

ELECTRONIC TUBE REFERENCE

GMI2B

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	25 V / 4 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

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

The GMI-2B tetrode is used in modulator service 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
grid [1]	1245	Working position: upright. 1,2,4,5-heater; 3-grid 1;
grid [2]	3	Working position: upright. 1,2,4,5-heater; 3-grid 1;
grid [3]	1	Working position: upright. 1,2,4,5-heater; 3-grid 1;
cathode and [1]	6	6 — grid 2; 7 — cathode and
cathode and [2]	2	6 — grid 2; 7 — cathode and
cathode and [3]	7	6 — grid 2; 7 — cathode and
anode	300	Height: at most 300 mm. heater; A - anode
temperature, °C [1]	-55 C	.. —55-+70 Ambient temperature, °C —55t0 +70
temperature, °C [2]	70 C	.. —55-+70 Ambient temperature, °C —55t0 +70
temperature, °C [3]	-55 C	.. —55-+70 Ambient temperature, °C —55t0 +70
temperature, °C [4]	70 C	.. —55-+70 Ambient temperature, °C —55t0 +70
voltage (ACorDC), V [1]	25 V	 25 Heater voltage (ACorDC), V 25
voltage (ACorDC), V [2]	25 V	 25 Heater voltage (ACorDC), V 25
current, A [1]	158 A	TokHaKana, A 15,8-19,2 Heater current, A 15.8-19.2
current, A [2]	-192 A	TokHaKana, A 15,8-19,2 Heater current, A 15.8-19.2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
current, A [3]	15.8 A	TokHaKana, A 15,8-19,2 Heater current, A 15.8-19.2
current, A [4]	-19.2 A	TokHaKana, A 15,8-19,2 Heater current, A 15.8-19.2
voltage (DC), kV	32 kV	HanpsbxHwue, kB: Anode voltage (DC), kV 32
voltage (DC), kV [1]	32 kV	AHOAAMOCTOAHHOE t 32 Grid 2 voltage (DC), kV 2
voltage (DC), kV [2]	2 kV	AHOAAMOCTOAHHOE t 32 Grid 2 voltage (DC), kV 2
voltage (DC), kV [3]	2 kV	AHOAAMOCTOAHHOE t 32 Grid 2 voltage (DC), kV 2
voltage (DC), kV [1]	2 kV	CEeTKU BTOPON NOCTOAHHOE 2 Grid 1 voltage (DC), kV 600-107°
voltage (DC), kV [2]	1 kV	CEeTKU BTOPON NOCTOAHHOE 2 Grid 1 voltage (DC), kV 600-107°
voltage (DC), kV [3]	600 kV	CEeTKU BTOPON NOCTOAHHOE 2 Grid 1 voltage (DC), kV 600-107°
voltage (DC), kV [4]	-107 kV	CEeTKU BTOPON NOCTOAHHOE 2 Grid 1 voltage (DC), kV 600-107°
voltage, kV [1]	600 kV	CETKN NEPBOA NOCTORHHOE oo 600-107% Peak grid 1 excess voltage, kV 200-107°
voltage, kV [2]	-107 kV	CETKN NEPBOA NOCTORHHOE oo 600-107% Peak grid 1 excess voltage, kV 200-107°
voltage, kV [3]	1 kV	CETKN NEPBOA NOCTORHHOE oo 600-107% Peak grid 1 excess voltage, kV 200-107°
voltage, kV [4]	200 kV	CETKN NEPBOA NOCTORHHOE oo 600-107% Peak grid 1 excess voltage, kV 200-107°
voltage, kV [5]	-107 kV	CETKN NEPBOA NOCTORHHOE oo 600-107% Peak grid 1 excess voltage, kV 200-107°
current, A, at least [1]	6 A	CETKW NEPBOY B UMNbNCE (M36LITOYHOE) 200-1072 Peak anode current, A, at least 90

