

TETRODE

GS-23B

The GS-23B power tetrode generates and amplifies power at up to 1000 MHz in RF equipment.

GENERAL

Cathode: indirectly heated, oxide-coated.
 Envelope: metal-ceramic.
 Cooling: forced air.
 Height: at most 120 mm.
 Diameter: at most 90 mm.
 Mass: at most 1.1 kg.

OPERATING ENVIRONMENTAL CONDITIONS

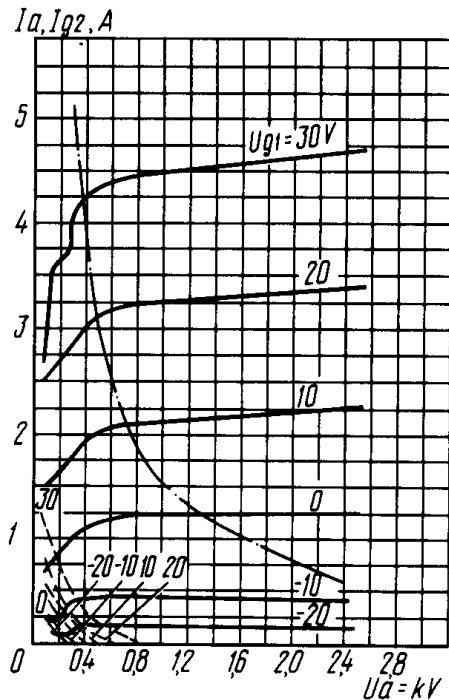
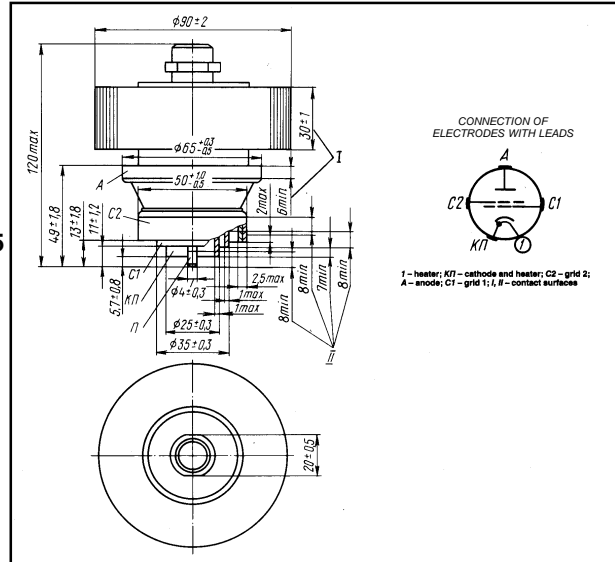
Ambient temperature, °C **-10to +55**
 Relative humidity at up to +25 °C, % **98**

BASIC DATA Electrical Parameters

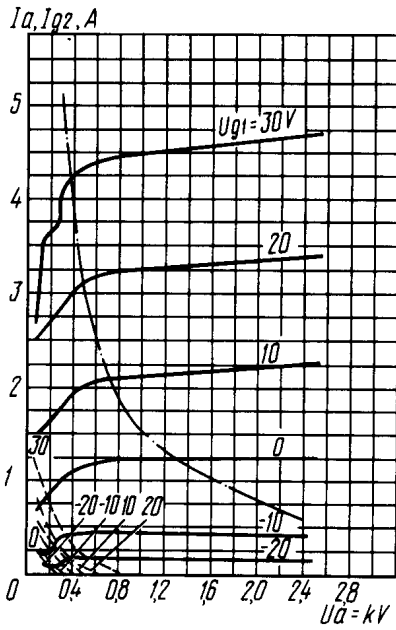
Heater voltage, V **6.3**
 Heater current, A **5.3-6.1**
 Mutual conductance (at anode voltage 1.25 kV, grid 2 voltage 400 V, anode current 0.9 A),mA/V **40-70**
 Power gain (at anode voltage 2.1 kV, grid 2 voltage 400 V, anode current 1 A, heater voltage 5.7 V), at least **8**
 Cutoff voltage (at anode voltage 1.25 kV, grid 2 voltage 400 V, anode current 10 mA), V, at most **65**
 Interelectrode capacitance, pF:
 input **28-38**
 output **9.5-13.5**
 transfer, at most **0.025**
 Cathode heating time, s, at most **210**
 Output power (at anode voltage 2.1 kV, grid 2 voltage 400 V, anode current 1 A, heater voltage 5.7 V),W, at least **500**
 Output power over 1,000 h of service, at least **400**

