

Mullard

MEDIUM IMPEDANCE TRIODE

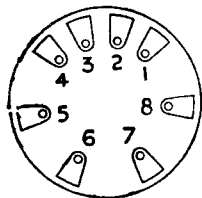
HL13

The HL13 is an indirectly heated medium impedance Triode for use in D.C./A.C. mains receivers.

DIMENSIONS

Overall length 101 mm. Overall diameter 44 mm.

CONNECTIONS



- | | |
|---------------|-------------|
| Contact No. 1 | Metallising |
| „ 2 | Heater |
| „ 3 | Heater |
| „ 4 | Cathode |
| „ 5 | — |
| „ 6 | — |
| „ 7 | — |
| „ 8 | Anode |

Top Cap—Control Grid (G1)

Viewed from underside of Valve base.

OPERATING DATA AND NOTES

For heater characteristics, operating data, and characteristic curves, see Type HL13C. Except for dimensions and base connections, Types HL13 and HL13C are identical.

Mullard

MEDIUM IMPEDANCE TRIODE

HL13C

The HL13c is a medium impedance triode for use as detector or L.F. amplifier in D.C./A.C. mains receivers.

HEATER CHARACTERISTICS

Heater Volts	...	...	Vf=13.0 volts.	Overall Length	...	=120 mm.
Heater Current	...	...	If=0.2 amp.	Overall Diameter	...	= 43 mm.
Heating Time	—60 seconds			Bulb Finish	—Metallised	

DIMENSIONS

OPERATING CHARACTERISTICS

Anode Voltage	...	...	...	V _{aw}	= 200 volts
Anode Current	...	...	...	I _{aw}	= 5.0 mA
Grid Voltage	...	...	...	-V _{gw}	= 3.7 volts
Mutual Conductance	...	...	...	S _w	= 3.3 mA/V
Amplification Factor	...	...	...	G _w	= 40
Anode Impedance	...	...	...	R _{iw}	= 12,000 ohms
Cathode Bias Resistor	...	...	...	R _k	= 740 ohms

OPERATING CHARACTERISTICS AS R.C. AMPLIFIER

Line Voltage	...	...	...	V _a	= 200 volts
Anode Current	...	...	...	I _a	= 0.65 mA
Grid Voltage	...	...	...	-V _g	= 2.6 volts
Optimum Load	...	...	...	R _a	=160,000 ohms
Cathode Bias Resistor	...	...	...	R _k	= 4,000 ohms
Amplification Factor	...	...	...	G	= 30.0
Maximum Output Voltage (D=5% 2nd H.)	...	...	...	V _o	= 36.0 volts

CAPACITIES

Anode-Control Grid	...	...	...	C _{ag1}	= 3.1 μF
Grid-Cathode	...	...	...	C _{gk}	= 3.9 μF
Anode-Cathode	...	...	...	C _{ak}	= 4.6 μF

LIMITS

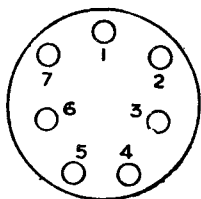
Maximum Anode Voltage	...	...	...	V _a max	= 200 volts
Maximum Anode Dissipation	...	...	...	W _a max	= 2.0 watts
Maximum Cathode Current	...	...	...	I _k max	= 10 mA
Maximum Resistance in Grid Circuit	...	...	...	R _{g1A} max	= 1.5 megohms
Maximum Voltage between Heater and Cathode	...	...	...	V _{fk} max	= 125 volts
Maximum Resistance between Heater & Cathode	...	...	...	R _{fk} max	= 20,000 ohms
Range of grid voltage for 1 μA grid current	...	...	...	V _{g1}	= -0.5 to -1.0 v.

