

ELECTRONIC TUBE REFERENCE

GMI32B

Specialized - Switching Tube electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TETRODE

Russian high-power tetrode designed for pulse-modulator or pulse-power switching service in RF equipment, controlling high-voltage, high-current pulses rather than continuous linear amplification.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	26 V / 5 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1	Tetrode
<p>No fixed ratings recorded.</p> <p>Promoted-field audit performed from English ratings/characteristics; detailed electrical values retained in parameter table.</p>	

The GMI-32B tetrode is used as a pulse power switch in RF equipment 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 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
power	32 W	The 'MU-32bB tetrode is used as a pulse power
cathode and [1]	1	1 -grid 2; 2 - cathode and
cathode and [2]	2	1 -grid 2; 2 - cathode and
cathode and [3]	2	1 -grid 2; 2 - cathode and
grid [1]	4	Mass: at most 4 kg. [heater; 3 - heater; 4 — grid
grid [2]	3	Mass: at most 4 kg. [heater; 3 - heater; 4 — grid
grid [3]	4	Mass: at most 4 kg. [heater; 3 - heater; 4 — grid
anode	1	1; A-anode
temperature, °C [1]	-60 C	€ YCKOpEHMeM, m/c Ambient temperature, °C —60to +85
temperature, °C [2]	85 C	€ YCKOpEHMeM, m/c Ambient temperature, °C —60to +85
grid [1]	4 uA	Tok aHoAa B UMMYNbee (Npy HaNPshXXeHUAX aHoga Peak anode current (at anode voltage 4 kV, grid 2
grid [2]	2 uA	Tok aHoAa B UMMYNbee (Npy HaNPshXXeHUAX aHoga Peak anode current (at anode voltage 4 kV, grid 2
voltage [1]	4 kV	4 kB, ceTku BTOpO# 1,75 KB, cMeLeHus voltage 1,75 kV, bias voltage —700 V,
voltage [2]	175 kV	4 kB, ceTku BTOpO# 1,75 KB, cMeLeHus voltage 1,75 kV, bias voltage —700 V,
voltage [3]	175 kV	4 kB, ceTku BTOpO# 1,75 KB, cMeLeHus voltage 1,75 kV, bias voltage —700 V,

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage [4]	-700 kV	4 kB, ceTku BTOpO# 1,75 KB, cMeLeHus voltage 1,75 kV, bias voltage —700 V,
voltage [1]	700 pF	MuHyc 700 B, ceTku nepBo# B Mnynbce peak grid 1 voltage 150 V, reservoir capacitor
voltage [2]	1 pF	MuHyc 700 B, ceTku nepBo# B Mnynbce peak grid 1 voltage 150 V, reservoir capacitor
voltage [3]	150 pF	MuHyc 700 B, ceTku nepBo# B Mnynbce peak grid 1 voltage 150 V, reservoir capacitor
anode circuit [1]	150	150 B, HakonuTenbHON eMKOCTH B Lienu in anode circuit 5 uF), A, atleast 50
anode circuit [2]	5	150 B, HakonuTenbHON eMKOCTH B Lienu in anode circuit 5 uF), A, atleast 50
anode circuit [3]	50	150 B, HakonuTenbHON eMKOCTH B Lienu in anode circuit 5 uF), A, atleast 50
voltage [1]	5 A	aHopa 5 Mx@d), A, He meHee Peak grid 1.current (at anode voltage 4 kV,
voltage [2]	1 A	aHopa 5 Mx@d), A, He meHee Peak grid 1.current (at anode voltage 4 kV,
voltage [3]	4 A	aHopa 5 Mx@d), A, He meHee Peak grid 1.current (at anode voltage 4 kV,
voltage [1]	2 kV	TOK CETKU NEPBOU B UMNyIbCe (MPW HaNPs>XXEHUAX grid 2 voltage 1.75 kV, bias voltage —700V,
voltage [2]	1.75 kV	TOK CETKU NEPBOU B UMNyIbCe (MPW HaNPs>XXEHUAX grid 2 voltage 1.75 kV, bias voltage —700V,
voltage [3]	-700 kV	TOK CETKU NEPBOU B UMNyIbCe (MPW HaNPs>XXEHUAX grid 2 voltage 1.75 kV, bias voltage —700V,
voltage [1]	4 pF	aHoga 4 kB, ceTku BTOpow 1,75 kB, cmeweHna peak grid 1 voltage 150 V, reservoir capacitor
voltage [2]	175 pF	aHoga 4 kB, ceTku BTOpow 1,75 kB, cmeweHna peak grid 1 voltage 150 V, reservoir capacitor
voltage [3]	1 pF	aHoga 4 kB, ceTku BTOpow 1,75 kB, cmeweHna peak grid 1 voltage 150 V, reservoir capacitor
voltage [4]	150 pF	aHoga 4 kB, ceTku BTOpow 1,75 kB, cmeweHna peak grid 1 voltage 150 V, reservoir capacitor
anode circuit), A,atmost [1]	700	MuHyc 700 KB, ceTku nepsoi B 5 uF in anode circuit), A,atmost 8
anode circuit), A,atmost [2]	5	MuHyc 700 KB, ceTku nepsoi B 5 uF in anode circuit), A,atmost 8

