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OCTODE FREQUENCY CHANGER FC2A

The FC2A is an octode frequency changer for use in battery superheterodyne receivers. This valve has been specially designed for frequencies up to 19 mega-cycles.

FILAMENT CHARACTERISTICS

Filament Volts ... ... Vf=2·0 volts
Filament Current ... If=0·13 amp

DIMENSIONS

Overall Length ... =135 mm.
Overall Diameter ... = 46 mm.

Bulb finish—Metallised

OPERATING CHARACTERISTICS

(a) Normal Operation

Anode Voltage	Va_w	=90	135 volts
Oscillator Anode Voltage	$Vg2_w$	=90	135 volts
Auxiliary Grid and Screen Voltage ...	$Vg3+5_w$	=45	45 volts
Anode Current (−Vg4=0·5)	Ia_w	=0·7	0·7 mA*
Anode Current (−Vg4=12)	Ia_w	=<0·015	0·015 mA*
Oscillator Anode Current	$Ig2_w$	=1·3	2·1 mA*
Auxiliary Grid and Screen Current ...	$Ig3+5_w$	=0·6	0·7 mA*
Conversion Conductance (−Vg4=0·5)	Sc_w	=0·27	0·27 mA/V*
Conversion Conductance (−Vg4=12)	Sc_w	=<0·002	0·002 mA/V*
Anode Impedance (−Vg4=0·5) ...	Ri	=2	2·5 megohms*
Anode Impedance (−Vg4=12) ...	Ri	=>10	10 megohms*

* Vosc=8·5 V R.M.S. approx.

(b) Short Wave Operation

Anode Voltage	Va_w	= 135 volts
Oscillator Anode Voltage	$Vg2_w$	= 135 volts
Auxiliary Grid and Screen Voltage ...	$Vg3+5_w$	= 60 volts
Anode Current (−Vg4=1·5)	Ia_w	= 1·0 mA†
Oscillator Anode Current	$Ig2_w$	= 2·3 mA†
Auxiliary Grid and Screen Current ...	$Ig3+5_w$	= 1·0 mA†
Conversion Conductance (−Vg4=1·5)	Sc_w	= 67 μA/V†
Anode Impedance (−Vg4=1·5) ...	Ri_w	= 1·7 megohms†

† Vosc=4 Volts (R.M.S.) approx.

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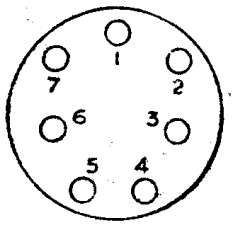
CAPACITIES

Oscillator Grid	Cg1	= 6·6 μμF
Input	Cg4	= 9·1 μμF
Output	Ca	= 13·6 μμF
Oscillator Anode	Cg2	= 8·5 μμF
Oscillator Grid-Control Grid	Cg1g4	= <0·12 μμF
Oscillator Anode-Control Grid ...	Cg2g4	= <0·35 μμF
Anode-Control Grid	Cag4	= <0·07 μμF

LIMITS

Maximum Anode Voltage	Va_{max}	= 150 volts
Maximum Anode Dissipation ...	Wa_{max}	= 0·5 watt
Maximum Oscillator Anode Voltage ...	$Vg2_{max}$	= 150 volts
Maximum Oscillator Anode Dissipation	$Wg2_{max}$	= 0·6 watt
Maximum Auxiliary Grid and Screen Voltage	$Vg3+5_{max}$	= 100 volts
Maximum Auxiliary Grid and Screen Dissipation	$Wg3+5_{max}$	= 0·4 watt
Maximum Cathode Current	Ik_{max}	= 11 mA
Maximum Resistance in Grid Circuit	$Rg4_{max}$	= 2·5 megohms
Maximum Resistance in Grid Circuit...	$Rg1_{max}$	= 100,000 ohms

CONNECTIONS



Viewed from free end of pins.

