Mullard
H.F. PENTODE

SP13C

The SP13C is an indirectly heated straight H.F. Pentode for use in D.C./A.C. receivers, and for car radio.

HEATER CHARACTERISTICS

Heater Voltage ... ... Vf = 13·0 volts
Heater Current ... ... If = 0·2 amp
Heating Time—60 seconds

DIMENSIONS

Overall Length ... = 125 mm.
Overall Diameter... = 43 mm.
Bulb Finish—Metallised

OPERATING DATA AS R.F. AMPLIFIER

Normal Anode Voltage	Va_W	= 200 volts
Normal Auxiliary Grid Voltage	$Vg2_W$	= 200 volts
Anode Current	Ia_W	= 2·5 mA
Control Grid Voltage	$-Vg1_W$	= 2·2 volts
Auxiliary Grid Current	$Ig2_W$	= 0·9 mA
Amplification Factor	G_W	= 7,000
Mutual Conductance (Ia = 2·5 mA)	S_W	= 2·8 mA/V
Anode Impedance	Ri_W	= 2·5 megohms

OPERATING DATA AS SPEECH DETECTOR

Anode Voltage (line)	Va	= 200 volts
Series Resistance (Grid 2)	Rg2	= 0·5 megohm
Anode Resistance	Ra	= 0·1 megohm
Grid Condenser	Cg1	= 100 μμF
Grid Resistance	Rg1	= 0·5—1·0 megohm

CAPACITIES

Anode-Control Grid	Cag1	= <0·003 μμF
Input	Cg1	= 6·9 μμF
Output	Ca	= 8·1 μμF

LIMITS

Maximum Anode Voltage	Va_{max}	= 200 volts
Maximum Anode Dissipation	Wa_{max}	= 1·0 watt
Maximum Cathode Current	Ik_{max}	= 6·0 mA
Maximum Auxiliary Grid Voltage	$Vg2_{max}$	= 200 volts
Maximum Auxiliary Grid Dissipation	$Wg2_{max}$	= 0·3 watt
Maximum Auxiliary Grid Current	$Ig2_{max}$	= 1·2 mA
Maximum Resistance in Grid Circuit	$Rg1a_{max}$	= 1·5 megohms
Maximum Voltage Heater to Cathode	Vfk_{max}	= 125 volts
Maximum Resistance Heater to Cathode ...	Rfk_{max}	= 20,000 ohms
Range of Grid Voltage for 1 μA Grid Current	Vg1	= −0·5 to −1·0 volt

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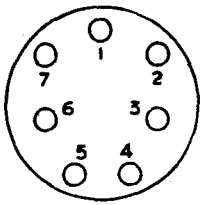
CONNECTIONS



Viewed from free end of pins.

Pin No. 1 Metallisation
„ 2 Anode
„ 3 Suppressor Grid (G3)
„ 4 Heater
„ 5 Heater
„ 6 Cathode
„ 7 Auxiliary Grid (G2)
Top Cap—Control Grid

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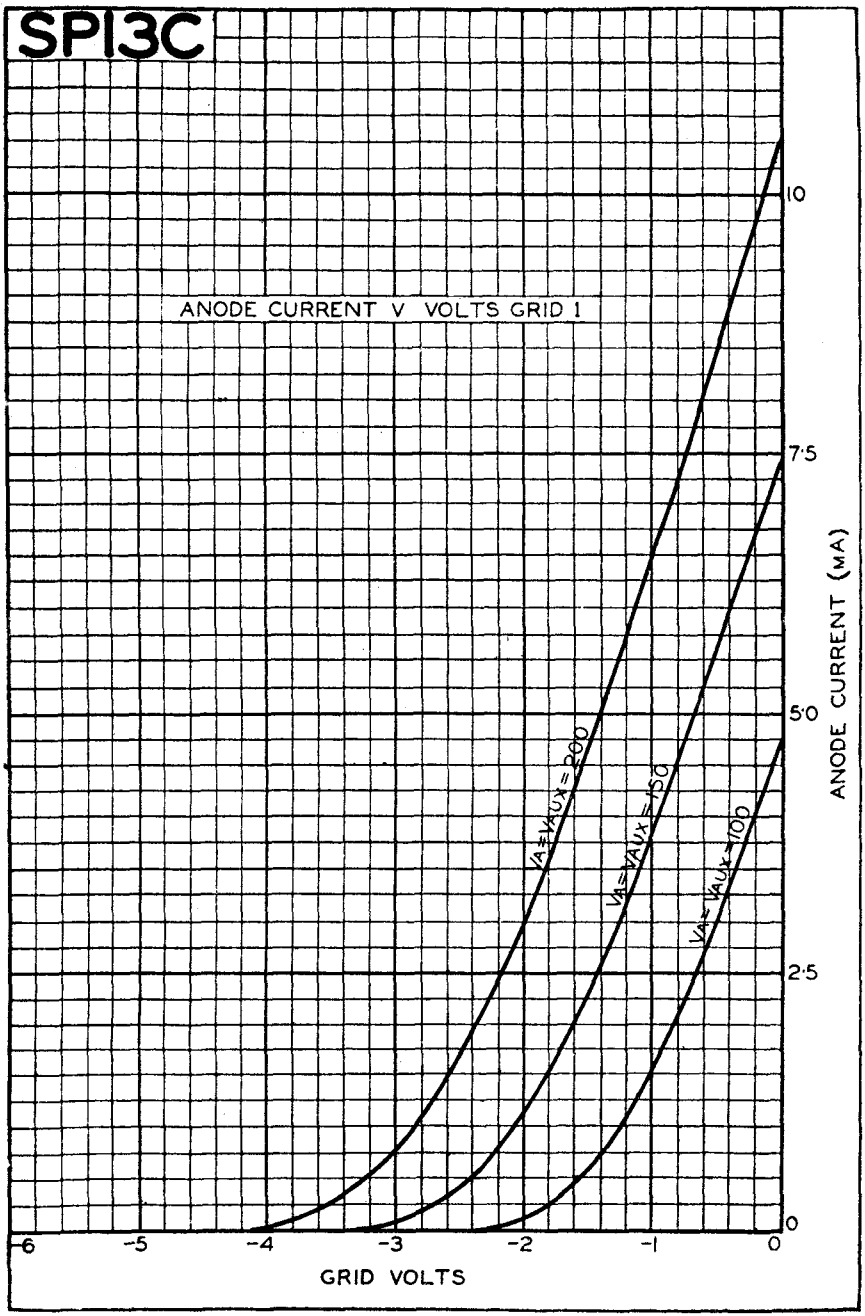

