GI-39b

Triode

The GI-39B triode generates and amplifies RF oscillations in pulsed operation with anode modulation. Rated to 1200 MHz at 440W plate dissipation. It is a direct replacement for the older (discontinued) GI-14b, and can also be used to replace the GS-1b and GS-31b at slightly reduced power levels for amateur applications.

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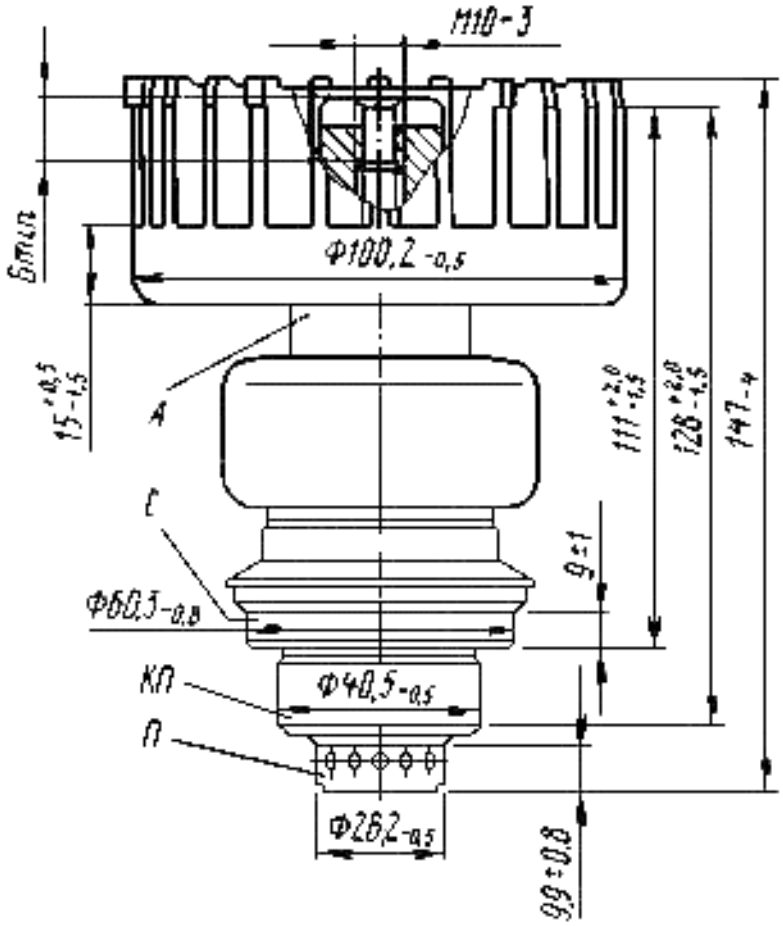
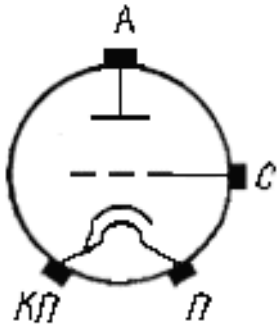
GENERAL	
Cathode: indirectly heated, oxide-coated.	
Envelope: metal-ceramic with ring leads of cathode, heater and grid.	
Cooling: forced air.	
Height, mm, at most:	147
Diameter, mm, at most:	100.2
Mass, kg, at most:	1.2