Pin No. 1 Oscillator Anode (G2)
„ 2 Oscillator Grid (G1)
„ 3 Screen Grids (G3+G5)
„ 4 Filament
„ 5 Filament
„ 6 Metallisation and G6
„ 7 Anode
Top Cap—Control Grid (G4)

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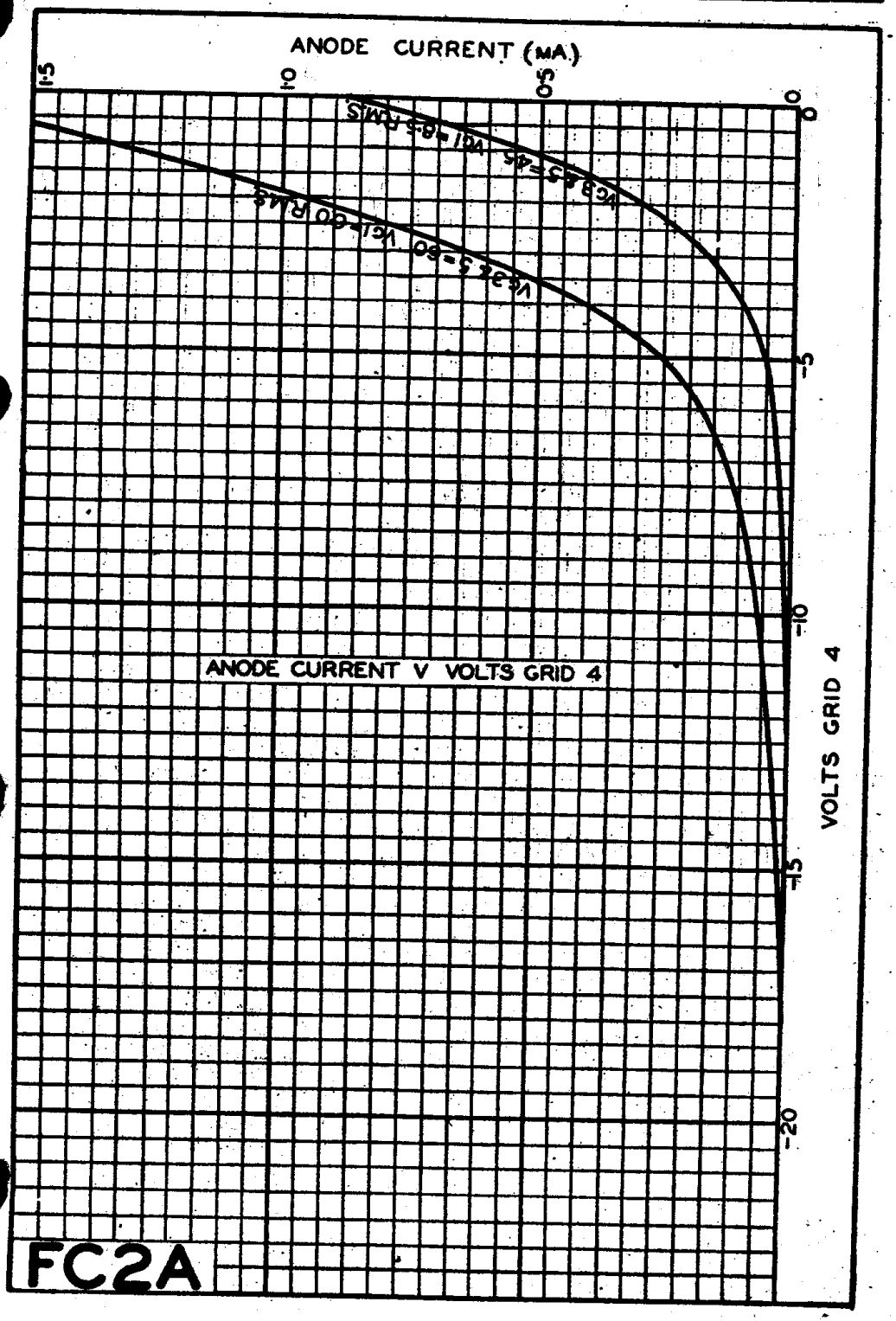