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
current, A, at least [2]	200 A	CETKW NEPBOY B UMNbNbCE (M36LITOYHOE) 200-1072 Peak anode current, A, at least 90
current, A, at least [3]	-1072 A	CETKW NEPBOY B UMNbNbCE (M36LITOYHOE) 200-1072 Peak anode current, A, at least 90
current, A, at least [4]	90 A	CETKW NEPBOY B UMNbNbCE (M36LITOYHOE) 200-1072 Peak anode current, A, at least 90
current (average value), mA, at least	140 mA	Tok aHopga, A, He meHee: Anode current (average value), mA, at least 140
current (average value), mA, atleast [1]	90 mA	BUMMYNBCE ottt 90 Grid 1 current (average value), mA, atleast 1
current (average value), mA, atleast [2]	1 mA	BUMMYNBCE ottt 90 Grid 1 current (average value), mA, atleast 1
current (average value), mA, atleast [3]	1 mA	BUMMYNBCE ottt 90 Grid 1 current (average value), mA, atleast 1
current (average value), mA, atleast [1]	3 mA	aHoa (CpeaHee 3HAYGHNE) 14,0102 Grid 2 current (average value), mA, atleast 30
current (average value), mA, atleast [2]	140102 mA	aHoa (CpeaHee 3HAYGHNE) 14,0102 Grid 2 current (average value), mA, atleast 30
current (average value), mA, atleast [3]	2 mA	aHoa (CpeaHee 3HAYGHNE) 14,0102 Grid 2 current (average value), mA, atleast 30
current (average value), mA, atleast [4]	30 mA	aHoa (CpeaHee 3HAYGHNE) 14,0102 Grid 2 current (average value), mA, atleast 30
current	1 mA	Tok ceTku, MA, He MeHee: Negative cutoff voltage (at anode current 1 mA),
resistance, Q [1]	3 ohm	CETKW BTOPO (CpefHee 3Ha4YeHne) 30 Anode load resistance, Q 300
resistance, Q [2]	30 ohm	CETKW BTOPO (CpefHee 3Ha4YeHne) 30 Anode load resistance, Q 300
resistance, Q [3]	300 ohm	CETKW BTOPO (CpefHee 3Ha4YeHne) 30 Anode load resistance, Q 300
anode circuit, uF [1]	3 pF	HanpsixeHue 3anvpaHus (0TpuyaTensHoe) Reservoir capacitor in anode circuit, uF
anode circuit, uF [2]	0 pF	HanpsixeHue 3anvpaHus (0TpuyaTensHoe) Reservoir capacitor in anode circuit, uF

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pulse duration, us [1]	1 us	npv Toke aHopa 1 MA), B,He 6onee 570 Pulse duration, us 0.65-1.1
Pulse duration, us [2]	6 us	npv Toke aHopa 1 MA), B,He 6onee 570 Pulse duration, us 0.65-1.1
Pulse duration, us [3]	570 us	npv Toke aHopa 1 MA), B,He 6onee 570 Pulse duration, us 0.65-1.1
Pulse duration, us [4]	0.65 us	npv Toke aHopa 1 MA), B,He 6onee 570 Pulse duration, us 0.65-1.1
Pulse duration, us [5]	-1.1 us	npv Toke aHopa 1 MA), B,He 6onee 570 Pulse duration, us 0.65-1.1
Pulse [1]	300	ConpoTUBnNeHue aHogHOM Harpysku, Om 300 Pulse 1/dutyfactor 570-615
Pulse [2]	1	ConpoTUBnNeHue aHogHOM Harpysku, Om 300 Pulse 1/dutyfactor 570-615
Pulse [3]	570	ConpoTUBnNeHue aHogHOM Harpysku, Om 300 Pulse 1/dutyfactor 570-615
Pulse [4]	-615	ConpoTUBnNeHue aHogHOM Harpysku, Om 300 Pulse 1/dutyfactor 570-615
Interelectrode capacitance, pF	5 pF	HakonuTenoHas eMKoCTb B Uenu aHoaa, mk® 0,05 Interelectrode capacitance, pF:
input,atmost [1]	65	DnnuTenbHOCTL UMNYNBCA, MKC oot 0,65-1,1 input,atmost 350
input,atmost [2]	-11	DnnuTenbHOCTL UMNYNBCA, MKC oot 0,65-1,1 input,atmost 350
input,atmost [3]	350	DnnuTenbHOCTL UMNYNBCA, MKC oot 0,65-1,1 input,atmost 350
output,atmost [1]	570	CRBAMKHOCTD .+ v o v vveee e i e e e e e a e 570-615 output,atmost 125
output,atmost [2]	-615	CRBAMKHOCTD .+ v o v vveee e i e e e e e a e 570-615 output,atmost 125
output,atmost [3]	125	CRBAMKHOCTD .+ v o v vveee e i e e e e e a e 570-615 output,atmost 125
voltage (ACorDC),V [1]	237 V	... 23,7-26,3 Heater voltage (ACorDC),V 23.7-26.3
voltage (ACorDC),V [2]	-263 V	... 23,7-26,3 Heater voltage (ACorDC),V 23.7-26.3

