

# TETRODE

# GU-73B

The GU-73B tetrode is used for single-sideband power amplification at frequencies up to 250 MHz.

## GENERAL

Cathode: indirectly heated, oxide-coated.  
 Envelope: metal-to-ceramic.  
 Cooling: forced air.  
 Height: at most 150 mm.  
 Diameter: at most 101 mm.  
 Mass: almost 150g.

## OPERATING ENVIRONMENTAL CONDITIONS

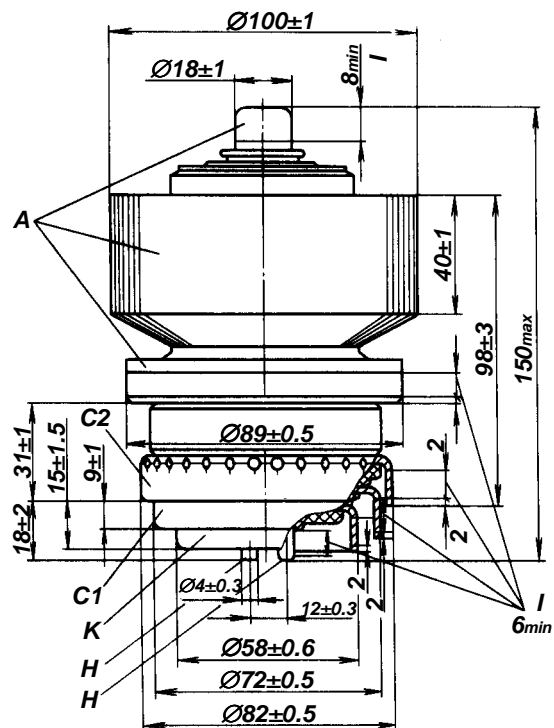
Vibration loads:	
frequencies, Hz	5-80
acceleration, m/s <sup>2</sup>	25
Multiple impacts with acceleration, m/s <sup>2</sup>	118
Linear loads with acceleration, m/s <sup>2</sup>	88
Lowest permissible ambient temperature, °C	-60
Relative humidity at up to +40 °C, %	95-98

## BASIC DATA Electrical Parameters

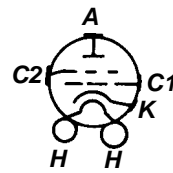
Heater voltage (AC or DC), V	27
Heater current, A	4.55-5.15
Anode voltage, kV	1.7
Grid 2 voltage, V	250
Negative grid 1 bias voltage, V	18-40
Negative cutoff voltage, V, at most	120
Anode current, A	1.5
Grid 2 current, mA	-130
Mutual conductance, mA/V, at least	65
Gain coefficient (grid 1 grid 2)	3-7
Voltage level of combination frequencies of third and fifth orders (at anode voltage 3 kV, grid 2 voltage 300 V, anode current 750 mA, grid 2 current at most 110 mA), dB, at most	-30
Warm up time, s, at most	210
Oscillatory power under conditions of class AB <sub>1</sub> (at anode voltage 3 kV, grid 2 voltage 300 V, anode current 750 mA, grid 2 current at most 110 mA), kW, at least	2.5
Interelectrode capacitance, pF:	
input	190
output	27
transfer	0.2