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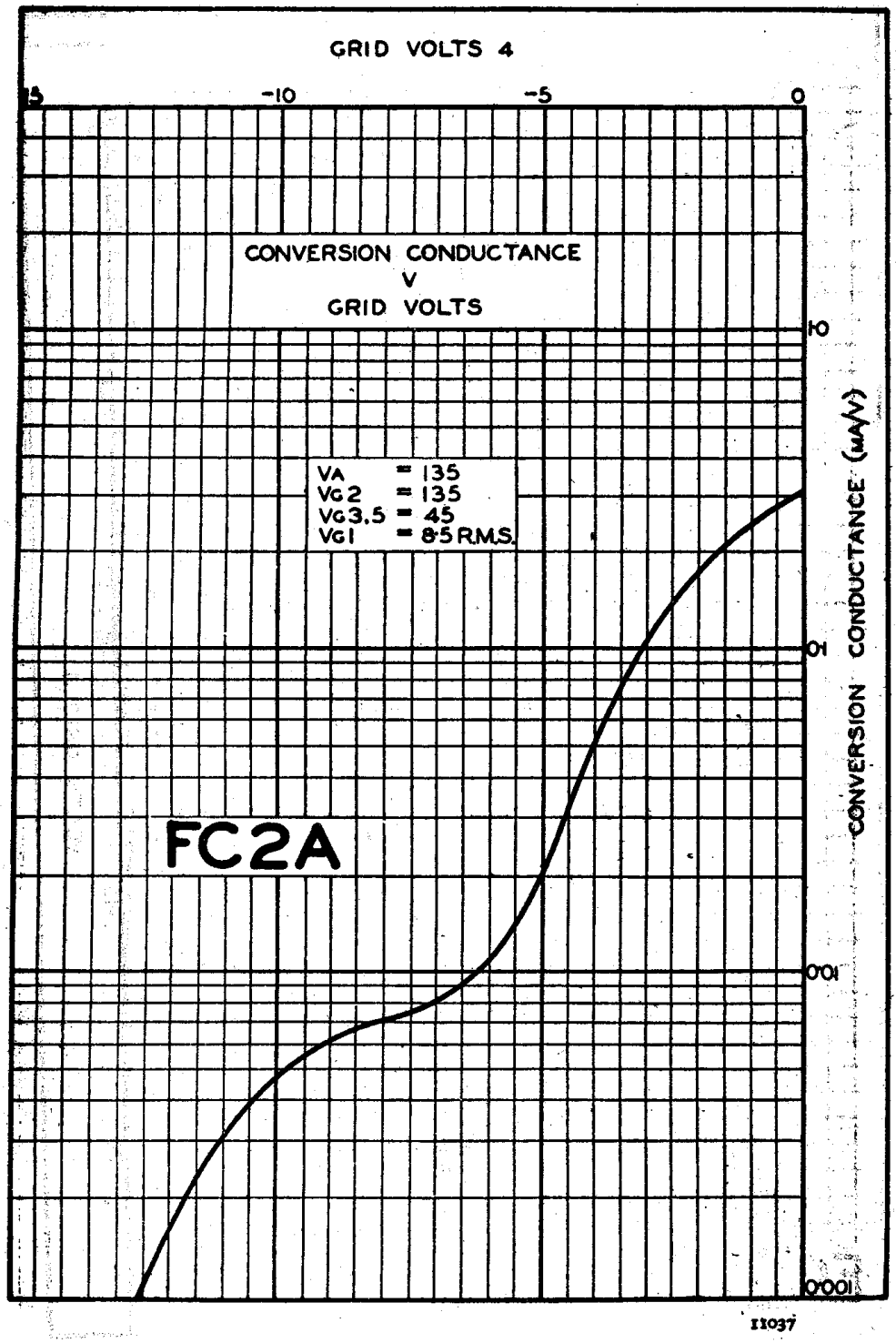

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