

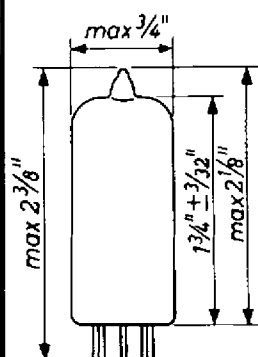
6687

DUAL CONTROL HEPTODE for use as gated amplifier in computer and on-off control circuits

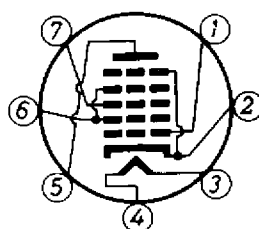
MECHANICAL DATA

Cathode	Coated unipotential
Base	E7-1
Bulb	T5½
RETMA basing designation	7 CH
Mounting position	Any

TUBE OUTLINE



BOTTOM VIEW OF BASE



BASE PIN No

1	Grid No.1
2	Cathode and grid No.5
3	Heater
4	Heater
5	Plate
6	Grids No.2 and 4
7	Grid No.3

ELEMENT

ELECTRICAL DATA

Heater data

Heater voltage ¹⁾	6.3 volts
Heater current at 6.3 volts	270(±5%) mamps

DIRECT INTERELECTRODE CAPACITANCES (without external shield)

Plate to all other elements	7.6 μμF
Grid No.1 to all other elements	5.4 μμF
Grid No.3 to all other elements	7.1 μμF
Plate to grid No.1	max. 0.08 μμF
Plate to grid No.3	max. 0.35 μμF
Grid No.1 to grid No.3	max. 0.2 μμF

¹⁾In order to obtain a prolonged tube life the maximum variations of the heater voltage should be less than ± 5% (absolute limits)

MAXIMUM RATINGS (Absolute Values)

Plate voltage	250 volts max.
Plate voltage (without current)	500 volts max.
Plate dissipation	1.0 watt max.
Grid No.2 and 4 voltage	100 volts max.
Grid No.2 and 4 voltage (without current)	500 volts max.
Grid No.2 and 4 dissipation	1.0 watt max.
Negative grid No.3 voltage	100 volts max.
Positive grid No.3 voltage	0 volt max.
Negative grid No.3 peak voltage	200 volts max.
Positive grid No.3 peak voltage	90 volts max.
Grid No.3 dissipation	0.5 watt max.
Grid No.3 circuit resistance (with fixed bias)	0.5 megohm max.
Grid No.3 circuit resistance (with automatic bias)	1 megohm max.
Negative grid No.1 voltage	100 volts max.
Positive grid No.1 voltage	0 volt max.
Negative grid No.1 peak voltage	200 volts max.
Grid No.1 dissipation	0.5 watt max.
Grid No.1 circuit resistance (with fixed bias)	0.5 megohm max.
Grid No.1 circuit resistance (with automatic bias)	1 megohm max.
Cathode current	20 mamps max.
Peak cathode current	70 mamps max.
Voltage between heater and cathode	120 volts max.

