TETRODE   GS-15B

The GS-15B tetrode is used as a RF oscillator and amplifier in continuous operation in grounded-grid circuits.

GENERAL

Cathode: indirectly heated, oxide-coated, dispenser.
Envelope: metal-ceramic with ring leads.
Cooling: forced air. Height: at most 69 mm.
Diameter: at most 37.1 mm. Mass: at most 140g.

OPERATING ENVIRONMENTAL CONDITIONS

Vibration loads:	
frequency, Hz	**5-1400**
acceleration, m/s^2	**98**
Multiple impacts with acceleration, m/s^2	**1470**
Linear loads with acceleration, m/s^2	**2940**
Ambient temperature, °C	**-60 to +100**
Relative humidity up to +40 °C, %	**98**

CONNECTION OF ELECTRODES WITH LEADS

КП – cathode and heater; П – heater; C1 – grid; C2 – grid 2; A – anode

BASIC DATA Electrical Parameters

|	
Heater voltage (AC or DC), V	**6.3**
Heater current, A	**1.85-2.2**
Anode voltage (DC), V	**900**
Grid 2 voltage (DC), V	**250**
Mutual conductance (at grid 1 voltage reduction by 1 V and anode current 0.2 A), mA/V, at least	**9**
Grid 1 inverse current (at anode current 0.2 A), µA, at most	**20**
Warm up time (at anode voltage 1.5 kV, grid 2 voltage 300 V, anode current 0.24 A, drive power 15 W at wavelength 30 cm), s, at most	**60**
Oscillator output power in amplification mode (at anode voltage 1.5 kV, grid 2 voltage 300 V, anode current 0.24 A, drive power 15 W at wavelength 30 cm),W, at least	**160**
Interelectrode capacitance, pF:	
grid 1-cathode	**6-8.5**
grid 2-anode	**1.5-2.3**

Limit Operating Values

|	
Heater voltage (AC or DC), V:	
maximum	**6.6**
minimum	**6**
Maximum anode voltage (DC), kV	**1.37**
Maximum grid 2 voltage (DC), V	**300**
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**

I_a, I_{g1}, A

$U_{g1} = 40V$
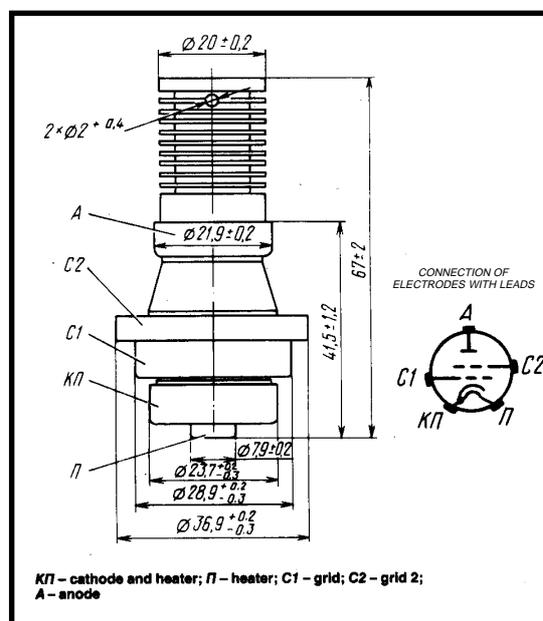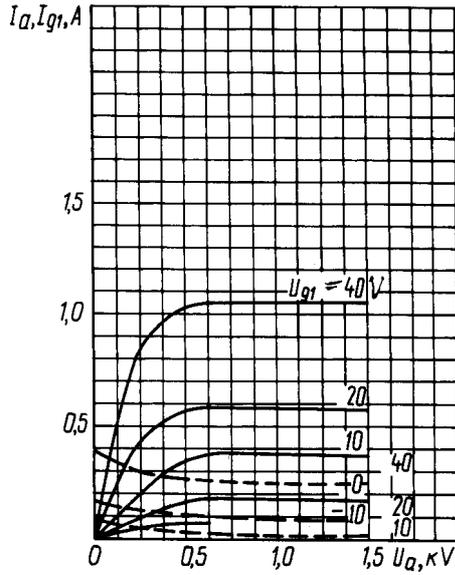
Averaged Characteristic Curves:
$U_1 = 6.3V$; $U_{g2} = 300V$;
———— anode;
- - - - - grid 2 - anode
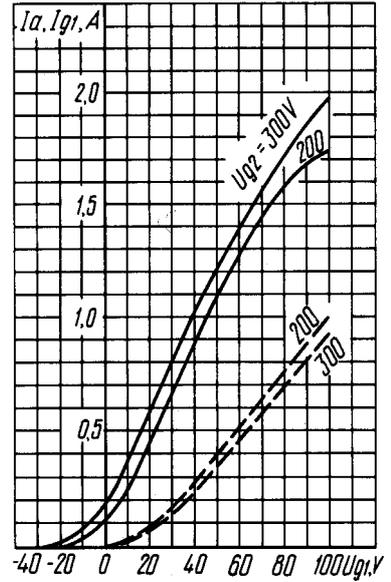
Averaged Characteristic Curves:
$U_1 = 6.3$ V; $U_{g2} = 1.5$ kV;
———— anode-grid;
- - - - - grid

I_a, I_{g1}, A

$U_{g2} = 300$ V

P, W

$I_a = 300\,mA$
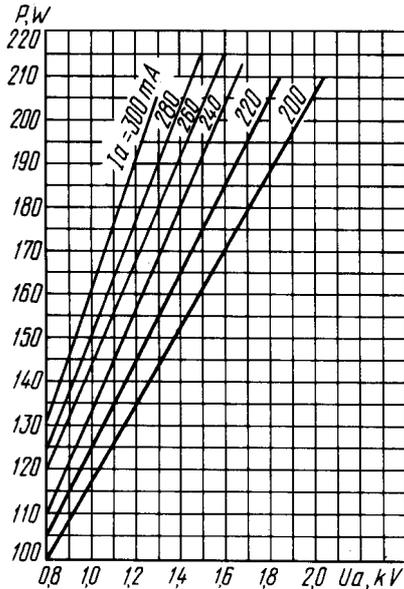
Averaged characteristic curves showing oscillator output power versus anode voltage:
$U_1 = 6.3$ V; $U_{g2} = 300V$;
$P_{in} = 15W$; $\lambda = 30$cm.
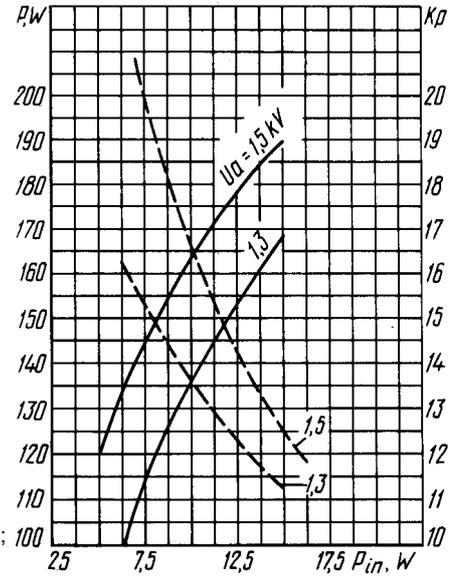
Averaged characteristic curves showing oscillator output power versus input power:
$U_1 = 6.3$ V; $U_{g2} = 300V$;
$I_a = 240$mA; $\lambda = 30$cm.
———— oscillator output power (P);
- - - - - gain coefficient.

P, W K_p

$U_a = 1.5$ kV