



ELECTRONIC TUBE REFERENCE

GI39B

Power - Triode (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Power transmitting triode intended for RF amplification, oscillation, or modulation. Manufacturer documentation emphasizes professional transmitter or industrial RF service with substantial plate voltage, current, and output capability.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	12.6 V / —	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
MAXIMUM PLATE VOLTAGE	20000 V
MAXIMUM PLATE DISSIPATION	440 W
MAXIMUM GRID DISSIPATION	5 W
MAXIMUM CATHODE CURRENT	16 A
Promoted-field completeness audit performed from English ratings/characteristics.	

The GI-39B metal-ceramic triode generates and amplifies RF oscillations in pulsed operation with anode modulation and is forced-air cooled.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1968 Electronintorg

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1968 ELECTRONINTORG

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
grid	1	1 hi) A - anode; C — grid;
temperature, °C L [1]	294 C	JIMHERHBIE & o o o i e e e 294 Ambient temperature, °C L. —60to +150
temperature, °C L [2]	-60 C	JIMHERHBIE & o o o i e e e 294 Ambient temperature, °C L. —60to +150
temperature, °C L [3]	150 C	JIMHERHBIE & o o o i e e e 294 Ambient temperature, °C L. —60to +150
voltage (ACorDC), V [1]	126 V	Hanpskenue Hakana (~wwm =), B 12,6 Heater voltage (ACorDC), V 12.6
voltage (ACorDC), V [2]	12.6 V	Hanpskenue Hakana (~wwm =), B 12,6 Heater voltage (ACorDC), V 12.6
voltage (DC), kV [1]	2 kV	HanpskeHue aHoga noctosHHoe, kB 2 Anode voltage (DC), kV 2
voltage (DC), kV [2]	2 kV	HanpskeHue aHoga noctosHHoe, kB 2 Anode voltage (DC), kV 2
Mutual conductance, mA/V [1]	27 mA/V	KpyTusHa xapaktepuctuku, MA/B 27-36 Mutual conductance, mA/V 27-36
Mutual conductance, mA/V [2]	-36 mA/V	KpyTusHa xapaktepuctuku, MA/B 27-36 Mutual conductance, mA/V 27-36
Mutual conductance, mA/V [3]	27 mA/V	KpyTusHa xapaktepuctuku, MA/B 27-36 Mutual conductance, mA/V 27-36
Mutual conductance, mA/V [4]	-36 mA/V	KpyTusHa xapaktepuctuku, MA/B 27-36 Mutual conductance, mA/V 27-36

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
current [1]	2 A	Hanpsikenus aHoaa Ha 0,2 kB n Toke change 0.2 kV, anode current 0.25A), % 0.6-1
current [2]	200 mA	Hanpsikenus aHoaa Ha 0,2 kB n Toke change 0.2 kV, anode current 0.25A), % 0.6-1
current [3]	250 mA	Hanpsikenus aHoaa Ha 0,2 kB n Toke change 0.2 kV, anode current 0.25A), % 0.6-1
current [4]	600 mA	Hanpsikenus aHoaa Ha 0,2 kB n Toke change 0.2 kV, anode current 0.25A), % 0.6-1
current [5]	-1 A	Hanpsikenus aHoaa Ha 0,2 kB n Toke change 0.2 kV, anode current 0.25A), % 0.6-1
pulse generation	90 W	Bpewms rotoBHoCTH, C, He Bonee 90 Oscillatory power in pulse generation
voltage	20 kV	Kone6aTerbHas MOLWHOCTb B peXume mode (at peak anode voltage 20 kV,
wavelength	16 cm	MMNYNbCHOMO reHeprpoBaHua (Npu peak anode current 16 A, wavelength
pulse [1]	20	HanpsbKeHuy aHoga B umnynsce 20 kB, about 30 cm, 1/duty factor 500, pulse
pulse [2]	30	HanpsbKeHuy aHoga B umnynsce 20 kB, about 30 cm, 1/duty factor 500, pulse
pulse [3]	1	HanpsbKeHuy aHoga B umnynsce 20 kB, about 30 cm, 1/duty factor 500, pulse
pulse [4]	500	HanpsbKeHuy aHoga B umnynsce 20 kB, about 30 cm, 1/duty factor 500, pulse
Interelectrode capacitance, pF [1]	0 pF	BOMNHbI 0Kos0 30 cM, ckBaxHOCTM 500 Interelectrode capacitance, pF:
Interelectrode capacitance, pF [2]	30 pF	BOMNHbI 0Kos0 30 cM, ckBaxHOCTM 500 Interelectrode capacitance, pF:
Interelectrode capacitance, pF [3]	500 pF	BOMNHbI 0Kos0 30 cM, ckBaxHOCTM 500 Interelectrode capacitance, pF:
input [1]	2	¥ ANUTENBHOCTY UMNysbca 2—5 Mke), KBT, input 21-25
input [2]	-5	¥ ANUTENBHOCTY UMNysbca 2—5 Mke), KBT, input 21-25
input [3]	21	¥ ANUTENBHOCTY UMNysbca 2—5 Mke), KBT, input 21-25
input [4]	-25	¥ ANUTENBHOCTY UMNysbca 2—5 Mke), KBT, input 21-25
voltage (ACorDC),V [1]	13.2 V	Hanpsikenue Hakana (~ vunm =), B: Heater voltage (ACorDC),V 13.2-12