TYPICAL CHARACTERISTICS

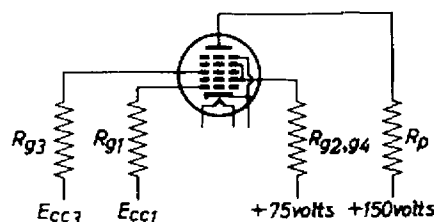
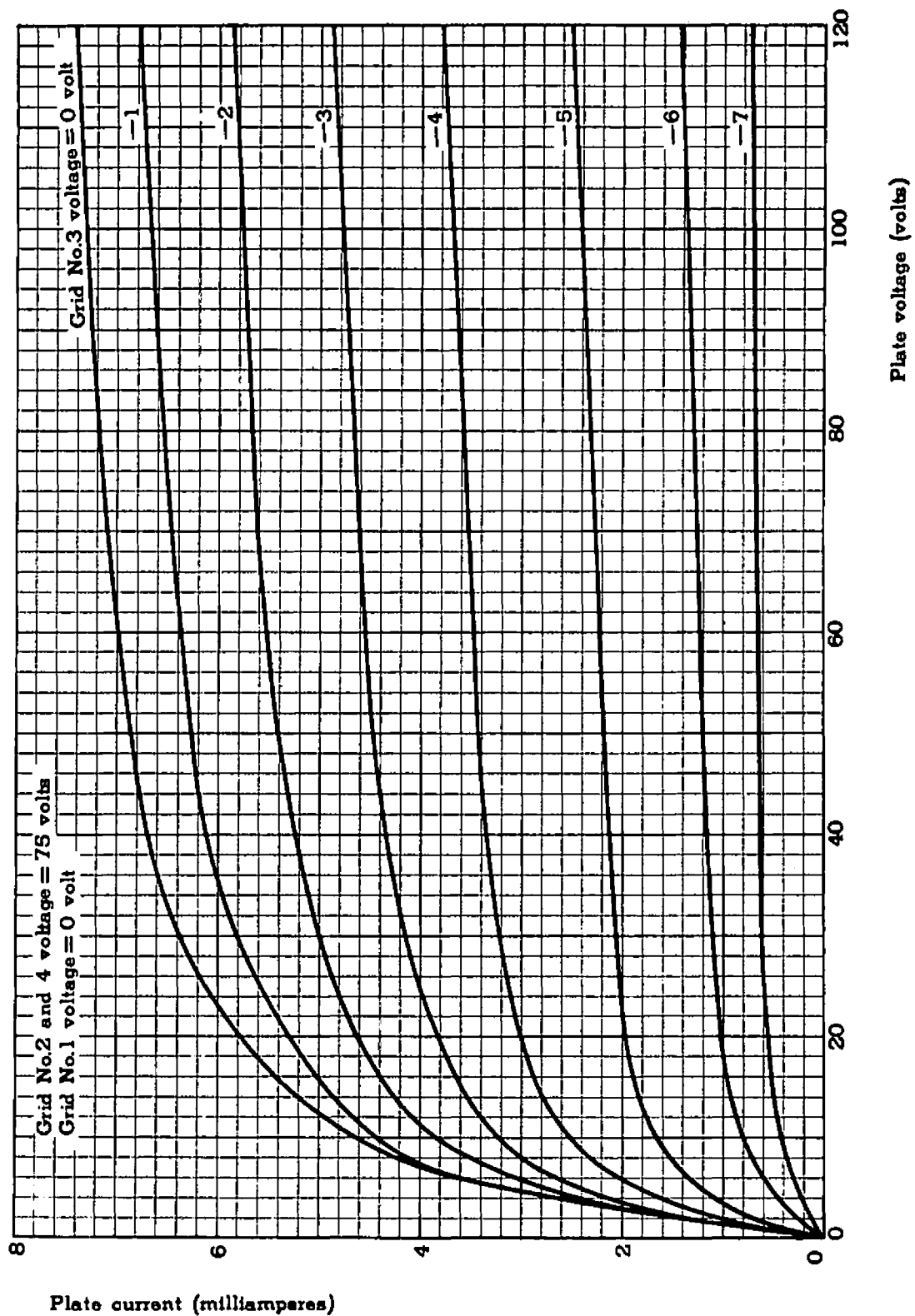