A - anode; *C* - grid; *KP* - cathode and heater; *P* - heater

ENVIRONMENTAL OPERATING CONDITIONS

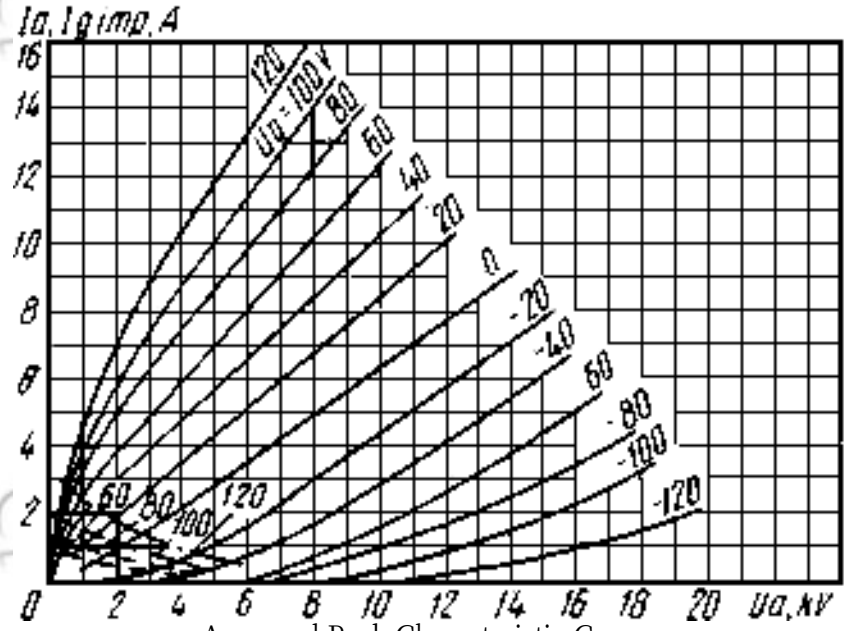
Vibration loads:	
frequency, Hz	2-2,000
acceleration, m/s^2	4.9-98
Multiple impacts with acceleration, m/s^2	343
Linear loads with acceleration, m/s^2	294
Ambient Conditions:	
Temperature, ° C	-60 to+150
Relative humidity at up to +40 ° C, %	95-98

NOMINAL ELECTRICAL PARAMETERS

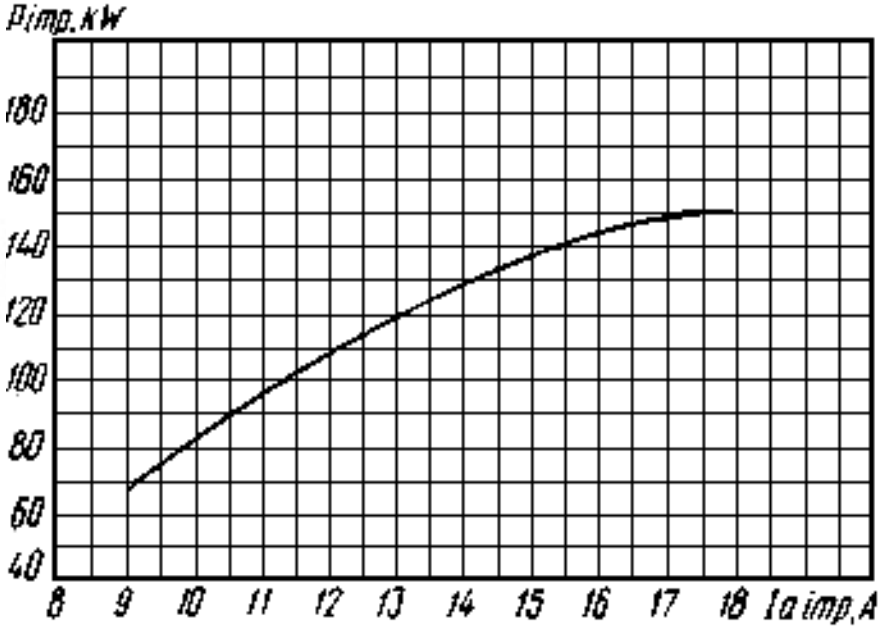
Heater voltage (AC or DC), V	12.6
Heater current, A	3.7
Mutual conductance, mA/V	30
Operating point (negative V_g with V_a = 2KV, I_a = 250mA), V	7
input capacitance, pF	23
transfer capacitance, pF	5.5
Warm up time, s, at most	90
Designed Tube Life (hours)	>500

