

6AB8

DATA FOR R.M.A. REGISTRATION

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Jan. 18, 1950

TUBE TYPE

ECL 80

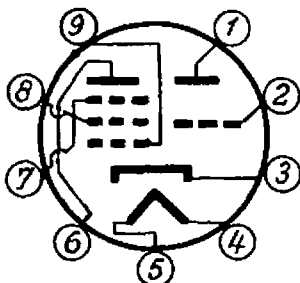
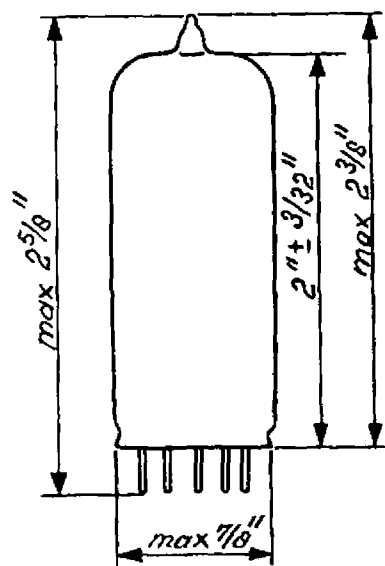
mfg. by N.V. PHILIPS' GLOEILAMPENFABRIEKEN
Eindhoven, Holland.DESCRIPTION: Triode pentode; heater type (AC or DC); T6½ bulb;
body length 2 3/8" max.; small button 9-pin base.

Heater voltage

6.3 volts

Heater current

300 ma

TUBE OUTLINEBOTTOM VIEW
OF BASEBASE PIN
No.ELEMENT

- | | |
|---|---------------------------|
| 1 | Triode plate |
| 2 | Triode grid |
| 3 | Cathode + internal shield |
| 4 | Heater |
| 5 | Heater |
| 6 | Pentode plate |
| 7 | Grid No. 3 |
| 8 | Grid No. 2 |
| 9 | Pentode grid No. 1 |

DIRECT INTERELECTRODE CAPACITANCES (pentode section)

Plate to all other electrodes		4.7 μ pf
Grid No. 1 to all other electrodes		4.6 μ pf
Plate to grid No. 1	max.	0.2 μ pf
Grid No. 1 to filament	max.	0.25 μ pf

DIRECT INTERELECTRODE CAPACITANCES (triode section)

Plate to cathode (output)		1.1 μ pf
Grid to cathode (input)		2.3 μ pf
Plate to grid		1.0 μ pf
Grid to filament	max.	0.05 μ pf

DIRECT INTERELECTRODE CAPACITANCES (between pentode and triode sections)

Triode grid to pentode plate	max.	0.15 μ pf
Triode plate to pentode plate	max.	1.5 μ pf
Triode grid to pentode grid No. 1	max.	0.2 μ pf
Triode plate to pentode grid No. 1	max.	0.2 μ pf

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MAXIMUM RATINGS (pentode section)

Plate voltage (without current)	550 volts
Plate voltage	250 volts
Plate dissipation	3.5 watts
Grid No.2 voltage (without current)	550 volts
Grid No.2 voltage	250 volts
Grid No.2 dissipation	0.75 watt
Average cathode current	25 ma
Peak cathode current	250 ma 1)
Grid No.1 voltage (when grid No.1 current = + 0.3 micro-amp)	-1.3 volt
Grid No.1 circuit resistance	2 megohms 2)
Grid No.1 circuit resistance	1 megohm 3)
Heater cathode voltage	150 volts
External heater cathode resistance	20,000 ohms

OPERATING CONDITIONS OF THE PENTODE SECTION AS A POWER AMPLIFIER

Plate voltage	170	200 volts
Grid No.3 voltage	0	0 volt
Grid No.2 voltage	170	200 volts
Grid No.1 voltage	-6.7	-7.7 volts
Plate current	15	17.5 ma
Grid No.2 current	2.8	3.3 ma
Transconductance	3300	3400 micromhos
Plate resistance	0.15	0.15 megohm
Plate load resistance	11,000	11,000 ohms
Max. signal power output	1.0	1.4 watt
Total harmonic distortion	10	10 %
Peak AF grid No.1 voltage	5.2	5.8 volts
AF grid No.1 voltage (for power output of 50 milliwatts)	0.7	0.7 volt (RMS)

- 1) The duty cycle of the pulse must not exceed 15% of one scanning cycle and its duration must be limited to 50 microse-
conds.
- 2) With cathode bias.
- 3) With fixed bias.

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OPERATING CONDITIONS OF THE PENTODE SECTION AS A SYNCH SEPARATOR

Plate voltage	20	volts
Grid No.3 voltage	0	volt
Grid No.2 voltage	12	volts
Grid No.1 voltage	0	- 1.45 volt
Plate current	2	0.1 ma

OPERATING CONDITIONS OF THE PENTODE SECTION AS A FRAME OUTPUT
TUBE

Plate voltage	70 volts
Grid No.3 voltage	0 volt
Grid No.2 voltage	170 volts
Grid No.1 voltage	- 1 volt
Plate current (design center value)	37 ma
Plate current (minimum value)	26.5 ma
Plate current (maximum value)	47.5 ma
Grid No.2 current (design center value)	9 ma

MAXIMUM RATINGS (triode section)

Plate voltage (without current)	550 volts
Plate voltage	200 volts
Plate dissipation	1 watt
Average cathode current	8 ma
Peak cathode current	80 ma 1)
Grid voltage (when grid current = + 0.3 micro-amp)	-1.3 volt
Grid circuit resistance	3 megohms 2)
Grid circuit resistance	1 megohm 3)
Heater cathode voltage	150 volts
External heater cathode resistance	20,000 ohms

- 1) The duty cycle pulse must not exceed 15% of one scanning cycle and its duration must be limited to 50 microseconds.
- 2) With cathode bias
- 3) With fixed bias.

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ELECTRICAL CHARACTERISTICS OF THE TRIODE SECTION

Plate voltage	100	100	volts
Grid voltage	0	- 2	volts
Plate current	7.5	4	ma
Transconductance	1900	1350	micromhos
Amplification factor	21	18	

OPERATING CONDITIONS OF THE TRIODE SECTION AS AN AF AMPLIFIER

Plate supply voltage	170	200	volts
Load resistance	0.22	0.22	megohm
Grid voltage	-3.5	-4.2	volts
Plate current	0.45	0.55	ma
AF gain	11.5	11.5	1)
Output voltage at a total harmonic distortion of 5%	20	24	volts(RMS)

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- 1) If the grid leak resistance of the following tube is 0.68 megohm.