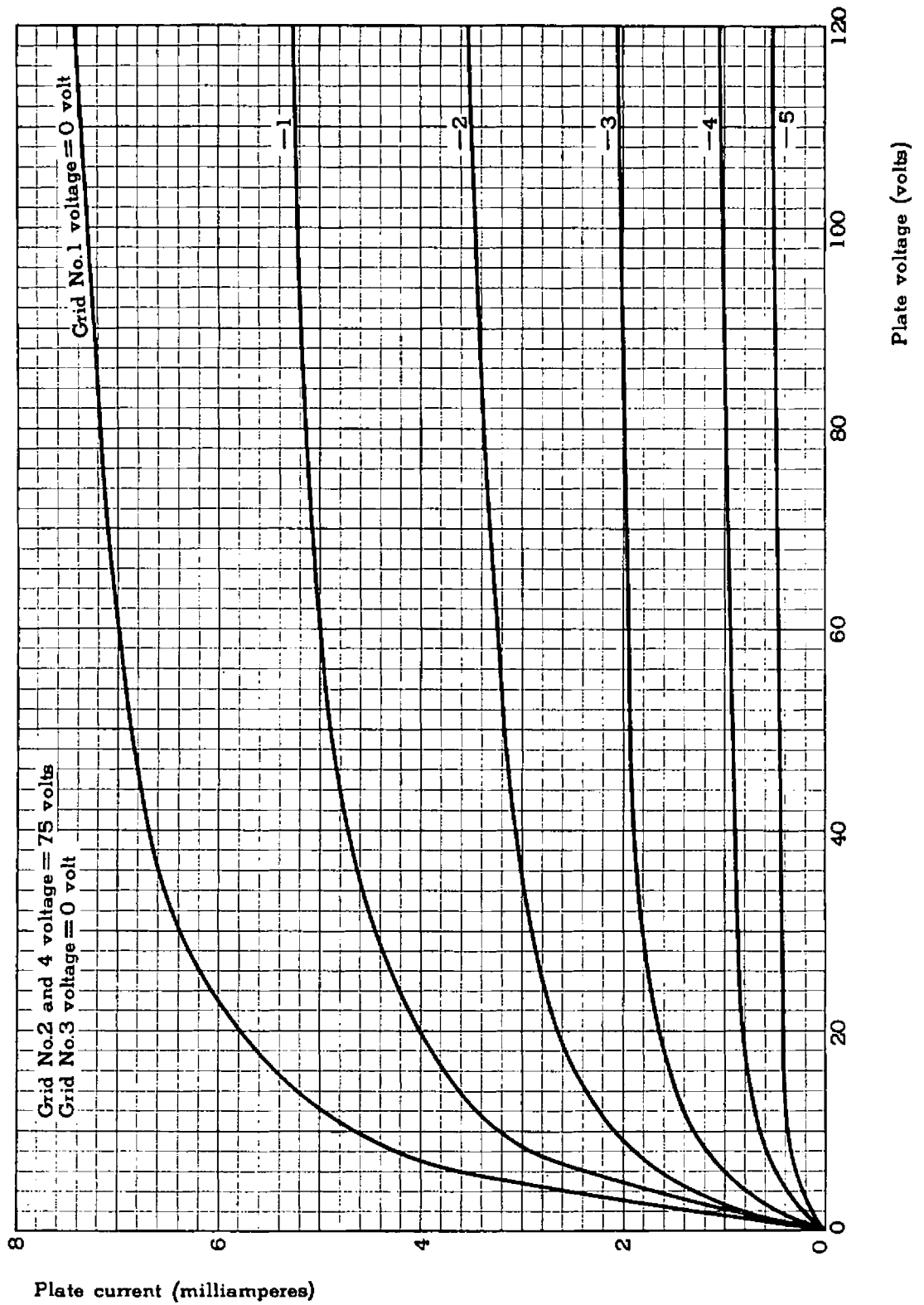
Plate supply voltage	150	150	150	150 volts
Grids No.2 and 4 supply voltage	75	75	75	75 volts
Grid No.1 supply voltage	0	0	-10	0 volt
Grid No.3 supply voltage	0	-10	0	+55 volts
Plate series resistor	20 000	20 000	20 000	0 ohms
Grids No.2 and 4 series resistor	470	470	470	0 ohms
Grid No.1 series resistor	47 000	47 000	47 000	0 ohms
Grid No.3 series resistor	47 000	47 000	47 000	0 ohms
Plate current	max.6.5 min.5.0	max.0.2	max.0.2	- mamps
Grid No.3 current	-	-	min. 0	mamp

Inverse grid No.1 and grid No.3 current (measured in the above circuit diagram)

Plate supply voltage	150 volts
Grid No.2 and 4 supply voltage	75 volts
Grid No.1 supply voltage	-1.5 volts
Grid No.3 supply voltage	-1.5 volts
Plate series resistor	20 000 ohms
Grids No.2 and 4 series resistor	470 ohms
Grid No.1 series resistor	47 000 ohms
Grid No.3 series resistor	47 000 ohms
Grid No.1 inverse current	max. 0.2 μ amp
Grid No.3 inverse current	max. 0.2 μ amp

Insulation between cathode and heater
(voltage between heater and cathode 120 volts) min.8 megohm





May 12, 1956