

GU-78B

Tetrode

The GU-78B tetrode is used for power amplification in distributed amplifiers and single-sideband signal amplifiers at frequencies up to 250 MHz, in RF industrial engineering equipment.

GENERAL

Cathode: indirectly heated, oxide-coated.

Envelope: metal ceramic, with ring leads of cathode, grid 2 and anode and pin leads of grid 1.

Cooling: forced air

Height, mm, at most: 120

Diameter, mm, at most: 111

Mass, Kg, at most: 1.8

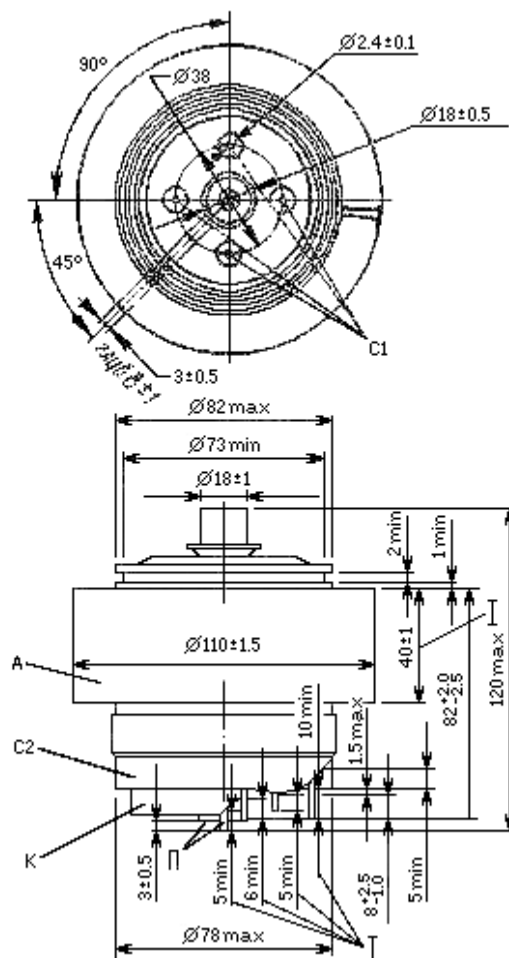
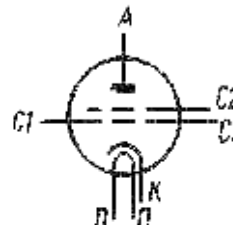


СХЕМА
СОЕДИНЕНИЯ
ЭЛЕКТРОДОВ
С ВЫВОДАМИ
CONNECTION
OF ELECTRODES
WITH LEADS



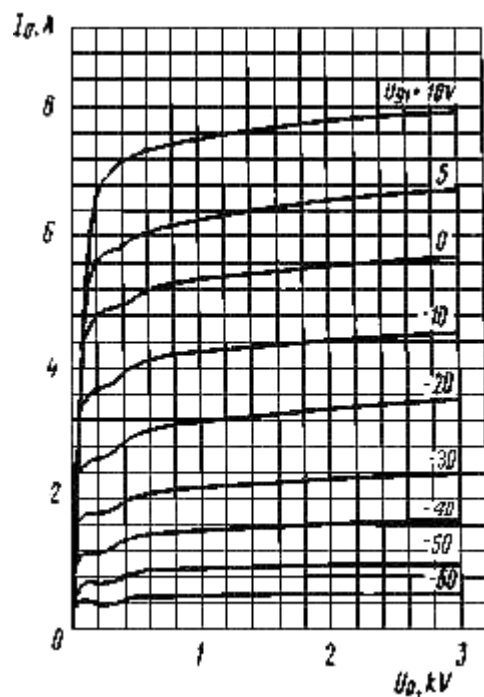
C1 - сетка первая;
A - анод; C2 - сетка
вторая; K - катод;
П - подогреватель;
I - контактные
ферриты

C1 - grid 1; A - anode;
C2 - grid 2; K - cathode;
П - heater; I - contact
ferrites

