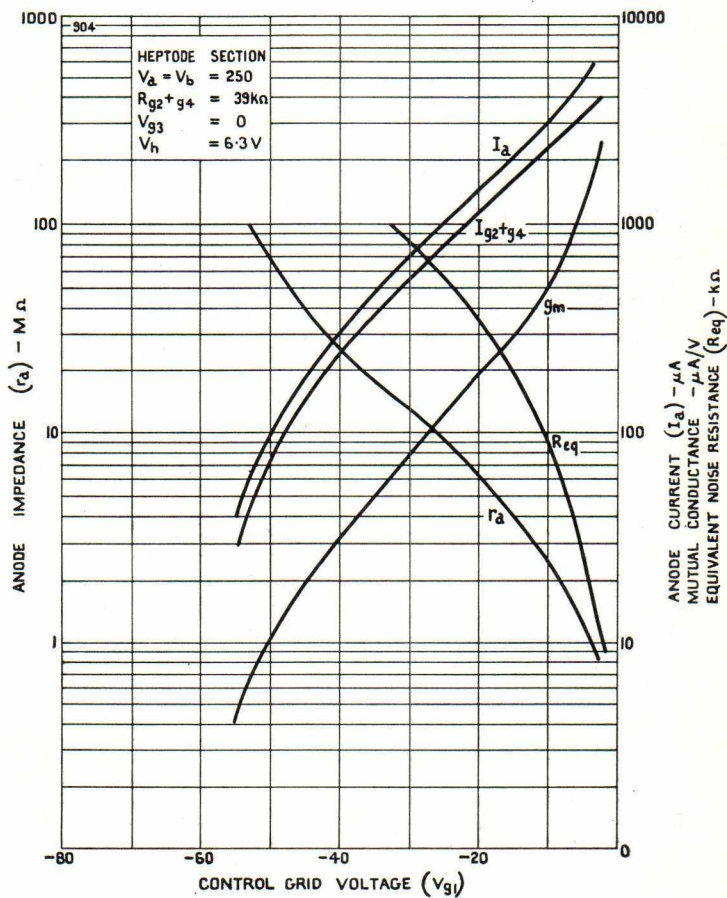
6AJ8

Ferranti

Typical Anode Current/Grid Voltage Characteristics—Heptode Section.



Typical Characteristics—Heptode Section.

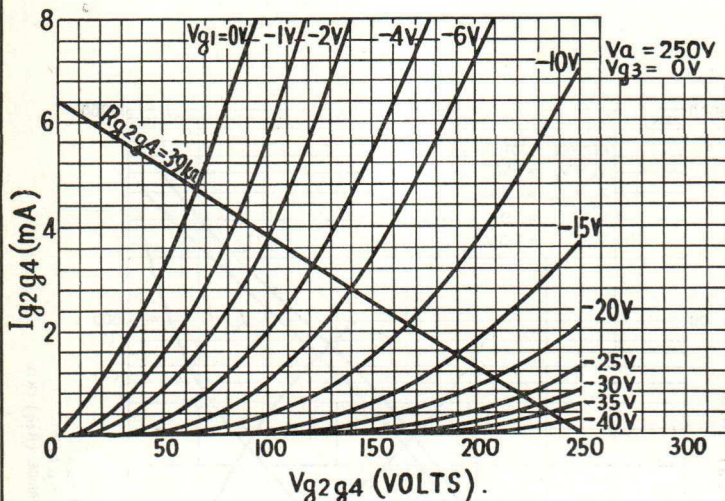


ECH81

6AJ8

Ferranti

Typical Screen Grid Characteristics.
Heptode Section.



Typical Anode Current/Anode Voltage Characteristics.
Triode Section.