Limit Operating Values

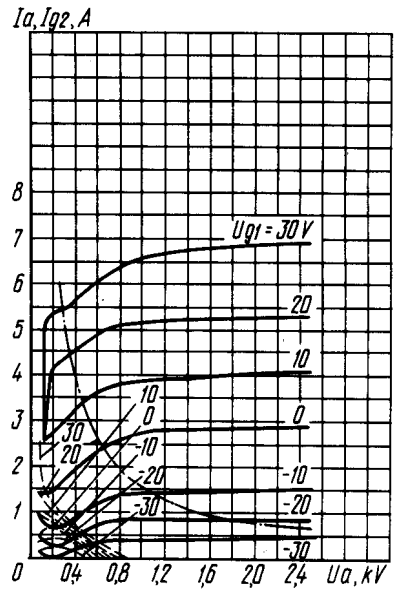
Heater voltage, V **5.7-7.0**
 Anode voltage, kV:
 DC voltage with tube cut off peak value **3.0**
 Grid 2 voltage (DC), V **3.5**
 Negative grid 1 voltage (DC), V **500**
 Cathode current (r.m.s. value), A **150**
 Dissipation, W:
 anode **1.5-10³**
 grid2 **12**
 grid 1 **1.5**
 Operating frequency, MHz **1000**
 Temperature at anode, stem and seals, °C **200**
 Grid 1 voltage, V:
 maximum **0**
 minimum **-100**
 Dissipation, W:
 anode **200**
 grids **3**
 Maximum anode current, A **0.24**
 Grid 2 current, mA:
 maximum **10**
 minimum **-10**
 Grid 1 current, mA:
 maximum **40**
 minimum **0**
 Maximum drive power, W **12**
 Minimum oscillator output power, W **112.5**
 Minimum wavelength, cm **30**
 Maximum temperature at envelope and leads, °C **200**



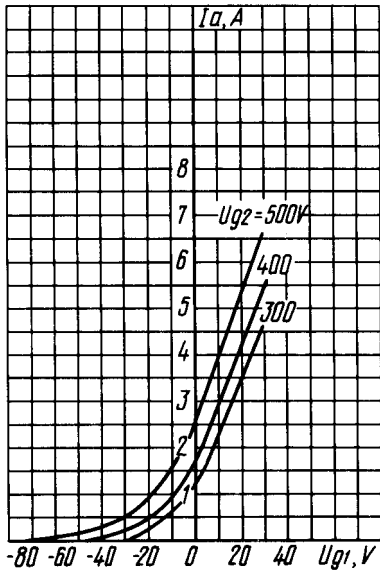
Averaged Characteristic Curves:
 U_i = 6.3V; U_{g2} = 300V;
 — anode;
 - - - - grid 2 - anode;
 - · - (P_{a max})



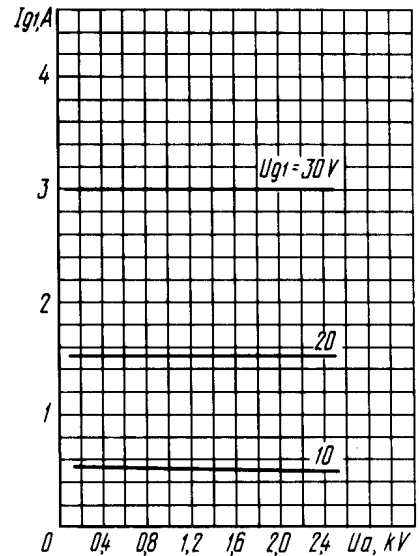
Averaged Characteristic Curves:
 $U_1 = 6.3V$; $U_{g2} = 400V$;
 — anode;
 - - - - grid 2 - anode;
 - · - · ($P_{a\ max}$)



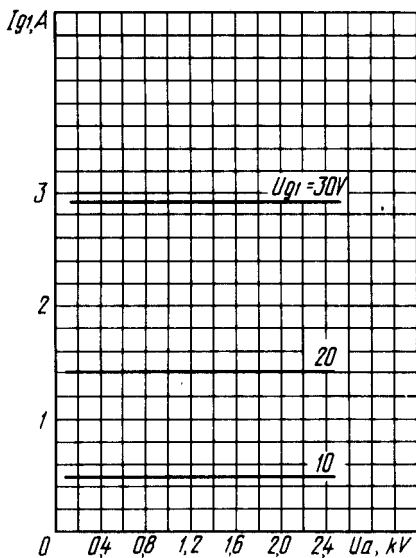
Averaged Characteristic Curves:
 $U_1 = 6.3V$; $U_{g2} = 500V$;
 — anode;
 - - - - grid 2 - anode;
 - · - · ($P_{a\ max}$)



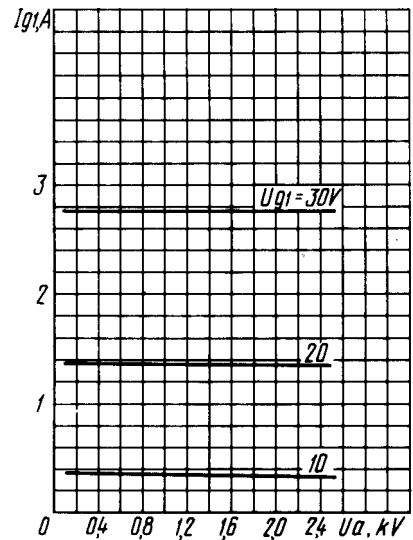
Averaged anode-grid characteristic curves:
 $U_1 = 6.3\ V$; $U_a = 1.5kV$.



Averaged anode-grid characteristic curves: $U_1 = 6.3\ V$; $U_{g2} = 300V$.



Averaged anode-grid characteristic curves: $U_1 = 6.3\ V$; $U_{g2} = 400V$.



Averaged anode-grid characteristic curves: $U_1 = 6.3\ V$; $U_{g2} = 500V$.