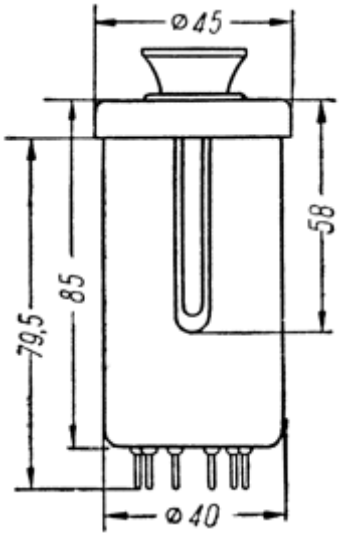
GU-50

(generator beam pentode)



The main dimensions of the GU-50 lamp.

general information

The GU-50 pentode is designed to amplify power and generate high-frequency oscillations.
It is used in transmitting devices, in low-frequency amplifiers for power amplification, and in television receivers in horizontal cascades.
Oxide indirect cathode.
Works vertically with leads down. Available in glass, paneless design. Service life not less than 100 hours.
Electrode leads pin. Pins 8. The first pin is located against the glass protrusion on the balloon.

Interelectrode capacitance, pF

Input 14.0 + - 1.0. The output is 9.15 + - 1.15. Passing no more than 0.1.

Rated Electrical Data

Filament voltage, V	12.6
Anode voltage, V	800
The voltage on the second grid, V	250
The bias voltage on the first grid, V	-40 + -10
Glow current, mA	765 + -65
The steepness of the characteristic at anode current of 50 mA, mA / V	4 + -1
Output power *), W	60
Output power at a voltage of 10.8 V *), W	not less than 52

*)

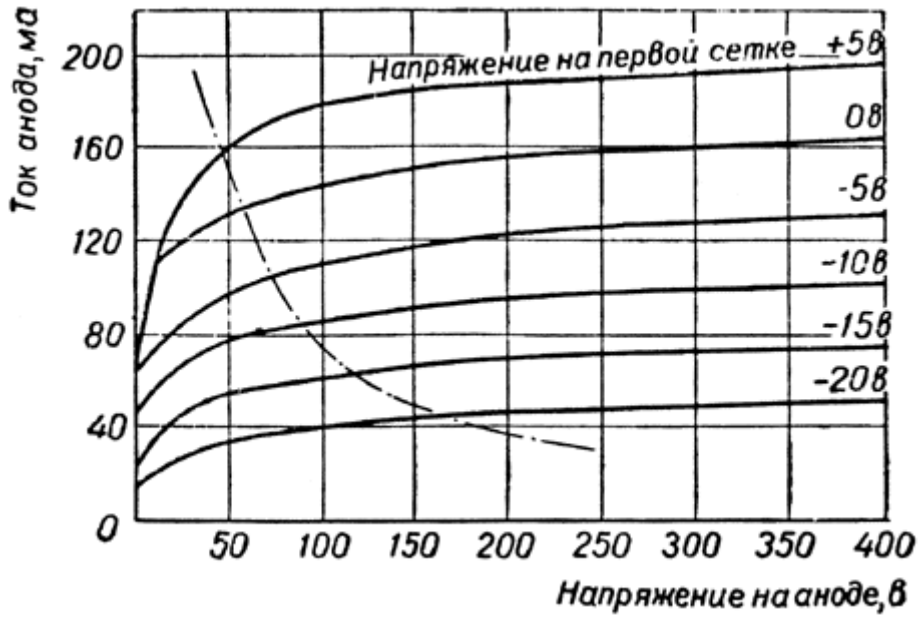
In the power amplification mode: the current in the anode circuit is 150 mA, the bias voltage on the first grid is -100 V, the current in the circuit of the first grid is 8 mA, the excitation voltage amplitude is 135 V, the operating frequency is 66.6 MHz.

