

# GU-50

## PENTODE

The GU-50 pentode is used as a RF oscillator and power amplifier in the metric wavelength range in RF equipment

### GENERAL

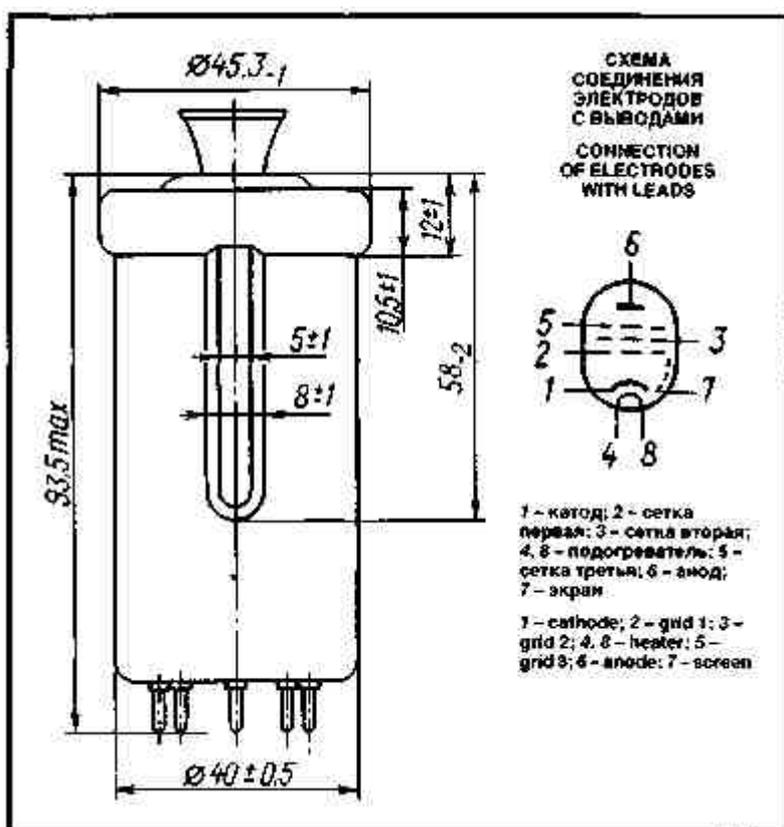
Cathode: indirectly heated, oxide-coated.

Envelope: glass, no-base.

Height: at most 93.5 mm.

Diameter: at most 45.3 mm.

Mass: at most 100 g

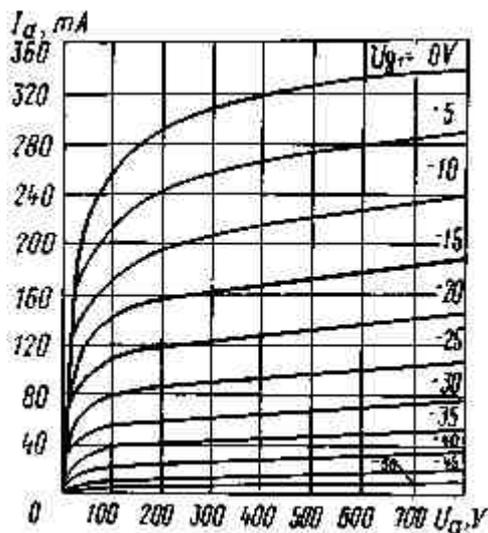


### OPERATING ENVIRONMENTAL CONDITIONS

Ambient temperature, °C	-10 to +55
Relative humidity at up to +25 °C, %	98

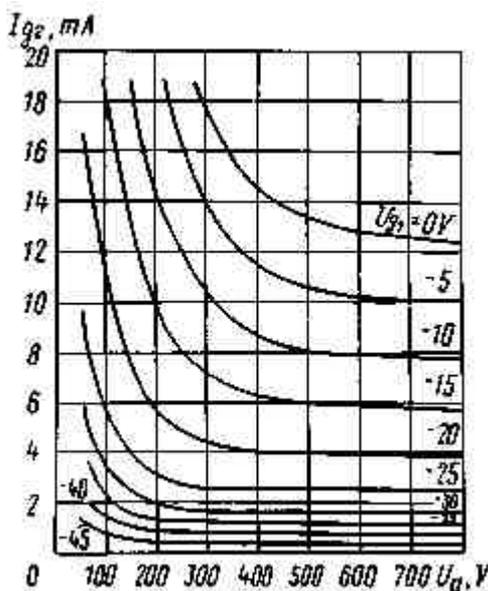
BASIC DATA	
Electrical Parameters	
Heater voltage, V	12.6
Heater current, A	0.6-0.85
Mutual conductance (at anode voltage 800 V, grid 2 voltage 250 V, grid 1 voltage increment 5 V, anode current 50 mA), mA/V	3-5.5
Bias voltage at operating point, V	25-55
Penetration factor of grid 1 relative to grid 2, %	16-26
Interelectrode capacitance, pF:	
input, at most	13-15
output, at most	10.3
transfer, at most	0.1
Output power, W, max.:	
at anode voltage 800 V, grid 2 voltage 250 V, grid 1 voltage -100 V, anode current, at most 150 mA	55
over 1,750 h of service	40

Limit Operating Values	
Heater voltage, V	11.3-13.9
Anode voltage at different wavelengths, V:	
6.5 m or longer	1,000
6.5-4.5 m	800
4.5-3.5 m	700
3.5-2.5 m	600
Grid 2 voltage, V	250
Voltage between cathode and heater, V	200
Dissipation, W:	
anode	40
grid 2	5
grid 1	1
Envelope temperature, °C	200



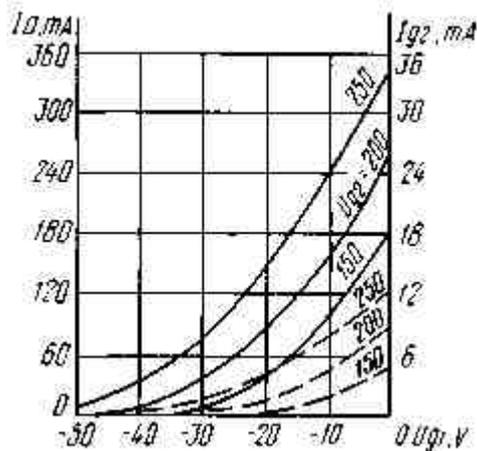
Averaged Anode-Grid 2 Characteristic Curves:

$U_f = 12.6V$ ;  $U_{g2} = 250V$ ;  $U_{g3} = 0$



Averaged Grid 2-Anode Characteristic Curves:

$U_f = 12.6V$ ;  $U_{g2} = 250V$ ;  $U_{g3} = 0$



Averaged Characteristic Curves:

$U_f = 12.6V$ ;  $U_{g2} = 500V$ ;  $U_{g3} = 0$

— anode-grid;  
 - - - grid 2