

ELECTRONIC TUBE REFERENCE

GMI19B

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	9.5 V / 90 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Tetrode	
MAXIMUM CATHODE CURRENT	120 A
Promoted-field audit performed from English ratings/characteristics; detailed electrical values retained in parameter table.	

The GMI-19B tetrode is used as a pulse power switch in pulse modulators in RF equipment. It has a directly heated carbonized thoriated-tungsten cathode and forced-air cooling.

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 CONNECTION	196 W	The MU-196 tetrode is used as a pulse power CONNECTION
grid [1]	0	P30-05 @105 1, 2~ cathode; 3 - grid 1;
grid [2]	-5	P30-05 @105 1, 2~ cathode; 3 - grid 1;
grid [3]	105	P30-05 @105 1, 2~ cathode; 3 - grid 1;
grid [4]	1	P30-05 @105 1, 2~ cathode; 3 - grid 1;
grid [5]	2	P30-05 @105 1, 2~ cathode; 3 - grid 1;
grid [6]	3	P30-05 @105 1, 2~ cathode; 3 - grid 1;
grid [7]	1	P30-05 @105 1, 2~ cathode; 3 - grid 1;
anode [1]	4	4 - grid 2; A- anode
anode [2]	2	4 - grid 2; A- anode
temperature, °C [1]	118 C	YCKOPEHMEM, M/C? it 118 Ambient temperature, °C , —60to +100
temperature, °C [2]	-60 C	YCKOPEHMEM, M/C? it 118 Ambient temperature, °C , —60to +100
temperature, °C [3]	100 C	YCKOPEHMEM, M/C? it 118 Ambient temperature, °C , —60to +100
voltage (ACorDC), V [1]	95 V	... 9,5 Filament voltage (ACorDC), V 9.5
voltage (ACorDC), V [2]	9.5 V	... 9,5 Filament voltage (ACorDC), V 9.5
voltage (DC), kV	4 kV	Hanpsikenne aHoga, nocTosiHHOe, KB 4 Anode voltage (DC), kV
voltage (DC), kV oL [1]	25 kV	... 2,5 Grid 2 voltage (DC), kV oL 2.5

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage (DC), kV ... oL [2]	2 kV	... 2,5 Grid 2 voltage (DC), kV ... oL 2.5
voltage (DC), kV ... oL [3]	2.5 kV	... 2,5 Grid 2 voltage (DC), kV ... oL 2.5
voltage (DC), kV [1]	-1 kV	HanpsixeHue ceTku nepBoi, NOCTOAHHOe, KB ... -1 Grid 1 voltage (DC), kV -1
voltage (DC), kV [2]	1 kV	HanpsixeHue ceTku nepBoi, NOCTOAHHOe, KB ... -1 Grid 1 voltage (DC), kV -1
voltage (DC), kV [3]	-1 kV	HanpsixeHue ceTku nepBoi, NOCTOAHHOe, KB ... -1 Grid 1 voltage (DC), kV -1
current, A, atleast [1]	120 A	Tok aHoAa B UMNynNbCe, A, HE MEHEE 120 Peak anode current, A, atleast ... 120
current, A, atleast [2]	120 A	Tok aHoAa B UMNynNbCe, A, HE MEHEE 120 Peak anode current, A, atleast ... 120
current, A,atmost [1]	2 A	TOK CEeTKM BTOPOM B uMnynbce, A, Peak grid 2 current, A,atmost 25
current, A,atmost [2]	25 A	TOK CEeTKM BTOPOM B uMnynbce, A, Peak grid 2 current, A,atmost 25
current, A,atmost [1]	25 A	HEBOME. ... i 25 Peak grid 1 current, A,atmost 12
current, A,atmost [2]	1 A	HEBOME. ... i 25 Peak grid 1 current, A,atmost 12
current, A,atmost [3]	12 A	HEBOME. ... i 25 Peak grid 1 current, A,atmost 12
voltage	1 V	Tok ceTKu nepeou B UMNynbce, A, Negative grid 1 cutoff voltage (at anode voltage
Interelectrode capacitance, pF [1]	36 pF	aHopa 36 kB), B,Hebornee 900 Interelectrode capacitance, pF:
Interelectrode capacitance, pF [2]	900 pF	aHopa 36 kB), B,Hebornee 900 Interelectrode capacitance, pF:
output [1]	25	ANUTenbHOCTL UMNYNBCa, MKC ... oo 25 output .. 22-34
output [2]	22	ANUTenbHOCTL UMNYNBCa, MKC ... oo 25 output .. 22-34
output [3]	-34	ANUTenbHOCTL UMNYNBCa, MKC ... oo 25 output .. 22-34