Maximum allowable electrical quantities

The highest voltage, V	14.5
The smallest voltage, V	10.8
The highest voltage at the anode at a frequency of 46.1 MHz, V	1000
The highest voltage at the anode at a frequency of 66.6 MHz, V	800
The highest voltage at the anode at a frequency of 87.5 MHz, V	700
The highest voltage at the anode at a frequency of 120 MHz, V	600
The highest peak voltage at the anode, V	3000
The highest voltage on the second grid, V	250
The greatest power dissipated at the anode for a long time, W	40
The greatest power dissipated at the anode during overload for 1 min., W	fifty
The greatest power dissipated on the second grid, W	5
The greatest power dissipated on the first grid, W	1
The greatest constant voltage between the cathode and the heater, V	200
The greatest leakage current between the cathode and the heater, μA	100
The highest current in the cathode circuit, mA	230
The greatest resistance in the cathode-heater circuit, kOhm	5

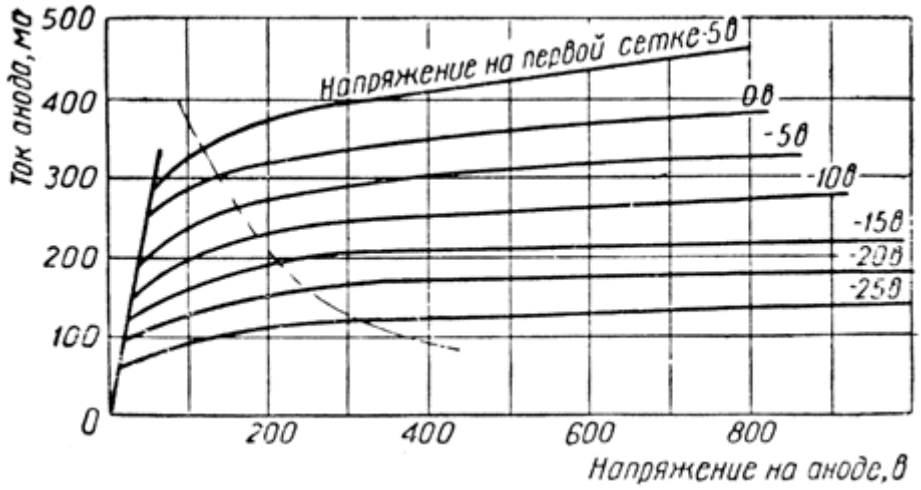
Recommended telegraph operation

Anode voltage, V	1000
The voltage on the third grid, V	0
The voltage on the second grid, V	300
The bias voltage on the first grid, V	-80
The amplitude of the excitation voltage, V	100
Current in the anode circuit, mA	120
Current in the circuit of the second grid, mA	10
Slope, mA / V	5
Net vibrational power, W	fifty
Allowable power dissipated at the anode, W	40
Gain in the triode part: cathode - first grid - second grid	5
Equivalent loop resistance, Ohm	4750
Maximum permissible oscillation frequency, MHz	60



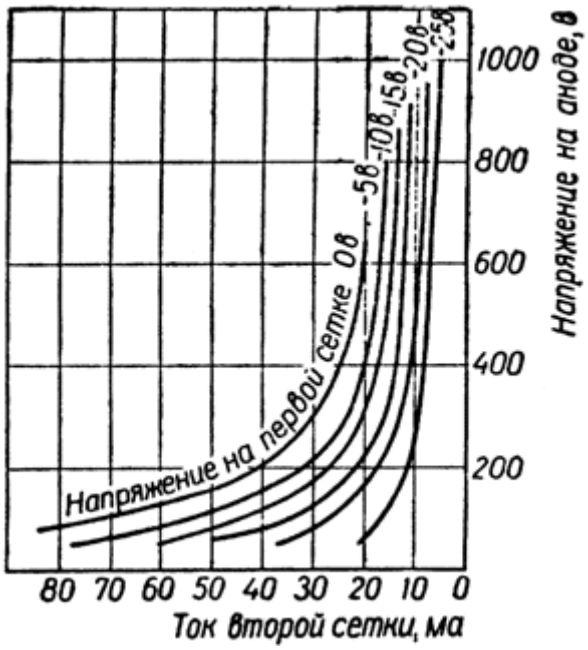
Characteristics of the dependence of the anode current on the voltage at the anode at a voltage on the third grid of 0 V and a voltage on the second grid of 150 V.

Current in the anode circuit ———— ; the greatest power dissipated at the anode —·—·—.



Characteristics of the dependence of the anode current on the voltage at the anode at a voltage on the third grid of 0 V and a voltage on the second grid of 250 V.

Current in the anode circuit ———— ; the greatest power dissipated at the anode —·—·—.



Characteristics of the dependence of the current of the second grid on the voltage at the anode with a voltage on the third grid of 0 V and a voltage on the second grid of 250 V.

The material was prepared according to [3, p. 324-327].

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