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage (ACorDC),V [2]	-12 V	Hanpsikenue Hakana (~ vunm =), B: Heater voltage (ACorDC),V 13.2-12
voltage, kV [1]	132 kV	HaMbONbLIEE v v v v i e e e e 13,2 Peak anode voltage, kV 20
voltage, kV [2]	20 kV	HaMbONbLIEE v v v v i e e e e 13,2 Peak anode voltage, kV 20
voltage,kV [1]	12 kV	HaumeHbliee L. 12 Negative peak grid 1 voltage,kV 1
voltage,kV [2]	1 kV	HaumeHbliee L. 12 Negative peak grid 1 voltage,kV 1
voltage,kV [3]	1 kV	HaumeHbliee L. 12 Negative peak grid 1 voltage,kV 1
anode (averagevalue) [1]	20	BuMmnynece, kB o oo 20 anode (averagevalue) 440
anode (averagevalue) [2]	440	BuMmnynece, kB o oo 20 anode (averagevalue) 440
grid	5	Hawnbonbliee oTpuuaTensHoOe HanpsKeHue grid 5
current, A L [1]	1 A	CeTKV NepBOM Bumnynbce, KB 1 Peak anode current, A L. 16
current, A L [2]	16 A	CeTKV NepBOM Bumnynbce, KB 1 Peak anode current, A L. 16
wavelength,em [1]	3 cm	aHOAOM (CpefHee 3HA4YeHne) 440 Minimum wavelength,em 25
wavelength,em [2]	440 cm	aHOAOM (CpefHee 3HA4YeHne) 440 Minimum wavelength,em 25
wavelength,em [3]	25 cm	aHOAOM (CpefHee 3HA4YeHne) 440 Minimum wavelength,em 25
Temperature, °C	25 C	HaumeHbluas gnvHa BOMHLL, CM 25 Temperature, °C:
voltage, kV [1]	20 kV	HanpsxeHue aHoga B umnynece, kB 20 Peak anode voltage, kV 20
voltage, kV [2]	20 kV	HanpsxeHue aHoga B umnynece, kB 20 Peak anode voltage, kV 20
current, A L e [1]	16 A	TokaHogaBwumnynsce, A 16 Peak anode current, A L. e 16
current, A L e [2]	16 A	TokaHogaBwumnynsce, A 16 Peak anode current, A L. e 16
Wavelength,em L [1]	30 cm	AnvHaBORHBLCM 30 Wavelength,em L. 30

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Wavelength, em L [2]	30 cm	AnvHaBORHBLCM 30 Wavelength, em L. 30
power, kW [1]	128 kW	Kone6arenbHan MOWHOCTbL B uMnynece, KBT 128 Peak oscillatory power, kW 128
power, kW [2]	128 kW	Kone6arenbHan MOWHOCTbL B uMnynece, KBT 128 Peak oscillatory power, kW 128
Current [1]	12.6 Hz	U; = 12.6 V; 7 = 2 ys frequency 1,000 imp/s: versus Anode Current:
Current [2]	7 Hz	U; = 12.6 V; 7 = 2 ys frequency 1,000 imp/s: versus Anode Current:
Current [3]	2 Hz	U; = 12.6 V; 7 = 2 ys frequency 1,000 imp/s: versus Anode Current:
Current [4]	1000 Hz	U; = 12.6 V; 7 = 2 ys frequency 1,000 imp/s: versus Anode Current:
frequency [1]	126 Hz	anode; Uy = 12,6 V; Uyimp = 20 kV; T = 2 us; frequency 1,000 imp/s
frequency [2]	20 Hz	anode; Uy = 12,6 V; Uyimp = 20 kV; T = 2 us; frequency 1,000 imp/s
frequency [3]	2 Hz	anode; Uy = 12,6 V; Uyimp = 20 kV; T = 2 us; frequency 1,000 imp/s
frequency [4]	1000 Hz	anode; Uy = 12,6 V; Uyimp = 20 kV; T = 2 us; frequency 1,000 imp/s