HL13C

Mullard

MEDIUM IMPEDANCE TRIODE

CONNECTIONS



Pin No. 1 Metallisation

” 2 —

” 3 —

” 4 Heater

” 5 Heater

” 6 Cathode

” 7 Anode

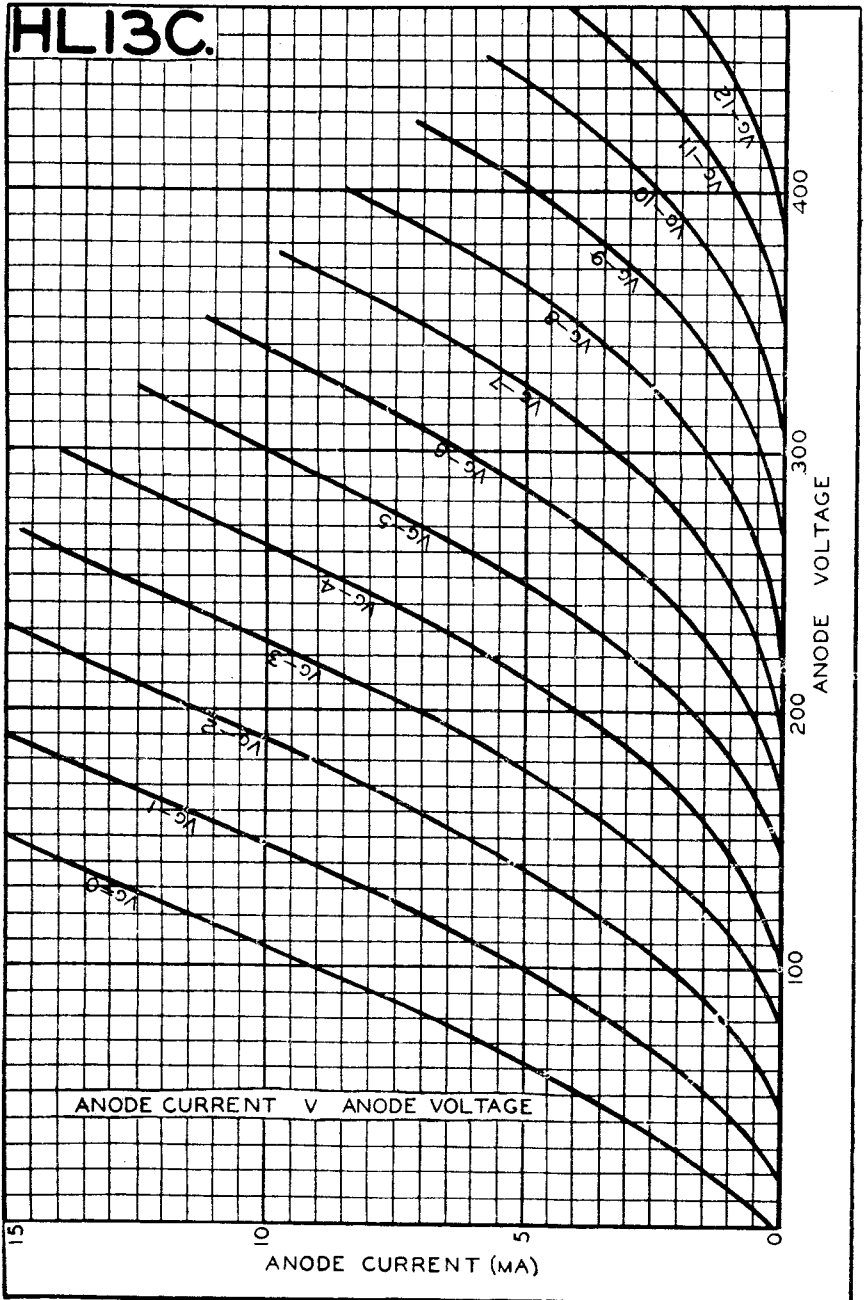
Top Cap—Control Grid.

Viewed from free end of pins.

HL13C

Mullard

MEDIUM IMPEDANCE TRIODE



Mullard

MEDIUM IMPEDANCE TRIODE

HL13C