ELECTRICAL PARAMETER LIMITS

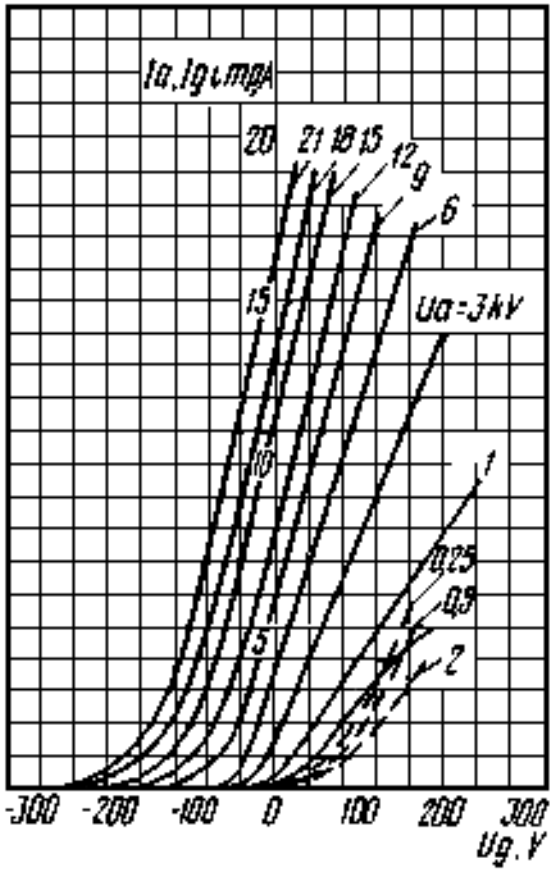
Heater voltage, V	12-13.2
Heater current, A	3.4-3.9
Operating point (negative V_g with V_a = 2KV, I_a = 250mA), V	4.5-10
input capacitance, pF	21-25
transfer capacitance, pF	4.2-6.3
Mutual conductance, mA/V	27-36
Maximum Peak value Anode voltage (V_a), KV:	20
Peak value Anode current (I_a), A	16
Maximum Peak bias (V_g), KV	1
Maximum Peak Grid current (I_g), A	7
Average Anode Dissipation, W:	440
Average Grid Dissipation, W:	5
Temperature at anode terminal, ° C	200
Temperature at cathode terminal, ° C	150
Temperature at grid terminal, ° C	180
Temperature anode insulator, ° C	250
Minimum Wavelength, cm	25



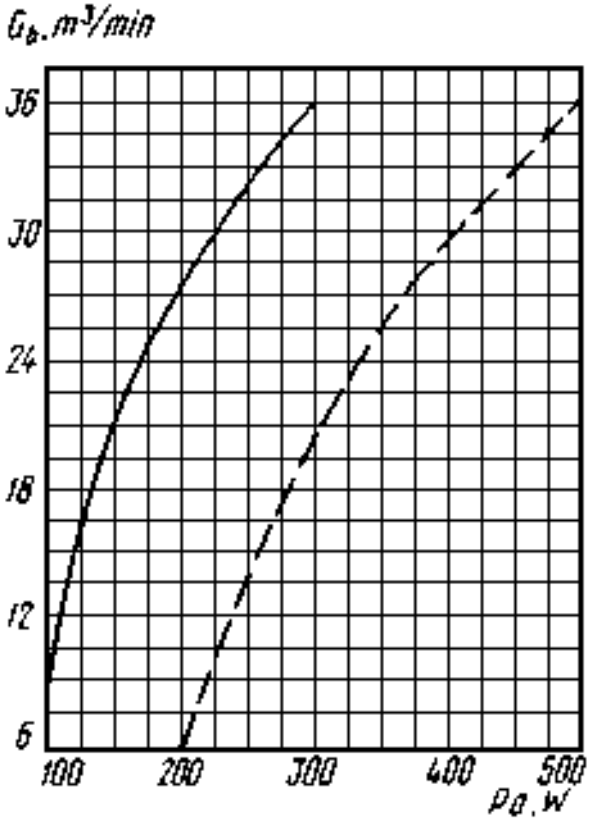
Averaged Peak Characteristic Curves:
U_f = 12.6V; t = 2μs; frequency 1,000 imp/s;
_____ anode;
_ _ _ grid-anode



Averaged Peak Characteristic Curves Showing Oscillator Output Power versus Anode Current:
U_f = 12.6V; $U_{a\ imp}$ = 20kV; t = 2 μs; frequency 1,000 imp/s



Averaged Peak Characteristic Curves:
U_f = 12.6V; t = 2μs; frequency 1,000 imp/s;
_____ anode-grid;
_ _ _ grid



Characteristic Curves Showing Flow Rate of Envelope Cooling Air versus Anode Dissipation:
_____ at 100 ° C;
_ _ _ at 160 ° C