

TETRODE

GU-84B

The GU-84B tetrode is used for power amplification in traveling-wave and single-sideband signal amplifier circuits and as power amplifiers in RF equipment.

GENERAL

Cathode: indirectly heated, oxide-coated.
 Envelope: metal ceramic.
 Cooling: forced air.
 Height: at most 112 mm.
 Diameter: at most 99 mm.
 Mass: at most 1.3 kg.

OPERATING ENVIRONMENTAL CONDITIONS

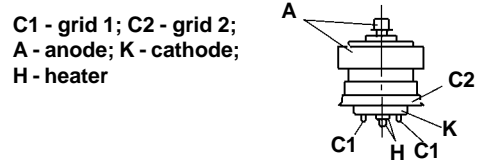
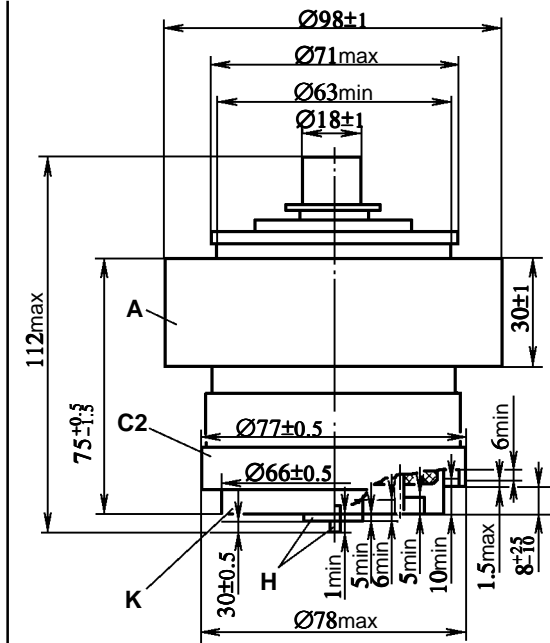
Vibration loads:
 frequencies, Hz **1-80**
 acceleration, m/s² **49**
 Multiple impacts with acceleration, m/s² **147**
 Ambient temperature, °C **-10 to +70**
 Relative humidity at up to +35 °C, % **98**

BASIC DATA Electrical Parameters

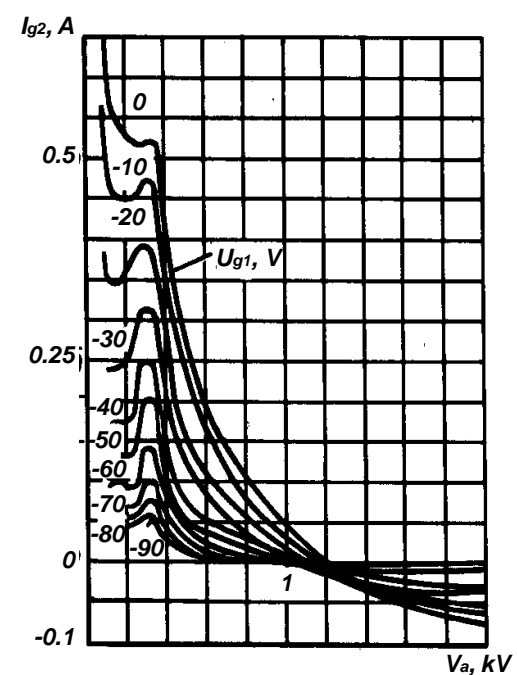
Heater voltage, V **27**
 Heater current, A **3.4-4.0**
 Negative bias voltage (at anode voltage 750 V, grid 2 voltage 375 V, anode current 2000 mA), absolute value, V **10-50**
 Grid 1 cutoff voltage (at anode voltage 2000 V, grid 2 voltage 375 V, anode current 20 mA, anode resistance 0.5 kΩ), absolute value, V, at most **150**
 Zero anode current (at anode voltage 250 V, grid 2 voltage 375 V, grid 1 voltage 0), A **3.5-6**
 Grid 1 reverse current (at anode voltage 1000 V, grid 2 voltage 375 V, anode current 2000 mA) μA, at most **80**
 Grid 2 current (at anode voltage 750 V, grid 2 voltage 375 V, anode current 2000 mA), mA **-25 to +60**
 Mutual conductance (at anode voltage 750 V, grid 2 voltage 375 V, anode current 2000 mA), mA/V **44-72**
 Output power under conditions of class AB, at frequencies 0.1-1 MHz (at anode voltage 2000 V, grid 2 voltage 375 V, grid 2 current at least 80 mA, absolute value), kW, at least **1.5**
 Output power under conditions of class B at frequency 250 MHz (at anode voltage 2000 V, grid 2 voltage 375 V, anode current 1500 mA, grid 2 current at least 60mA, grid 1 current at most 4mA), kW, at most **1.2**
 Interelectrode capacitance, pF:
 input **90-115**
 output **18-23**
 transfer, at most **0.2**