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
anode circuit), A,atmost [3]	8	MuHyc 700 KB, ceTku nepsoi B 5 uF in anode circuit), A,atmost 8
grid [1]	150 A	umnynesce 150 B, HakonuTensHOM eMKoCcTH Peak grid 2 current (at anode voltage 4 kV, grid 2
grid [2]	2 A	umnynesce 150 B, HakonuTensHOM eMKoCcTH Peak grid 2 current (at anode voltage 4 kV, grid 2
grid [3]	4 A	umnynesce 150 B, HakonuTensHOM eMKoCcTH Peak grid 2 current (at anode voltage 4 kV, grid 2
grid [4]	2 A	umnynesce 150 B, HakonuTensHOM eMKoCcTH Peak grid 2 current (at anode voltage 4 kV, grid 2
grid [1]	8 kV	8 uernu aHoaa 5 mx®), A, He 6onee voltage 1.75 kV, bias voltage —700 V, peak grid 1
grid [2]	5 kV	8 uernu aHoaa 5 mx®), A, He 6onee voltage 1.75 kV, bias voltage —700 V, peak grid 1
grid [3]	6 kV	8 uernu aHoaa 5 mx®), A, He 6onee voltage 1.75 kV, bias voltage —700 V, peak grid 1
grid [4]	1.75 kV	8 uernu aHoaa 5 mx®), A, He 6onee voltage 1.75 kV, bias voltage —700 V, peak grid 1
grid [5]	-700 kV	8 uernu aHoaa 5 mx®), A, He 6onee voltage 1.75 kV, bias voltage —700 V, peak grid 1
grid [6]	1 kV	8 uernu aHoaa 5 mx®), A, He 6onee voltage 1.75 kV, bias voltage —700 V, peak grid 1
anode [1]	150 pF	ToK CeTKv BTOpPOWA B UMMNYNbCE (NP HANPsHXKeHUAX voltage 150 V, reservoir capacitor 5 uF in anode
anode [2]	5 pF	ToK CeTKv BTOpPOWA B UMMNYNbCE (NP HANPsHXKeHUAX voltage 150 V, reservoir capacitor 5 uF in anode
voltage [1]	700 V	MuHyc 700 B, ceTku nepeoit B umnynbce 150 B, Negative cutoff voltage (at anode voltage
voltage [2]	150 V	MuHyc 700 B, ceTku nepeoit B umnynbce 150 B, Negative cutoff voltage (at anode voltage
voltage [1]	5 kV	HaKOTMUTENbHON eMKOCTY B Lienn aHofga 5 mk®P), 44 kV, grid voltage 1.75 kV, reservoir
voltage [2]	44 kV	HaKOTMUTENbHON eMKOCTY B Lienn aHofga 5 mk®P), 44 kV, grid voltage 1.75 kV, reservoir

