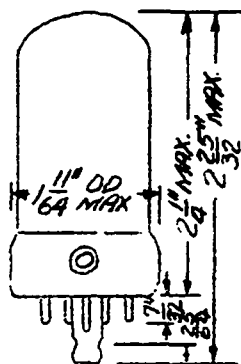


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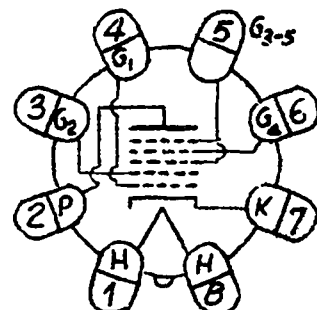
TENTATIVE DATA
RAYTHEON TYPE 7B8

HEPTODE
PENTAGRID CONVERTER
Heater Type
Glass Bulb Loktal Base



The 7B8 is a pentagrid type converter tube designed for use as a combined oscillator and mixer in superheterodyne receivers.

NOMINAL RATINGS
Heater Voltage (a-c or d-c)
Heater Current



BOTTOM VIEW OF SOCKET

7.0 volts
0.32 amp

MAXIMUM AND MINIMUM RATINGS

Maximum Plate Voltage	250	volts
Maximum Screen (G_3 & G_5) Voltage	100	volts
Maximum Anode Grid (G_2) Voltage	200	volts
Maximum Anode Grid Supply Voltage	250	volts
Minimum Control Grid (G_4) Bias	-3	volts
Maximum Total Cathode Current	14	ma

DIRECT INTERELECTRODE CAPACITANCES

G_4 to P (Mixer Grid to Plate)	0.30 max.	μ mf
G_4 to G_2 (Mixer Grid to Oscillator Plate)	0.20	μ mf
G_4 to G_1 (Mixer Grid to Oscillator Grid)	0.15	μ mf
G_1 to G_2 (Oscillator Grid to Plate)	0.8	μ mf
G_4 to All Other Electrodes (Mixer Input Electrode)	9.5	μ mf
G_2 to All Other Electrodes Except G_1 (Osc. Output Electrode)	3.0	μ mf
G_1 to All Other Electrodes Except G_2 (Osc. Input Electrode)	4.4	μ mf
P to All Other Electrodes (Mixer Output Electrode)	9.0	μ mf

TYPICAL FREQUENCY CONVERTER CONDITIONS

Heater Voltage	6.3	6.3	volts
Heater Current	0.3	0.3	amp
Plate Voltage	100	250	volts
Screen Voltage	50	100	volts
Anode Grid Voltage	100	-	volts
Anode Grid Supply Voltage	-	250 *	volts
Control Grid Bias	-1.5 min.	-3	volts
Oscillator Grid Resistor	50000	50000	ohms
Plate Resistance	0.6	0.36	megohm
Conversion Transconductance	360	550	μ mhos
Plate Current	1.1	3.5	ma
Screen Current	1.3	2.7	ma
Anode Grid Current	2.0	4.0	ma
Oscillator Grid Current	0.25	0.4	ma
Control Grid Bias (approximate)			
For Conversion Transconductance = 6 μ mhos	-	-35	volts
For Conversion Transconductance = 3 μ mhos	-20		volts

* Applied through a 20000 ohm series resistor.

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