

# BEAM-POWER DOUBLE TETRODE GU-17

The GU-17 beam-power double tetrode is used for generation or power amplification at frequencies up to 250 MHz in RF equipment.

## GENERAL

Cathode: indirectly heated, oxide coated.  
 Envelope: glass, miniature.  
 Height: at most 80 mm.  
 Diameter: at most 22.5 mm.  
 Mass: at most 25 g.

## OPERATING ENVIRONMENTAL CONDITIONS

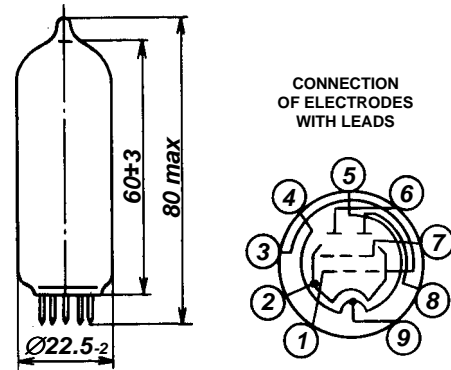
Vibration loads:	
frequencies, Hz	20-600
acceleration, m/s <sup>2</sup>	59
Multiple impacts with acceleration, m/s <sup>2</sup>	118
Single impacts with acceleration, m/s <sup>2</sup>	490
Linear loads with acceleration, m/s <sup>2</sup>	294
Relative humidity at up to +40 °C, %	98

## BASIC DATA Electrical Parameters

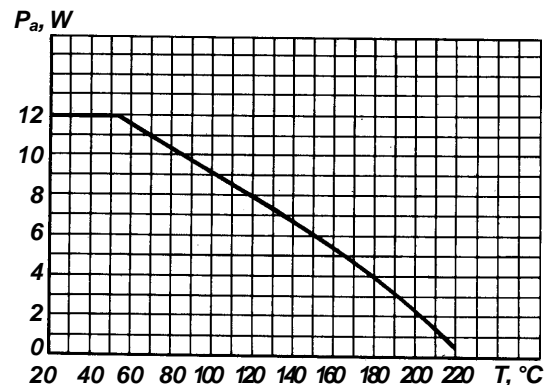
Heater voltage, V	6.3
Heater current, A	0.72-0.88
Mutual conductance (at anode and grid 2 voltages 200 V, grid 1 voltage - 16 V of first tetrode, grid 1 voltage - 100 V of 2nd tetrode), mA/V	1.6-3.3
Anode current (at anode and grid 2 voltage 200 V, grid 1 voltage - 16 V of 1st tetrode, grid 1 voltage 100 V of 2nd tetrode), mA	10-30
Interelectrode capacitance, pF:	
input	5.2-7.8
output	2.2-3.2
transfer, s, at most	0.1
Warm up time, s, at most	40
Output power (at anode voltage 300 V, grid 2 voltage 200V, voltage 80 V of grids 1), W, at least	11
Output power over 400 h of service, W, at least	8.8

## Limit Operating Values

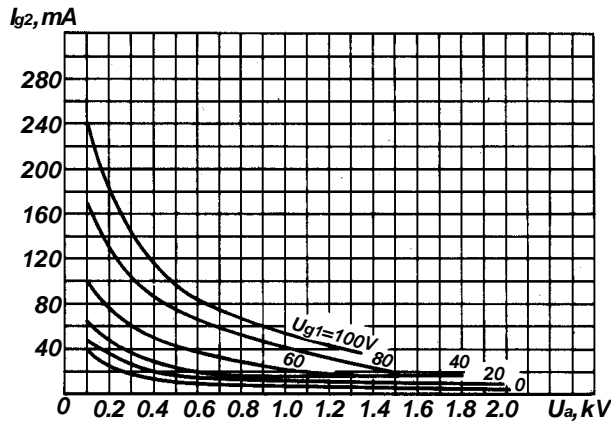
Heater voltage, V:	
with parallel-connected heater	5.7-7
with series-connected heater	11-14
Anode voltage, V	400
Anode voltage at the instant of switching on, V	450
Voltage between cathode and heater, V	-150 to +150
Cathode current, mA	100
Dissipation, W:	
anodes	12
grid 2	3
grid 1	0.5
Operating frequency, MHz	250
Envelope temperature, °C	260