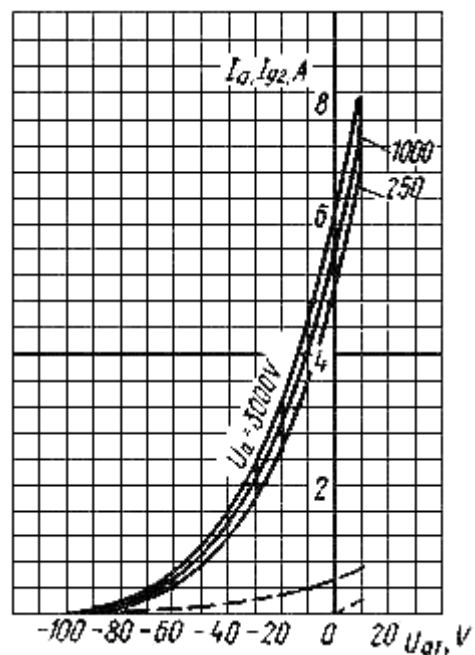
OPERATING ENVIRONMENTAL CONDITIONS	
Vibration loads: frequencies, Hz	1-60
acceleration, m/s ²	20
Multiple impacts with acceleration, m/s ²	150
Ambient temperature, °C	-60 to +70
Relative humidity at up to +25 °C without moisture condensation, %	98

BASIC DATA	
Electrical Parameters	
Heater voltage (AC or DC), V	27
Heater current, A	3.4-4
Anode voltage, kV	1.7
Grid 2 voltage, V	300
Negative grid 1 bias voltage, V	51-25
Negative cutoff voltage (at anode voltage 3 kV, anode current 20 mA), absolute value, V	-150
Anode current, A	1.5
Anode current at zero grid 1 voltage (at anode voltage 250 V), mA, at most	4.2
Grid 2 current at zero grid 1 voltage (at anode voltage 250 V), mA, at most	0.9
Mutual conductance, mA/V	40-80
Output power under amplification of class AB ₁ , kW:	
at heater voltage 27 V, at least	2.5
at heater voltage 25.7 V, at least	2.2
Common-cathode interelectrode capacitance, pF:	
input	100-150
output	15-30
transfer, at most	0.25

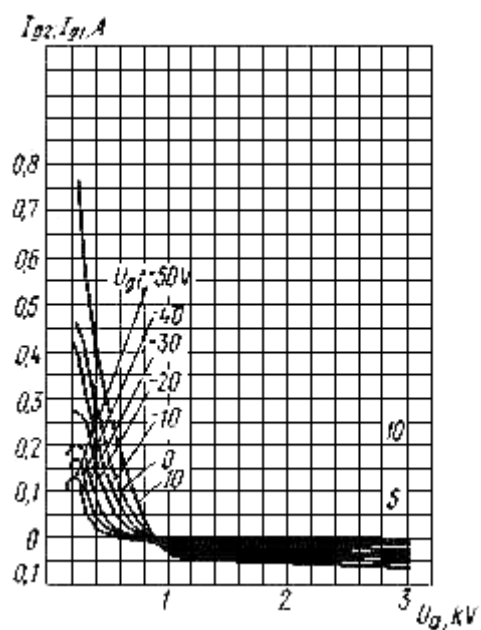
Limit Operating Values	
Heater voltage (AC or DC), V	25.5-28.3
Anode voltage, V:	
DC	3,200
instantaneous value	6,200
Grid 2 voltage (DC), V	350
Negative grid 1 voltage (DC, absolute value), V	150
Cathode-heater voltage (either polarity, absolute value), V	150
Cathode current (DC component), mA	2,200
Grid 1 current (DC component), mA	25
Dissipation, W:	
anode	2,500
grid 2	30
grid 1	1
Operating frequency, MHz	250
Cathode heating time, s	240
Envelope temperature at hottest point, °C	200



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



Averaged Characteristic Curves:
 $U_f = 27V$; $U_{g2} = 300V$;
 — anode grid;
 --- grid 2;
 - . - grid 1



Averaged Grid-Anode Characteristic Curves:
 $U_f = 27V$; $U_{g2} = 300V$;
 ----- I_{g2}
 - - - I_{g1}