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

Heater Volts	Vf = 4·0 volts	
Heater Current	If = 1·3 amps	

Bulb Finish—Metallised

DIMENSIONS

Overall Length ...	= 138 mm.
Overall Diameter...	= 45·2 mm.

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

Normal Anode Voltage	Va_w	= 200 volts
Normal Auxiliary Grid Voltage	$Vg2_w$	= 200 volts
Control Grid Voltage (Ia = 8·0 mA)	$-Vg1_w$	= 2·5 volts
Normal Anode Current (Vg1 = −2·5 V) ...	Ia_w	= 8·0 mA
Normal Auxiliary Grid Current	$Ig2_w$	= 1·5 mA
Slope	S_w	= 4·73 mA/V
Amplification Factor	G_w	= 6,730
Bias Resistance	Rk	= 260 ohms

OPERATING DATA AS OUTPUT VALVE FOR USE WITH CATHODE RAY TUBE

Normal Anode Voltage	Va_w	= 250 volts
Normal Auxiliary Grid Voltage	$Vg2_w$	= 250 volts
Control Grid Voltage (Ia = 10·5 mA)	$-Vg1_w$	= 3·0 volts
Normal Anode Current (Vg1 = −3·0 V) ...	Ia_w	= 10·5 mA
Normal Auxiliary Grid Current	$Ig2_w$	= 2·0 mA
Internal Resistance	Ri	= 0·75 megohm
Bias Resistance	Rk	= 250 ohms
Voltage Output (Ra—10,000 ohms $Vg_{eff.}$ = 0·55 volts R.M.S., D = 3·4% 2nd + 0·5% 3rd H.	Vo	= 30 v R.M.S.

CAPACITIES

Anode-Control Grid	Cag1	= ⊁0·01
Input	Cg1	= 9·6 μμF
Output	Ca	= 7·5 μμF

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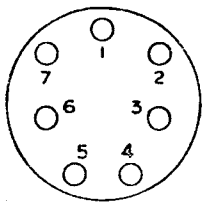
LIMITS

Maximum Anode Voltage	Va_{max}	=	250 volts
Maximum Auxiliary Grid Voltage	$Vg2_{max}$	=	250 volts
Maximum Resistance in Grid Circuit	$Rg1a_{max}$	=	1·0 megohm
Maximum Cathode Current	Ik_{max}	=	20 mA
Grid Current commences at	$-Vg1$	=	1·0 volt

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 (G1)

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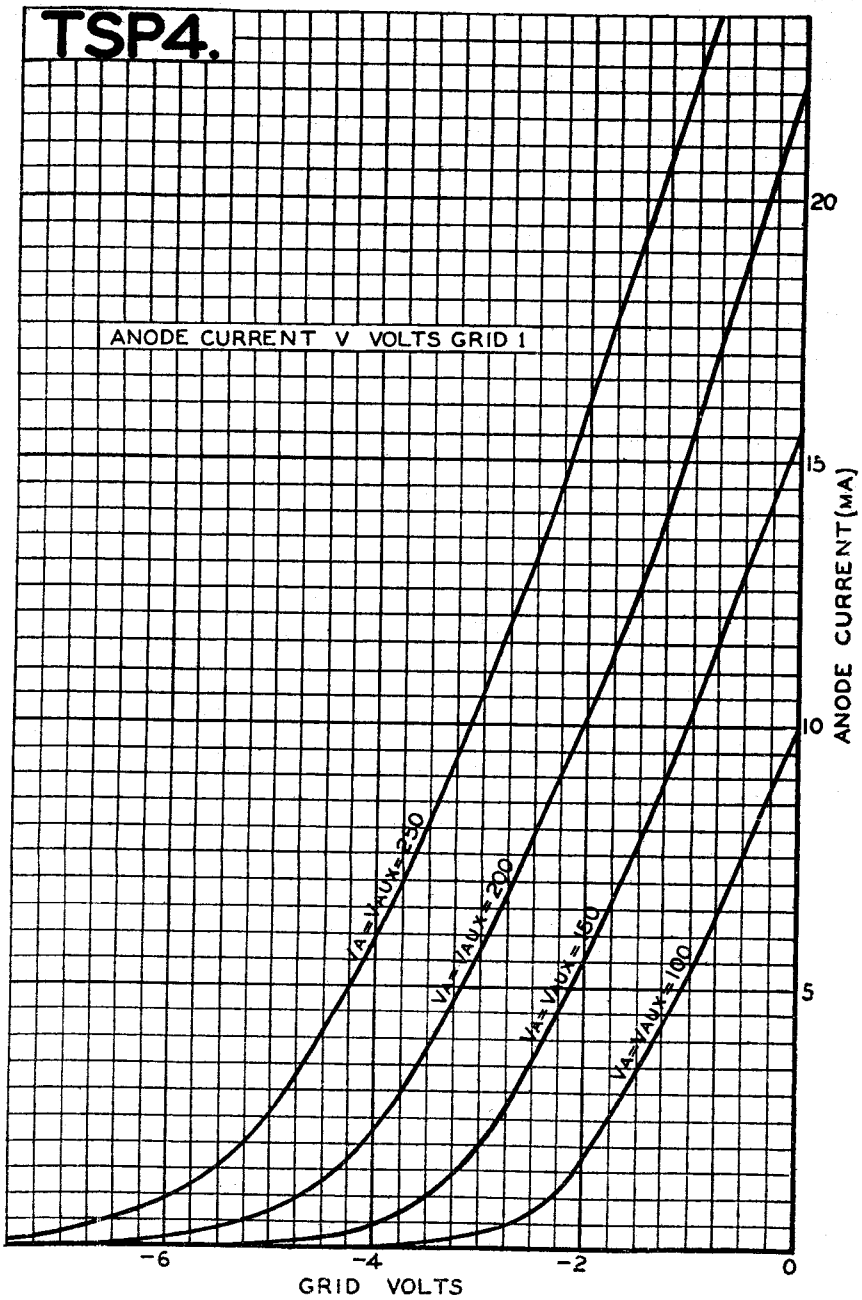

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