6AB8

DATA FOR R.M.A. REGISTRATION

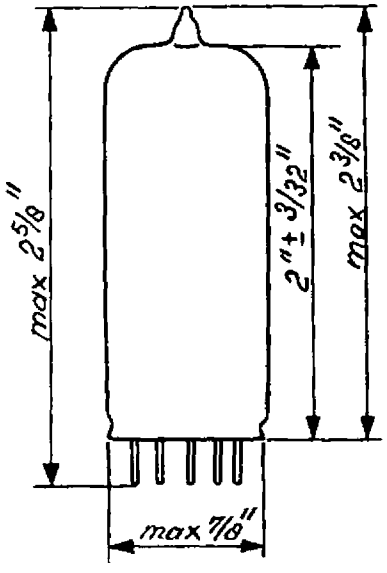
Jan.18, 1950

TUBE TYPE
ECL 80 mfg. by N.V. PHILIPS'GLOEILAMPENFABRIEKEN
Eindhoven, Holland.

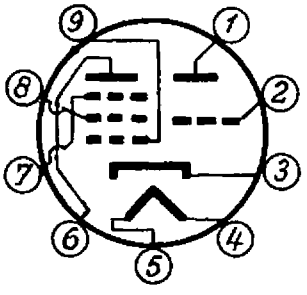
DESCRIPTION: Triode pentode; heater type(AC or DC); T6½ bulb; body length 2 3/8" max.; small button 9-pin base.

Heater voltage 6.3 volts Heater current 300 ma

TUBE OUTLINE



BOTTOM VIEW OF BASE



BASE 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 µµf
Grid No.1 to all other electrodes		4.6 µµf
Plate to grid No. 1	max.	0.2 µµf
Grid No.1 to filament	max.	0.25 µµf

DIRECT INTERELECTRODE CAPACITANCES (triode section)

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

DIRECT INTERELECTRODE CAPACITANCES (between pentode and triode sections)

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

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

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 microseconds.

2) With cathode bias.

3) With fixed bias.

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

OPERATING CONDITIONS OF THE PENTODE SECTION AS A SYNCH SEPARATOR

Plate voltage	20		volts
Grid No.3 voltage	o		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.

DATA FOR R.M.A. REGISTRATION

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

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)

---

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