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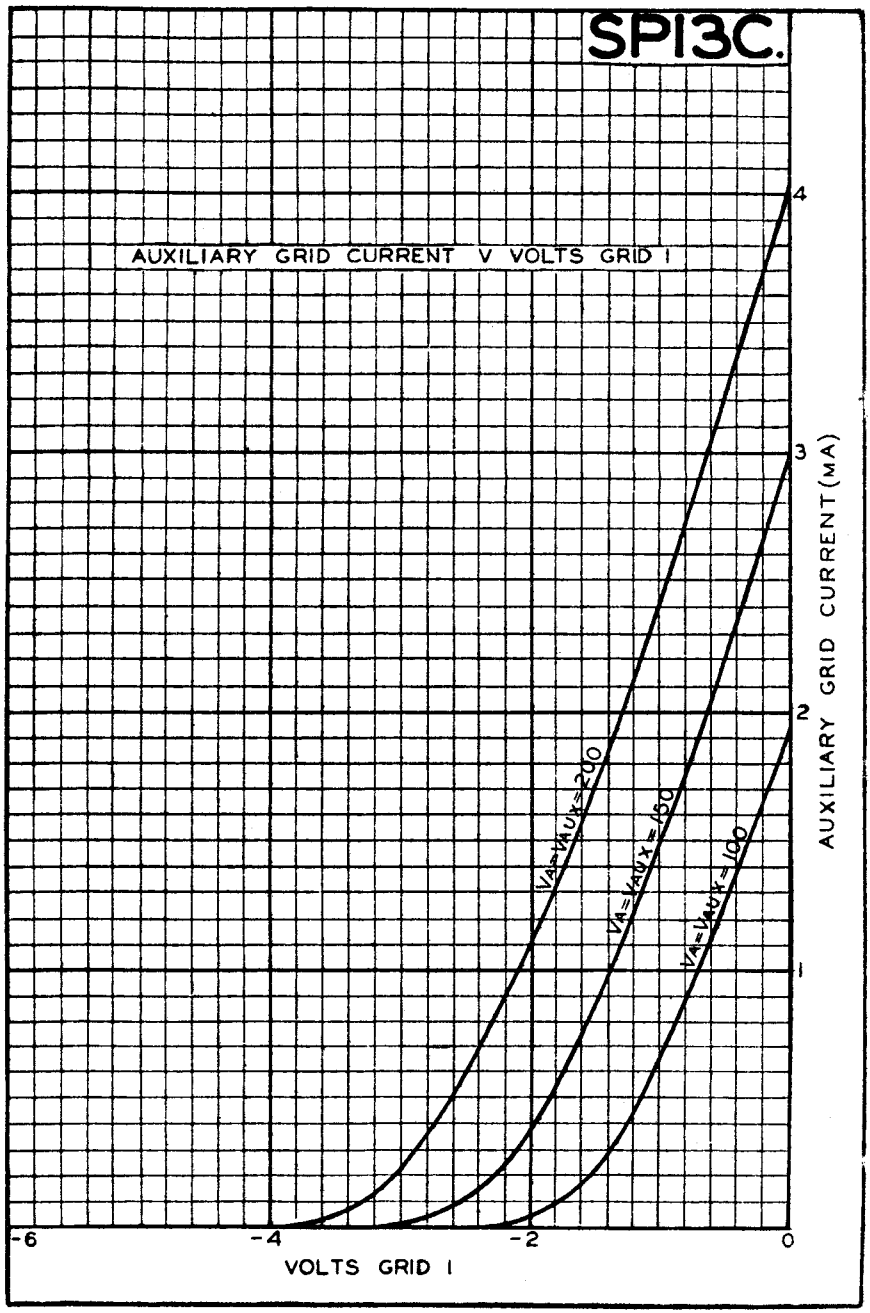
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