

Mullard

HIGH-MU H.F. PENTODE

TSP4

The TSP4 is an indirectly heated high slope R.F. Pentode for A.C. mains. It has been specially designed for application in television receivers, and as such is suitable for general use, including that of an output valve for modulating a cathode ray tube.

HEATER CHARACTERISTICS

DIMENSIONS

Heater Volts	...	Vf=4.0 volts	Overall Length	... =138 mm.
Heater Current	...	If =1.3 amps	Overall Diameter...	=45.2 mm.
Bulb Finish—Metallised				

OPERATING DATA AS H.F. OR I.F. AMPLIFIER

Normal Anode Voltage	...	V _{aw}	= 200 volts
Normal Auxiliary Grid Voltage	...	V _{g2w}	= 200 volts
Control Grid Voltage (I _a =8.0 mA)	...	-V _{g1w}	= 2.5 volts
Normal Anode Current (V _{g1} =-2.5 V)	...	I _{aw}	= 8.0 mA
Normal Auxiliary Grid Current	...	I _{g2w}	= 1.5 mA
Slope	...	S _w	= 4.73 mA/V
Amplification Factor	...	G _w	= 6,730
Bias Resistance	...	R _k	= 260 ohms

OPERATING DATA AS OUTPUT VALVE FOR USE WITH CATHODE RAY TUBE

Normal Anode Voltage	...	V _{aw}	= 250 volts
Normal Auxiliary Grid Voltage	...	V _{g2w}	= 250 volts
Control Grid Voltage (I _a =10.5 mA)	...	-V _{g1w}	= 3.0 volts
Normal Anode Current (V _{g1} =-3.0 V)	...	I _{aw}	= 10.5 mA
Normal Auxiliary Grid Current	...	I _{g2w}	= 2.0 mA
Internal Resistance	...	R _i	= 0.75 megohm
Bias Resistance	...	R _k	= 250 ohms
Voltage Output (R _a =10,000 ohms V _{g_{eff}} =0.55 volts R.M.S., D=3.4% 2nd+0.5% 3rd H.	...	V _o	= 30 v R.M.S.

CAPACITIES

Anode-Control Grid	...	C _{ag1}	= 3.0 pF
Input	...	C _{g1}	= 9.6 μF
Output	...	C _a	= 7.5 μF

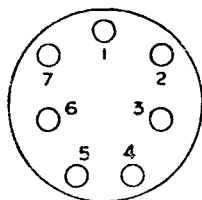
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LIMITS

Maximum Anode Voltage	...	...	$V_{a_{max}}$	= 250 volts
Maximum Auxiliary Grid Voltage	...	...	$V_{g2_{max}}$	= 250 volts
Maximum Resistance in Grid Circuit	...	...	$R_{g1a_{max}}$	= 1.0 megohm
Maximum Cathode Current	...	...	$I_{k_{max}}$	= 20 mA
Grid Current commences at	...	...	$-V_{g1}$	= 1.0 volt

CONNECTIONS

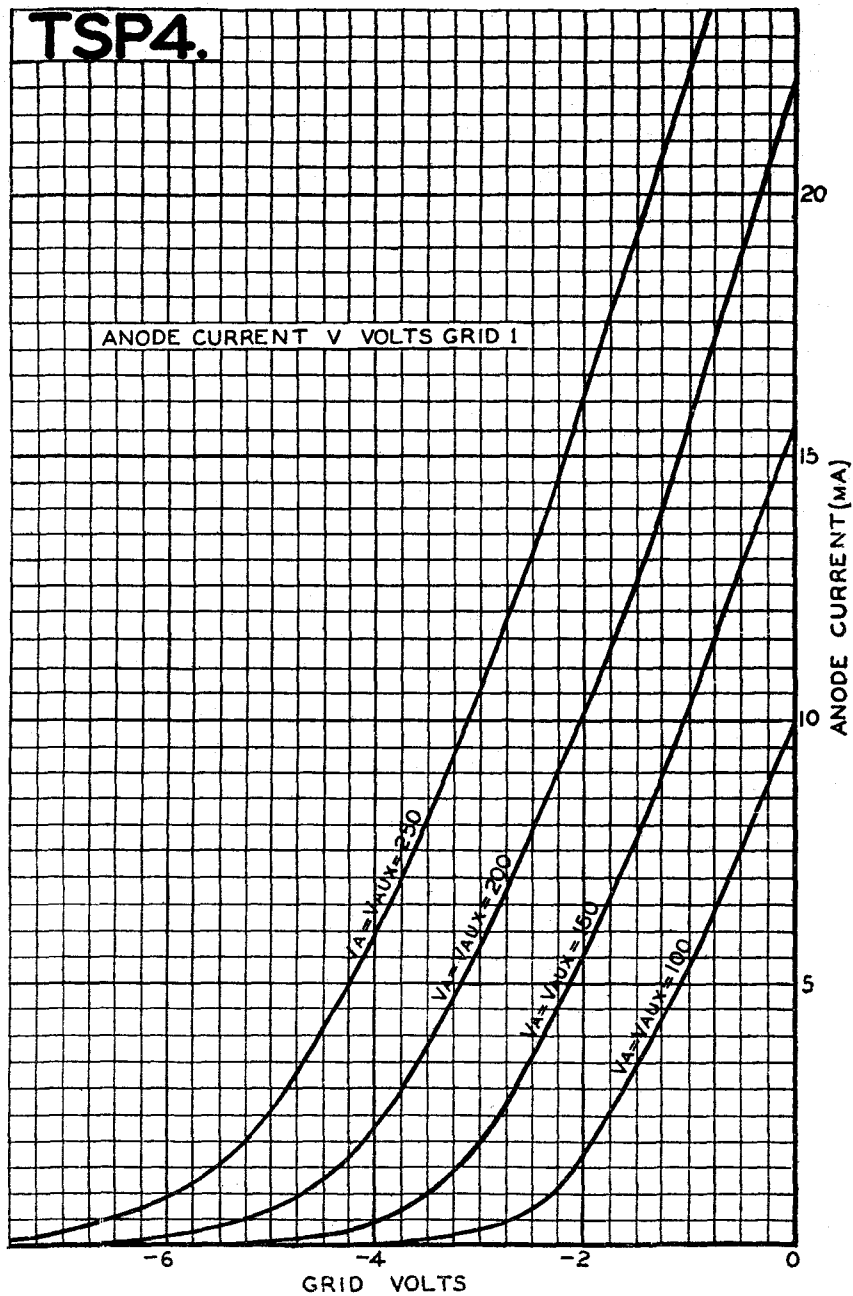


Viewed from free end of pins

- Pin No. 1 Metallisation
- ” 2 Anode
 - ” 3 Suppressor Grid (G_3)
 - ” 4 Heater
 - ” 5 Heater
 - ” 6 Cathode
 - ” 7 Auxiliary Grid (G_2)
- Top Cap—Control Grid (G_1)

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