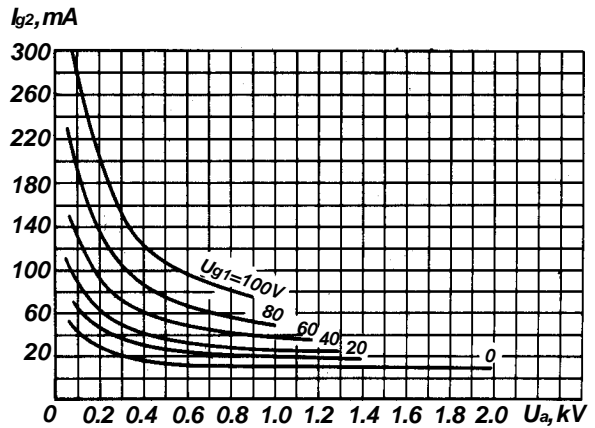
1 - grid 1 of first tetrode; 2 - cathode and beam-forming plates; 3 - grid 1 of second tetrode; 4 - heater; 5 - heater; 6 - anode of first tetrode; 7 - grid 2; 8 - anode of second tetrode; 9 - heater (centre tap)



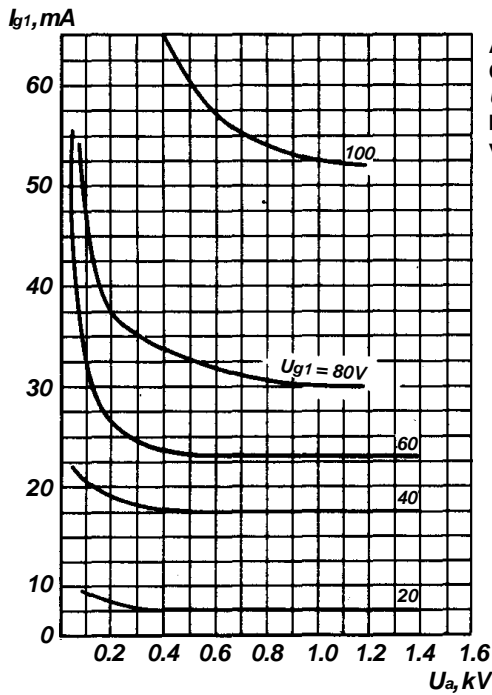
Maximum Permissible Anode Dissipation  $P_{a\ max}$  versus Ambient Temperature (at bulb temperature  $T_b$  260 °C)



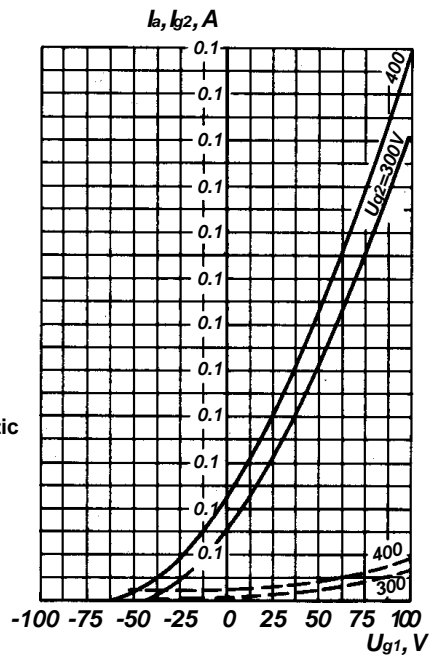
Averaged Grid 2-Anode Characteristic Curves:  
 $U_1 = 10V$ ;  $U_{g2} = 0.3kV$ ;  
 beam-forming plates voltage is 0



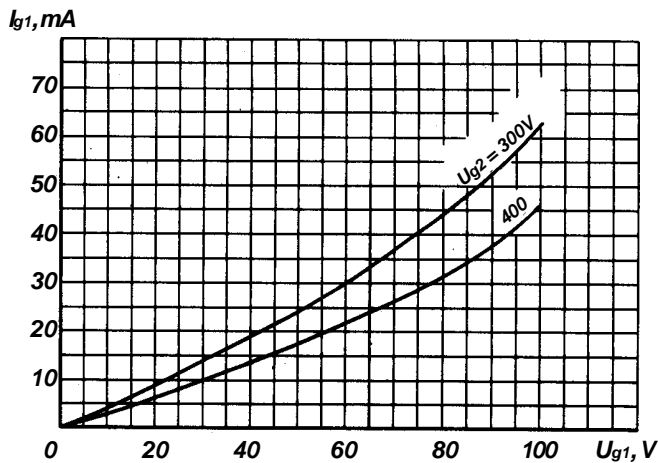
Averaged Grid 2-Anode Characteristic Curves:  
 $U_1 = 10V$ ;  $U_{g2} = 0.4kV$ ;  
 beam-forming plates voltage is 0



Averaged Grid-Anode Characteristic Curves:  
 $U_1 = 10V$ ;  $U_{g2} = 0.4kV$ ;  
 beam-forming plates voltage is 0



Averaged Characteristic Curves:  
 $U_1 = 10V$ ;  $U_{g2} = 1kV$ ;  
 — anode-grid;  
 - - - grid 2;  
 beam-forming plates voltage is 0



Averaged Grid Characteristic Curves:  
 $U_1 = 10V$ ;  $U_a = 1kV$ ;  
 beam-forming plates voltage is 0