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage [3]	1.75 kV	HaKOTMUTENbHON eMKOCTY B Lienn aHofga 5 mk®P), 44 kV, grid voltage 1.75 kV, reservoir
anode circuit), V, atmost [1]	6 pF	A, He 6onee capacitor 0.25 uF in anode circuit), V, atmost 600
anode circuit), V, atmost [2]	0.25 pF	A, He 6onee capacitor 0.25 uF in anode circuit), V, atmost 600
anode circuit), V, atmost [3]	600 pF	A, He 6onee capacitor 0.25 uF in anode circuit), V, atmost 600
heating time, s, at most [1]	3 us	HanpspkeHuve 3annpaHusa oTpularenshoe Cathode heating time, s, at most 180
heating time, s, at most [2]	180 us	HanpspkeHuve 3annpaHusa oTpularenshoe Cathode heating time, s, at most 180
Interelectrode capacitance, pF	44 pF	(npw HanpsPkeHuAxX aHoaa 44 kB, ceTkn BTOnon Interelectrode capacitance, pF:
input [1]	175	1,75 kB, HaKonNUTENbHON eMKOCTK B Lienu aHoAa input 140—180
input [2]	140	1,75 kB, HaKonNUTENbHON eMKOCTK B Lienu aHoAa input 140—180
input [3]	-180	1,75 kB, HaKonNUTENbHON eMKOCTK B Lienu aHoAa input 140—180
output [1]	25	0,25 mk®), B, He 6onee 600 output 20-33
output [2]	6	0,25 mk®), B, He 6onee 600 output 20-33
output [3]	600	0,25 mk®), B, He 6onee 600 output 20-33
output [4]	20	0,25 mk®), B, He 6onee 600 output 20-33
output [5]	-33	0,25 mk®), B, He 6onee 600 output 20-33
voltage (ACorDC), V [1]	243 V	Hanpsbkenue Hakana (~uwmm =),B 24,3-29,7 Heater voltage (ACorDC), V
voltage (ACorDC), V [2]	-297 V	Hanpsbkenue Hakana (~uwmm =),B 24,3-29,7 Heater voltage (ACorDC), V
voltage, absolute value, V	-800 V	Hawbonbiiee HanpshkeHue cmeweHuns Maximum bias voltage, absolute value, V. —800
voltage, V [1]	-800 V	(no a6bcontoTHoM BenudmHe), B L -800 Maximum grid 1 excess voltage, V 175
voltage, V [2]	1 V	(no a6bcontoTHoM BenudmHe), B L -800 Maximum grid 1 excess voltage, V 175

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage, V [3]	175 V	(no a6bcontOTHoM BenudmHe), B L -800 Maximum grid 1 excess voltage, V 175
grid [1]	2	et e e 2:10° grid 1 . 7
grid [2]	10	et e e 2:10° grid 1 . 7
grid [3]	1	et e e 2:10° grid 1 . 7
grid [4]	7	et e e 2:10° grid 1 . 7
current, A,max [1]	35 mA	nnn 35 Heater starting current, A,max. 20
current, A,max [2]	20 mA	nnn 35 Heater starting current, A,max. 20
current at [1]	7 A	CETKOM MEPBOM . ..o vi it ieinnanan 7 Peak cathode current at 1/duty factor 200, A 59
current at [2]	1 A	CETKOM MEPBOM . ..o vi it ieinnanan 7 Peak cathode current at 1/duty factor 200, A 59
current at [3]	200 A	CETKOM MEPBOM . ..o vi it ieinnanan 7 Peak cathode current at 1/duty factor 200, A 59
current at [4]	59 A	CETKOM MEPBOM . ..o vi it ieinnanan 7 Peak cathode current at 1/duty factor 200, A 59
current [1]	180 A	HaumeHbluee BpeMs roTOBHOCY, € + . . . oo v e v vt 180 Minimum 1/duty factor at peak anode current 50 A . . 200
current [2]	1 A	HaumeHbluee BpeMs roTOBHOCY, € + . . . oo v e v vt 180 Minimum 1/duty factor at peak anode current 50 A . . 200
current [3]	50 A	HaumeHbluee BpeMs roTOBHOCY, € + . . . oo v e v vt 180 Minimum 1/duty factor at peak anode current 50 A . . 200
current [4]	200 A	HaumeHbluee BpeMs roTOBHOCY, € + . . . oo v e v vt 180 Minimum 1/duty factor at peak anode current 50 A . . 200
anode, bulb and stem,°C	150 C	Haubonbwasn AnvTensHOCTb MMYbCa NPU TOKe Temperature at anode, bulb and stem,°C 150
Voltage M Jflg	1 V	Averaged Characteristic Curves Showing Grid 1 Cutoff Voltage M Jflg
anode	2	- _ _ _ grid 2-anode
anode	1250	— _ _ _ anode; 1250
grid [1]	300	a0 — 300 _ _ _ _ anode-grid 2 !

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
grid [2]	2	a0 — 300 _ _ _ _ anode-grid 2 !