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage (ACorDC),V [3]	23.7 V	... 23,7-26,3 Heater voltage (ACorDC),V 23.7-26.3
voltage (ACorDC),V [4]	-26.3 V	... 23,7-26,3 Heater voltage (ACorDC),V 23.7-26.3
voltage (DC), V [1]	-600 V	HaumeHbiuee HanpskeHwne ceTku nepsor (=), B . . . —600 Minimum grid 1 voltage (DC), V -600
voltage (DC), V [2]	1 V	HaumeHbiuee HanpskeHwne ceTku nepsor (=), B . . . —600 Minimum grid 1 voltage (DC), V -600
voltage (DC), V [3]	-600 V	HaumeHbiuee HanpskeHwne ceTku nepsor (=), B . . . —600 Minimum grid 1 voltage (DC), V -600
anode [1]	900	GHOAOM . . .ottt 900 anode . . . 900
anode [2]	900	GHOAOM . . .ottt 900 anode . . . 900
grid? [1]	12	CETKOMMEPBOM ottt 12 grid? ... 12
grid? [2]	12	CETKOMMEPBOM ottt 12 grid? ... 12
current, A L [1]	110 A	Haubonblunit TOK aHoga B umnynbee, A 110 Peak anode current, A L 110
current, A L [2]	110 A	Haubonblunit TOK aHoga B umnynbee, A 110 Peak anode current, A L 110
Pulse duration, us [1]	3 us	OnUTenbHOCTb UMNYNBCA, MKC o 0,3-2 Pulse duration, us
Pulse duration, us [2]	-2 us	OnUTenbHOCTb UMNYNBCA, MKC o 0,3-2 Pulse duration, us
anode face, °C	120 C	Hawbonbiuas TemnepaTypa AOHBILIKA Temperature of anode face, °C 120
grid [1]	1	Averaged Characteristic Curves (at peak grid 1 excess Averaged Characteristic Curves (at peak grid 1 excess Averaged Characteristic Curves (at peak grid 1 excess
grid [2]	1	Averaged Characteristic Curves (at peak grid 1 excess Averaged Characteristic Curves (at peak grid 1 excess Averaged Characteristic Curves (at peak grid 1 excess
grid [3]	1	Averaged Characteristic Curves (at peak grid 1 excess Averaged Characteristic Curves (at peak grid 1 excess Averaged Characteristic Curves (at peak grid 1 excess
voltage Uy jmp = [1]	100 V	voltage Uy, imp = 100 V): voltage Ugyimp = 125 V): voltage Uy jmp = 150 V):

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage Uy jmp = [2]	125 V	voltage Uy, imp = 100 V): voltage Ugyimp = 125 V): voltage Uy jmp = 150 V):
voltage Uy jmp = [3]	150 V	voltage Uy, imp = 100 V): voltage Ugyimp = 125 V): voltage Uy jmp = 150 V):
anode [1]	1	_ - grid 1-anode _ _ _ _ grid 1-anode _ _ _ _ grid 1-anode
anode [2]	1	_ - grid 1-anode _ _ _ _ grid 1-anode _ _ _ _ grid 1-anode
anode [3]	1	_ - grid 1-anode _ _ _ _ grid 1-anode _ _ _ _ grid 1-anode
Anode Characteristic Curves (at peak [1])	2	Averaged Grid 2-Anode Characteristic Curves (at peak Averaged Grid 2-Anode Characteristic Curves (at peak Averaged Grid 2-Anode Characteristic Curves (at peak
Anode Characteristic Curves (at peak [2])	2	Averaged Grid 2-Anode Characteristic Curves (at peak Averaged Grid 2-Anode Characteristic Curves (at peak Averaged Grid 2-Anode Characteristic Curves (at peak
Anode Characteristic Curves (at peak [3])	2	Averaged Grid 2-Anode Characteristic Curves (at peak Averaged Grid 2-Anode Characteristic Curves (at peak Averaged Grid 2-Anode Characteristic Curves (at peak
voltage Ug; imp = [1]	1 V	grid 1 excess voltage Ug;imp = 100 V) grid 1 excess voltage Ugyimp = 125 V) grid 1 excess voltage Ug; imp = 150 V)
voltage Ug; imp = [2]	100 V	grid 1 excess voltage Ug;imp = 100 V) grid 1 excess voltage Ugyimp = 125 V) grid 1 excess voltage Ug; imp = 150 V)
voltage Ug; imp = [3]	1 V	grid 1 excess voltage Ug;imp = 100 V) grid 1 excess voltage Ugyimp = 125 V) grid 1 excess voltage Ug; imp = 150 V)
voltage Ug; imp = [4]	125 V	grid 1 excess voltage Ug;imp = 100 V) grid 1 excess voltage Ugyimp = 125 V) grid 1 excess voltage Ug; imp = 150 V)
voltage Ug; imp = [5]	1 V	grid 1 excess voltage Ug;imp = 100 V) grid 1 excess voltage Ugyimp = 125 V) grid 1 excess voltage Ug; imp = 150 V)
voltage Ug; imp = [6]	150 V	grid 1 excess voltage Ug;imp = 100 V) grid 1 excess voltage Ugyimp = 125 V) grid 1 excess voltage Ug; imp = 150 V)