Limit Operating Values

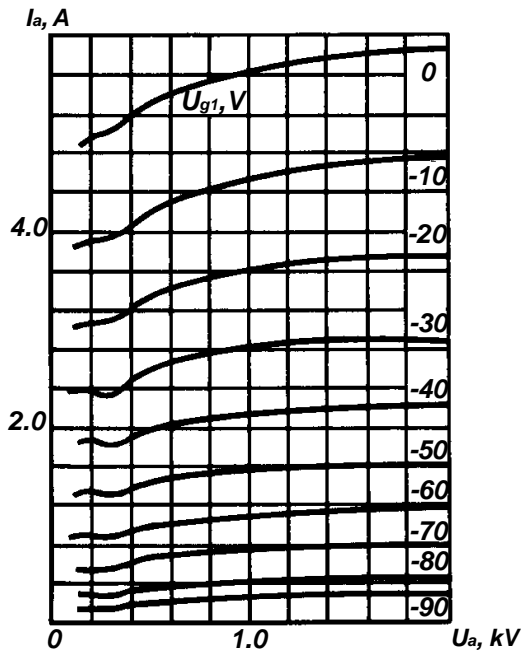
Heater voltage (AC or DC), V **25.6-28.4**
 Anode voltage, kV:
 DC **2.2**
 instantaneous value **4.25**
 Grid 2 voltage (DC) V **400**
 Negative grid 1 voltage (DC), absolute value, V **150**
 Input voltage (amplitude value), V **150**
 Cathode-heater voltage (either polarity, absolute value), V **100**
 Cathode current, A:
 DC component **2**
 instantaneous value **6**



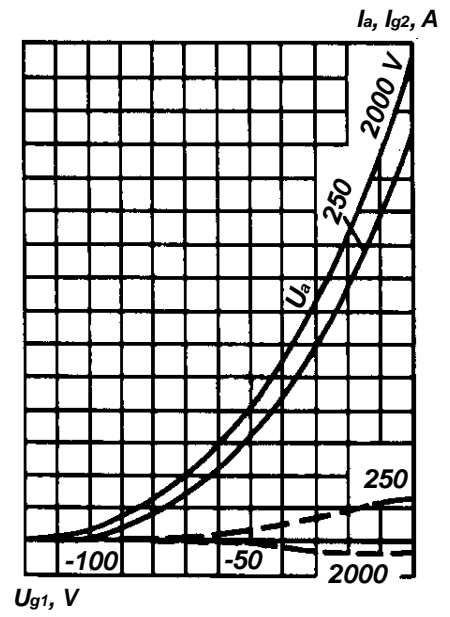
C1 - grid 1; C2 - grid 2;
 A - anode; K - cathode;
 H - heater



Averaged Grid-Anode Characteristic Curves;
 U₁ = 27 V; U_{g2} = 400 V



Averaged Anode Characteristic Curves;
 $U_1 = 27 V$; $U_{g2} = 400 V$



Averaged Anode-Grid and Grid
 Characteristic Curves;
 $U_1 = 27 V$; $U_{g2} = 400 V$;
 ——— I_a ;
 - - - - - I_{g2}