## Limit Operating Values

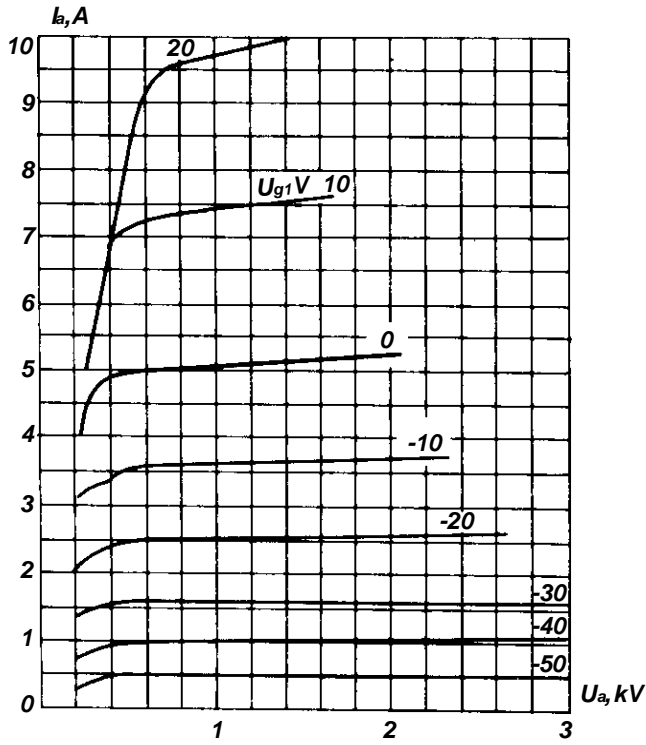
Heater voltage, V	24.7-27.3
Anode voltage (DC), kV	3
Grid 2 voltage (DC), V	325
Negative grid 1 voltage, V	150
Anode dissipation, kW:	
single-sideband signal amplification	2.5
TV signal amplification	3.5
Grid 2 dissipation, W	35
Grid 1 dissipation, W	5
Cathode current (DC component), A	2.2
Anode current (instantaneous value), A	7
Operating frequency, MHz	250
Temperature at anode, stem and seals, °C	200



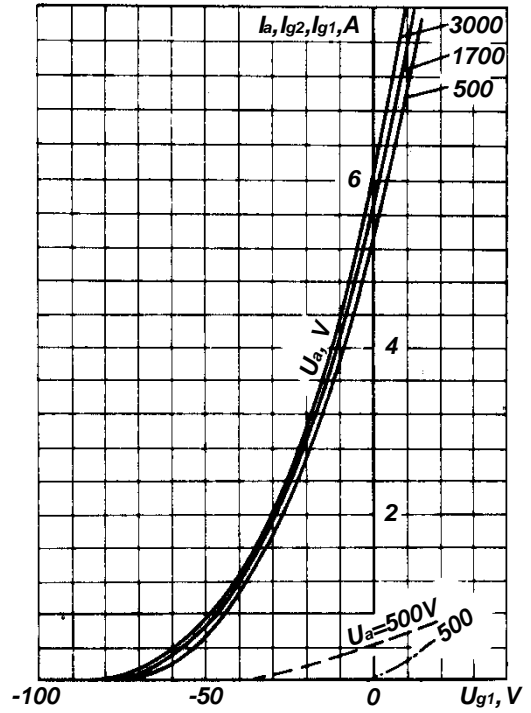
## CONNECTION OF ELECTRODES WITH LEADS



K - cathode; H - heater;  
 C1 - grid 1; C2 - grid 2;  
 A - anode

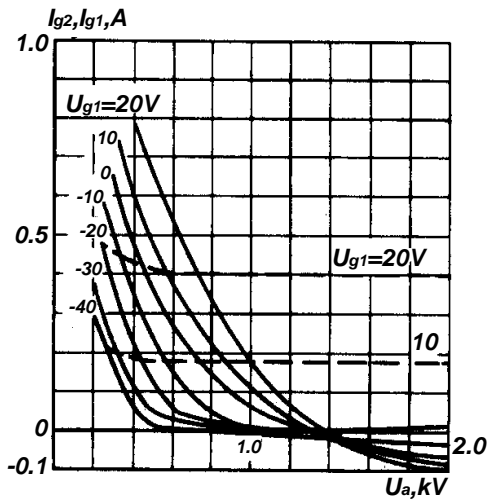


Averaged Anode Characteristic Curves:  
 $U_1 = 27V$ ;  $U_{g2} = 300V$ ;



Averaged Grid and Anode-Grid Characteristic Curves:  
 $U_1 = 27V$ ;  $U_{g2} = 300V$

— anode;  
 - - - grid 2;  
 - · - · grid 1



Averaged Grid-Anode Characteristic Curves:  
 $U_1 = 27V$ ;  $U_{g2} = 300V$

— ( $I_{g2}$ );  
 - - - ( $I_{g1}$ )