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage (ACorDC),V [1]	9 V	Hanpspkenve Hakana (~unm =), B 9-10 Fitament voltage (ACorDC),V 9-10
voltage (ACorDC),V [2]	-10 V	Hanpspkenve Hakana (~unm =), B 9-10 Fitament voltage (ACorDC),V 9-10
voltage (ACorDC),V [3]	9 V	Hanpspkenve Hakana (~unm =), B 9-10 Fitament voltage (ACorDC),V 9-10
voltage (ACorDC),V [4]	-10 V	Hanpspkenve Hakana (~unm =), B 9-10 Fitament voltage (ACorDC),V 9-10
current, A	285 A	Haunbonblumit NyCKOBOW TOK Hakana, A 285 Filament startingcurrent, A
voltage (DC), kV - [1]	25 kV	CEeTKM BTOPO# (MOCTORHHOB) 2,5 Grid 1 voltage (DC), kV —1.2
voltage (DC), kV - [2]	1 kV	CEeTKM BTOPO# (MOCTORHHOB) 2,5 Grid 1 voltage (DC), kV —1.2
voltage (DC), kV - [3]	-1.2 kV	CEeTKM BTOPO# (MOCTORHHOB) 2,5 Grid 1 voltage (DC), kV —1.2
power supply source, V [1]	1 W	Haunbonbluee Hanps>eHne CeTKn Nepson Peak grid 1 voltage at power supply source, V 800
power supply source, V [2]	800 W	Haunbonbluee Hanps>eHne CeTKn Nepson Peak grid 1 voltage at power supply source, V 800
Dissipation, W	600 W	BuUMIOySbCe, B 600 Dissipation, W:
anode [1]	1	Haubonblwee HanpskeHne CeTKu Nepeo anode 1-10°
anode [2]	-10	Haubonblwee HanpskeHne CeTKu Nepeo anode 1-10°
grid [1]	800	B UMMYJbCE HA UCTOYHUKE NuTanusa, B 800 grid 2 .. 125
grid [2]	2	B UMMYJbCE HA UCTOYHUKE NuTanusa, B 800 grid 2 .. 125
grid [3]	125	B UMMYJbCE HA UCTOYHUKE NuTanusa, B 800 grid 2 .. 125
grid [1]	1	PaccenBaemas Hanbonbluas MOLWHOCTb, BT: grid 1 . 25
grid [2]	25	PaccenBaemas Hanbonbluas MOLWHOCTb, BT: grid 1 . 25

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
current, A [1]	1.1 A	AHOAOM . . oottt e 1.10° Peak cathode current, A 165
current, A [2]	165 A	AHOAOM . . oottt e 1.10° Peak cathode current, A 165
pulse duration, us [1]	125 us	COTKOM BTOPOM . . o et e it e e 125 Maximum pulse duration, us 1,000
pulse duration, us [2]	1000 us	COTKOM BTOPOM . . o et e it e e 125 Maximum pulse duration, us 1,000
temperature, °C [1]	25 C	CETKOM MEPBOM . . ot it e e et eee v 25 Envelope temperature, °C 150
temperature, °C [2]	150 C	CETKOM MEPBOM . . ot it e e et eee v 25 Envelope temperature, °C 150
anode circuit, uF [1]	1000 pF	Haunbonblas AnMTensHOCTb UMNYNbCA, MKC 1000 Maximum reservoir capacitor in anode circuit, uF . . . 1.25
anode circuit, uF [2]	1.25 pF	Haunbonblas AnMTensHOCTb UMNYNbCA, MKC 1000 Maximum reservoir capacitor in anode circuit, uF . . . 1.25
Anode Characteristic [1]	40	40 Averaged Peak Grid 1-Anode Characteristic 16
Anode Characteristic [2]	1	40 Averaged Peak Grid 1-Anode Characteristic 16
Anode Characteristic [3]	16	40 Averaged Peak Grid 1-Anode Characteristic 16
Anode Characteristic [1]	2	— Averaged Peak Grid 2-Anode Characteristic -7 S 50
Anode Characteristic [2]	-7	— Averaged Peak Grid 2-Anode Characteristic -7 S 50
Anode Characteristic [3]	50	— Averaged Peak Grid 2-Anode Characteristic -7 S 50
Anode Characteristic Curves [1]	1	Averaged Peak Grid 1-Anode Characteristic Curves: Averaged Peak Grid 1-Anode Characteristic Curves:
Anode Characteristic Curves [2]	1	Averaged Peak Grid 1-Anode Characteristic Curves: Averaged Peak Grid 1-Anode Characteristic Curves:
Anode Characteristic Curves [1]	2	Averaged Peak Grid 2-Anode Characteristic Curves: Averaged Peak Grid 2-Anode Characteristic Curves:

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode Characteristic Curves [2]	2	Averaged Peak Grid 2-Anode Characteristic Curves: Averaged Peak Grid 2-Anode Characteristic Curves:
Anode Characteristic Curves	150	Averaged Peak Anode Characteristic Curves: 150 &
Grid [1]	1	Averaged Characteristic Curves Showing Grid 1 600 i
Grid [2]	600	Averaged Characteristic Curves Showing Grid 1 600 i

TUBE TINKER

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