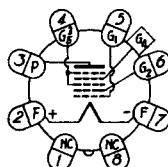


HEPTODE
PENTAGRID CONVERTER
Filament Type Glass Bulb

The 1D7G is a pentagrid type converter tube designed for service as a combined mixer and oscillator in battery operated superheterodyne receivers. The ratings and electrical characteristics are identical with those of the type 1A6.



RATINGS

Filament Voltage	
Filament Current	
Maximum Plate Voltage	
Maximum Screen Voltage	
Maximum Grid #2 Voltage	
Maximum Grid #2 Supply	
Minimum Grid #4 Bias	
Maximum Cathode Current	

BOTTOM VIEW OF SOCKET

2.0 d-c	volts
0.060	amp
180	volts
67.5	volts
135	volts
180†	volts
-3	volts
9	ma

DIRECT INTERELECTRODE CAPACITANCES*

Grid #4 to Plate	0.3	μf
Grid #4 to Grid #2	0.3	μf
Grid #4 to Grid #1	0.1	μf
Grid #1 to Grid #2	1.5	μf
Grid #4 to all other elements (r-f input)	11	μf
Grid #1 to all other elements (osc. input)	7	μf
Grid #2 to all other elements (osc. output)	7	μf
Plate to all other elements (mixer output)	14	μf

FREQUENCY CONVERTER - SUPERHETERODYNE CIRCUIT

Plate Voltage	135	180	volts
Screen (Grids #3 and #5) Voltage	67.5	67.5	volts
Anode Grid (#2) Voltage	135	135	volts
Anode Grid Supply Voltage		180†	volts
Control Grid (#4) Bias	-3	-3	volts
Oscillator Grid (#1) Resistor	50000	50000	ohms
Plate Resistance	0.4	0.5	megohm
Conversion Transconductance	275	300	μmhos
Plate Current	1.2	1.3	ma
Screen Current	2.5	2.4	ma
Anode Grid Current	2.3	2.3	ma
Oscillator Grid Current	0.2	0.2	ma
Total Cathode current	6.2	6.2	ma
Control Grid Bias	-22.5	-22.5	volts

(For Conversion Transconductance = 4 μmhos)

With plate voltage = 135 to 180 volts, screen voltage = 67.5 volts, anode grid voltage = 135 volts (no series resistor), control grid bias = -3 volts and oscillator grid voltage = 0 volts, the transconductance of the oscillator section (not oscillating) is 425 μmhos and the anode grid current is 2.3 ma.

*With tube shield connected to cathode.

†Applied through a 20000 ohm series resistor, bypassed by a 0.1 μf condenser.

